Portable colposcope using mobile health

Country of origin | United States of America Primary function | Diagnosis

Health problem addressed _

Cervical cancer kills 270 000 women each year, including 85% of deaths occurring in low and middle income countries (LMICs). Precancerous lesions are asymptomatic, so without common preventative screening, cervical cancer is typically detected only at an advanced stage. However, cervical cancer



is preventable when precancerous lesions are detected and treated. Early detection of precancerous lesions may be the best strategy to reduce the burden of cervical cancer in LMICs.

Disease addressed _

Neoplasms.

Product information _

This cellphone based low-cost ultraportable colposcope can be used for the detection of cervical cancer. The system was demonstrated to be able to capture cervical images comparable to images captured with a commercial high-end \$20 000 digital colposcope. This is achieved through closer placement of a consumer grade camera and LEDs on the tip of a tampon at a working distance of 35 mm versus the 300 mm distance used with the high-end system.

Use and maintenance _

User: Self-use/patient, midwife, technician, nurse, general physician, specialized physician.

Training: Basic training will involve showing the user how to sterilize and set up the device. Steps include sterilizing with bleach, how to set up the work station, plug in the colposcope, start the software application, turn on the device, enter patient information, visualize the cervix, apply acetic acid, place the probe, capture and save a picture, turn off the device, and send the picture to the appropriate provider for diagnosis. There will be a built-in training module within the mobile app.

Environment of use_

Setting: Rural settings, urban settings, indoors, at home, primary level (health post, health centre), secondary level (general hospital), tertiary level (specialists hospital).

Energy requirements: Rechargeable battery.

Product specifications_

Accessories: Smartphone or tablet with the mobile app installed, speculum or custom expansion mechanism to view the cervix, cylinder to hold the bleach solution for disinfection between patients. **Other features:** Bleach solution (0.6% or higher) to disinfect the colposcope between patients.

Commercial information_

Reference price (USD): 350 Model: Point of Care Tampon (POCkeT) Colposcope

