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A Self-sampling Collection Program As An Approach That Can Provide More Women Cervical Cancer Screening To Detect HPV In Kazakhstan

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Abstract

A potential for self-sampling Human Papillomavirus testing to include more of the female population in low- and middle- income countries in the cervical screening program (the example of Kazakhstan).

Introduction

According to WHO (WHO guideline, 2021), cervical cancer (CC) is one of the top causes of death among women. CC in the world:

- 604 000 new CC cases in 2020
- 342 000 women died in 2020
- WHO: cervical screening by using HPV DNA

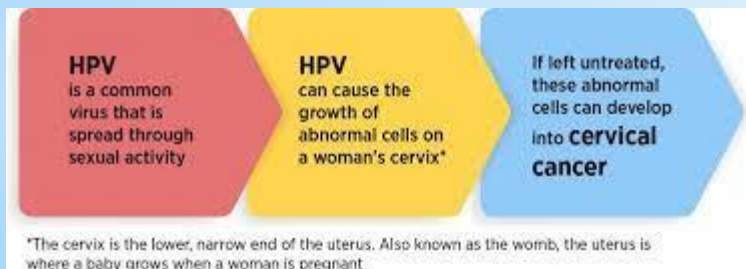
CC in Kazakhstan:

- 2nd leading cause of female cancer
- Around 2000 new cases of CC annually
- Approx.700 death annually (Igissinov et al, 2021)

NB! The cause of CC is Human Papillomavirus (HPV)

Self-sampling is the method of collection of vaginal and cervical samples for HPV testing (Yeh et al, 2019).

Fig 2. HPV is the cause of CC



Methodology

A literature review (Pubmed, Medline).
Inclusion criteria: HPV self-sampling (HPV SS), LMIC.

Key Findings

- SS → more coverage of women's participation in screening rather than in the regular cervical cancer screening program (Ping Teresa Yeh, 2019).
- SS → is widely used in countries of Latin America, Africa, and Asia. There is a number of surveys in China, Uganda, India, Nicaragua that have shown a high acceptability of HPV self-sampling by women (Jeronimo J et al, 2014).
- SS → increases the participation of "hard-to-reach women" in screening program (Madzima et al, 2017, p. 598).
- SS → Availability, solitude, easy-to-use, efficiency rise the role of HPV self-sampling in cervical screening program (Pimple et al, 2019. Yeh et al, 2018, Torres et al 2018, Benski et al, 2019).

Fig.1 Cervical screening in Kazakhstan (Aimagambetova et al, 2021)

Current programs

- Since 2008
- PAP smear
- 30-70 years every 4 years

Feasibility of Self-sampling method:

1. Ease to use
2. High specificity and sensitivity (Stanczuk et al, 2016).
3. Increase of screening coverage (Arbyn et al, 2018).
4. Available in remote areas and in unequipped medical centers (Pimple et al, 2019)
5. Privacy to overcome cultural barriers.
6. Cost-effectiveness (Chao et al, 2018)

Fig 3. HPV self-sampling (WHO)

HPV SELF-SAMPLING IMPROVES SCREENING FOR CERVICAL CANCER

Cervical cancer is the 4th most frequent cancer in women.

This can contribute to **ELIMINATING CERVICAL CANCER** as a public health problem by 2030.

HPV self-sampling is:

- ✓ Easy
- ✓ Convenient
- ✓ Private
- ✓ Painless
- ✓ Cheap

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Conclusion

The introduction of self-sampling method for HPV testing in Kazakhstan could involve more women in cervical screening program and save lives.

Fig 4. LMIC



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