



Taiwan—Somaliland
Flagship Project:
Saving My Mother, One
Screening at a Time
- WHO Cervical Cancer
Elimination Day of Action

December 2023 - January 2024





TMM—HGH

Pap Smear Campaign and Pathology Training Program

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1 Background

Taiwan Medical Mission (TMM) aims to build medical capacity in the Republic of Somaliland through specialty training exchanges, outreach programs, and visiting scholar opportunities at Hargeisa Group Hospital (HGH).

TMM has announced a Pap smear campaign, telepathology, and outreach campaigns by visiting specialists. TMM is also establishing a visiting scholar program for HGH staff to train in Taiwan.

Key initiatives planned for 2023-2024 are:

- Hemodialysis - AV fistula surgery training, tele-nephrology conferences
- Orthopedics - local and Taiwan orthopedic surgeon training
- NCD clinic - partnership with NGO SAHA on NCD prevention
- Nursing fundamentals training program
- Visiting specialists - Taiwanese specialists performing surgeries and training
- Telepathology for case discussions and virtual consults
- Outreach campaigns on Pap smear, orthopedic/trauma, oral health, blood donation, and osteoporosis awareness
- Visiting scholar program for HGH staff to train in Taiwan (since 2023)

2 Introduction

Cervical cancer is a preventable and curable disease, yet it remains the 4th most common form of cancer among women worldwide. Despite having successfully implemented a national cervical cancer screening program since 1995 in Taiwan that has reduced incidence and mortality by over 70%, screening coverage in Somaliland remains extremely low, well under 5%. Barriers to screening include limited medical infrastructure and personnel, low awareness among women, and sociocultural taboos. Our Taiwan Medical Mission team has been collaborating with Hargeisa Group Hospital since July 2023 to establish cervical cytology capacity. With enormous effort, we have set up Somaliland's first Pap smear

screening clinic in HGH. However, much work remains to expand services, train local staff, and educate women to utilize screening. To accelerate progress in saving women's lives, we propose a concentrated one-month training program and screening campaign in December 2023/January 2024. Renowned OB/GYN Professor Dr. Hsu from Taiwan will provide hands-on instruction in specimen collection and developing streamlined screening protocols. Leading pathologist Dr. Chang will conduct intensive Pap stain, cytology, and pathology workshops to increase the quality and efficiency of interpretation.

The Taiwan Medical Mission proposes a medical campaign called "WHO Cervical Cancer Elimination Day of Action" to launch an awareness drive across Hargeisa to motivate women to get screened from November 2023 to January 2024. Our hashtags are #GlowTeal and #CervicalCancer.

The Cervical Cancer Elimination Day of Action is an annual event that takes place on November 17th. It marks the anniversary of the launch of the "Global Strategy to Accelerate the Elimination of Cervical Cancer" as a public health problem by the World Health Organization (WHO). In May 2018, the WHO Director-General announced a global call for action to eliminate cervical cancer, underscoring renewed political will to make elimination a reality and calling for all stakeholders to unite behind this common goal. In August 2020, the World Health Assembly adopted the Global Strategy for cervical cancer elimination. Now is the time to act to eliminate cervical cancer as a public health problem.

Cervical cancer screening can help detect abnormal cells in the cervix before they develop into cancer. The two main types of cervical cancer screening tests are the Pap test and the Human papillomavirus (HPV) DNA test. Human papillomavirus (HPV) is a commonly transmitted infection that can cause cervical cancer in women. HPV infection often has no symptoms, so many people may not know they have it. There are many different types of HPV, some of which can cause cancer. During a Pap test, a sample of cells from the cervix is obtained and analyzed for abnormalities by a cytologist. An HPV DNA test can identify high-risk HPV varieties that are most likely to cause cervical cancer. These tests are advised for women aged 30 to 49.

If abnormal cells are detected during cervical cancer screening, further testing and treatment may be necessary. Treatment options for pre-cancerous lesions include cryosurgery, laser surgery, surgical removal, loop electrosurgical excision procedure (LEEP), and cold knife conization. These treatments aim to remove abnormal cells, which will be investigated by a pathologist before they develop into cancer.

We will propose using the "screen-triage-treat" approach via HPV DNA testing, which has been recognized by the WHO as the primary screening method for eliminating cervical cancer globally. This project will also enable the HPV self-sampling initiative, a widely used HPV testing method, to discover best practices in low-resource service delivery.

3 Objectives

The main objective of this project is to improve cervical cancer prevention and screening in Somaliland by implementing the 2021 WHO recommendation guideline, which includes HPV DNA testing.

- Train at least 4 OB/GYN doctors and 10 midwives in proper Pap test procedures
- Train at least 2 pathology technicians in Pap stain methodology
- Train at least one pathologist doctor in cytology/pathology diagnoses
- Screen and provide results for 500+ women in Hargeisa
- Develop streamlined protocols for large-scale screening implementation
- Increase public awareness and demand for cervical cancer prevention

The project aims ultimately to achieve the following targets by 2030:

- Vaccination: 90% of girls fully vaccinated with the HPV vaccine by the age of 15.
- Screening: 70% of women screened using a high-performance test, including HPV DNA test, by the age of 35, and again by the age of 45.
- Treatment: 90% of women with pre-cancer treated and 90% of women with invasive cancer managed.

