

Papillomavirus (HPV) in Low-Income Countries: Which Perspectives?



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Abstract

Human Papillomavirus (HPV) is agent of the most common sexually transmitted diseases that can infect both females and males. In most cases HPV is asymptomatic and transient, but it may persist giving a variety of mucosal manifestations, genital and not, such as warts and cancers and playing a role in infertility. In low-income countries, despite the high incidence, to date, do not exist effective prevention strategies, neither acceptable diagnostic and therapeutic procedures.

In this paper we suggest an operational research approach in order to assess HPV burden and tailor the best solution for HPV infection in low-resources settings.

Keywords: HPV; Low-income countries; HPV prevention; HPV vaccine

Introduction

Human Papillomavirus (HPV) is an emerging disease affecting worldwide both genders although it was always considered as women disease [1]. While in West they were made strides about HPV prevention, diagnosis and therapy, in developing countries this topic is rarely addressed despite the high incidence and the advanced related diseases stage [2]. Although HPV is mainly asymptomatic, it can lead to benign papillomas and genital warts, generally solved by the host's immune system or to cancer [3,4]. On the one hand, in the general population, genital warts HPV related are the main anogenital viral sexual transmitted disease (STD) [5]. On the other hand, cervical, penile, anal or pharynx HPV related cancers cause growing concern and interest in worldwide population [6]. Moreover, recent evidence revealed a role of HPV in fertility both in males and females [7]. Studies about HPV infection in low resources settings show a high HPV prevalence both in female and male. Moreover, low-income countries represent a particular setting for HPV not only due to the inappropriateness of resources, both in terms of equipments and health workers, but also for the extremes of risk factors. In fact, all well known risk factors for HPV are prominent in developing countries: sexual intercourse at a young age, multiple sexual partners, high degree of parity, lack of circumcision, smoking, immuno suppression, co-infection with HIV and other STDs and of course, lack of condom use [8]. Considering all these

aspects, it is mandatory to investigate, explore and identify for low-income countries the most appropriate and effectiveness strategies in term of prevention, diagnosis, therapy and follow-up in order to eradicate or at least reduce and contain the spread of HPV infection and its related diseases. In particular, operational research could play a key role in the assessment and characterization of HPV burden and, consequently, to draw the best solution.

Conclusion

Low-income countries are particular settings in term of health care not only due to the lack of resources but also for many socio-cultural aspects as myths, superstitions and traditional healers that turn away patients from conventional medicine. Moreover, people are often reluctant to be tested for STIs as HIV and HPV due to the risk of stigmata and marginalization.

In our opinion, operational research could be a mile stone in addressing this issue and reducing the gap between patients needs and health care, not only allowing the assessment of needs and the identification of the best strategy, but it also represents the most appropriate tool to evaluate the effectiveness of intervention programs. Of course, to start research programs, lastingly and in a sustainable way, we cannot separate operational research from implementation and we have to take into account the context in which we work.

To date, researches in low-income countries bring out high HPV prevalence in males and females, both in genital and oral sites. Moreover, in these regions, the strong presence of most known risk factors makes mandatory to improve and increase the efforts and effectiveness of interventions in order to fight this emerging disease.

The first step should be the assessment of the HPV burden: to track the infection epidemiology, to identify the main risk factors and the hotspot most at risk, to consider the frequency of associated diseases and, to evaluate the awareness of HPV and attitude, both among patients and health workers. After the assessment, the goal should be to procure the appropriate resources. On one hand, it is essential to train and to implement capacity building of local staff in order to have health workers with appropriate competences and able to implement correct and quality procedures. On the other hand, there has to be an appropriate environment, with adequate structures and equipment. Considering HPV implications, mainly in low-income settings where it is difficult to have proper diagnostics and therapeutic procedures, the leading objectives should be prevention, education. In this respect, they are described several methods to inform population and promote health education: socio-cultural events as sport competitions, theatre, music; peer discussion groups with support of communication materials; media as radio, WhatsApp, Facebook and Tweeter. However, whereas the life cycle of HPV, it is crucial also to establish a follow-up for infected couples to allow a complete clearance of infection. Only in this way, in fact, we could ensure a sustainable, lasting and high impact intervention. Also considering the possibility of vaccination, which is often lacking in developing countries, proper and correct information and education play a key role on the intervention effectiveness.

In conclusion, we think that, an operational research approach, with strict and standardized methods, could have a high clinical, scientific and social impact allowing to win some social, economic and health societal challenges against HPV infection. Though in many countries the concept of "research" does not exist or is far from the standards, we are optimistic about the flourishing of operational research in low-income countries and its high impact. The challenge for researchers will be to immerse themselves in the context, gain the trust of healthcare workers and local authorities and pass on their knowledge adapting to the environment without losing quality.

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