4 Methods

Training Activities

- Hands-on Pap smear workshops for OB/GYN and midwives
- Pap stain methodology sessions for pathology technicians
- Cytology/pathology sessions for pathologist doctors
- Lectures on international best practices and quality assurance
- Joint discussions to develop standardized protocols for cervical cancer screening and diagnosis

Screening Campaign

The campaign will implement several strategies to improve cervical cancer prevention and screening in Somaliland:

- In-person communication and information material at Hargeisa Group Hospital (HGH): This can include brochures, posters, A5-sized notes from the hospital information system (HIS) at OPD, and other informational materials that explain the importance of cervical cancer

screening, how to get screened with both HPV DNA test and Pap smear, and the benefits of vaccination against HPV.

- Media promotions through TV, radio, posters, and social media
- Better recall through SMS (Telesom or Somtel) written in Somali languages: A system (a.k.a. **PathoPush**) can be set up to send reminders to women through SMS. These reminders can include information about how to attend a screening, recall for further therapy in case of abnormal findings of HPV DNA test or Pap smear, and when their next screening is due.
- Incentives: People can be encouraged to attend screenings through free health checks, small gifts (like multivitamin tablets), recognition, or small rewards.
- Offering breast ultrasound and cervical cancer screening together during a screening campaign can provide women with the opportunity to have two important health screenings at the same time.
- Verbal communication through seminars and workshops: Seminars and workshops can be organized to educate women about their risk of cancer and the importance of screening.
- Screening approaches:
 - * screen-treat method: Taking Pap smear, then follow or treat according to cytology result by PathoPush system
 - * screen-triage-treat (mobileODT) at once: It offers a full turnkey diagnostic and treatment program utilizing the HPV DNA rapid test, the EVAPro digital colposcope, and the ThermoGlide, for thermocoagulation treatment of precancerous lesions.
- Streamlined workflow to maximize patients screened
- Data collection on screening statistics and outcomes (openEMR system)

5 Sustainability

To ensure the sustainability of the project, several measures will be implemented:

- Collaboration with local organizations: Partnering with local organizations can help to ensure that the campaign is culturally sensitive and tailored to the needs of the local population.
- Training of healthcare professionals: Training healthcare professionals on the importance of cervical cancer screening and how to perform HPV DNA

tests and Pap smears can help to ensure that women receive high-quality care.

- Regular follow-up: Regular follow-up with women who have attended screenings can help to ensure that they receive appropriate care if any abnormalities are detected.
- Data collection and analysis: Collecting data on the number of women who attend screenings, the results of their tests, and any follow-up care they receive can help to evaluate the effectiveness of the campaign and identify areas for improvement.
- Funding: Securing long-term funding for the campaign from organizations such as WHO, Prevent Cancer Foundation, or European Society for Medical Oncology (ESMO) can help to ensure its sustainability.

6 Expected Outcomes

The expected outcomes of this project include:

- Increased awareness and participation in cervical cancer prevention among women in Somaliland:
 - Screen and provide results for 500+ women in Hargeisa
- Improved access to high-quality cervical cancer prevention services for women in Somaliland:
 - Train at least 4 OB/GYN doctors and 10 midwives in proper Pap test procedures
 - Train at least 2 pathology technicians in Pap stain methodology
 - Develop streamlined protocols for large-scale screening implementation
 - Implement PathoPush and openEMR system for documentation and reporting purposes

7 Challenges and Solutions

With strong collaboration, planning, and adaptable implementation, the challenges can be overcome to make the initiatives successful.

- Limited public awareness of women's health
 - Engaging outreach with clear educational messaging
- Transportation barriers for patients
 - Arrange logistics support for those in need

8 Conclusion

The primary objective of this project is to enhance the effectiveness of cervical cancer prevention and screening efforts in Somaliland through the use of evidence-based tactics and the utilization of bioinformatics science. These approaches will be specifically customized to address the unique requirements and characteristics of the local population. By successfully attaining its stated goals, this program has the potential to make a significant contribution towards the eradication of cervical cancer as a prevailing public health concern in Somaliland. The implementation of this pathology training program has the potential to enhance the cancer diagnostic capabilities of Hargeisa Group Hospital, positioning it as a leading healthcare center in the Horn of African countries.

9 (draft) Budget Planning

Costs to include:

- "Saving My Mother, One Screening at a Time" - WHO Cervical Cancer Elimination Day of Action (Ceremony on 2023/11/17)
- Pap smear instruments, materials, and cytology/pathology reagents (to be delivered at HGH in July 2023)
- HPV DNA test instrument and kits
- Ultrasounds for breast/pelvic examinations
- Immunohistochemistry (IHC) staining process (sending to Ethiopian pathology laboratory)
- PathoPush system (Telesom's SMS enabled) and openEMR system (open-sourced software) with laptop computers
- Incentives for the medical practitioners and technicians contributing to the Pap smear/Pap stain workflow
- Printed educational booklet with Somali language translation

10 Supplement Material

A draft presentation Cervical Cancer Awareness and Prevention: (coming soon)

11 Acknowledgment

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