Examining policy cohesion for cervical cancer worldwide: analysis of WHO country reports

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ABSTRACT

Introduction: Cervical cancer is controllable through appropriate interventions such as vaccination, screening, treatment, early diagnosis and palliative care. The greatest burden of cervical cancer lies in low-income countries (LIC) where most of these services are missing or developed asymmetrically. Indeed, it is important to have not just an expansion, but a symmetric and concordant development of each service. Therefore, policies of countries should be aligned to provide concordant services and achieve the best outcomes with available resources. This is called ‘policy cohesion’ and for the first time in literature we will analyse cervical cancer policy coherence in all the 194 WHO member states.

Methods: The study is based on the 2017 WHO Non-Communicable Disease Country Capacity Surveys (NCD CCS). Although the survey covers multiple non-communicable diseases, in this report we will only discuss those results pertaining to cervical cancer, analysing the cervical cancer policy cohesion of 194 WHO member states, divided by WHO region and World Bank income group.

Results: Human papilloma virus vaccination exists in 53% of countries. 76% of countries offer cervical screening; among these countries, treatment, early diagnosis guidelines and palliative care are missing in 13%, 13% and 40%, respectively. In the African region, this discord is even more profound: 32%, 17% and 60%, respectively.

Conclusion: Especially in those settings where resources are limited, early detection guidelines, treatment and palliative care should be implemented along with secondary prevention strategies. Symmetric development of concordant cervical cancer services maximises cervical cancer control efficacy.

INTRODUCTION

Countries need to adopt concrete and ambitious policies to face cancer. This is why having a National Cancer Control Plan (NCCP) or a Cancer-Related Plan (CRP) is becoming so important. There has been an increase of CRP and NCCP, from 48% in 2000 to 87% in 2015. This data reflects the recognition of the rising impact of cancer, not only in high income countries (HIC), where it is actually the leading cause of death, but also in middle and low income countries (MIC and LIC). Among cancers, cervical cancer is the fourth most common cancer among women globally, with 569 847 new cases and 311 365 deaths in 2018. Most of these deaths are unnecessary because cervical cancer is one of the most preventable of all human malignancies, since its progressive steps, from human papilloma virus (HPV) infection to invasive cancer, are very clear and targetable.

Key questions

What is already known about this subject?

► Cervical cancer is one of the most preventable of all human malignancies, since its progressive steps, from human papilloma virus (HPV) infection to invasive cancer, are very clear and targetable.

► Several recommendations, called ‘Best Buys’ and ‘Cost-Effective Interventions’ were made by WHO to assist member states in pursuing cost-effective interventions against cervical cancer.

► Despite many efforts, not even ‘best buys’ are widely adopted in national plans yet. In addition, it is important not only to have a single intervention expansion but also a symmetric and concordant development of each service listed in the WHO recommendations.

What does this study add?

► We examined data from all the 194 WHO member states. HPV vaccination exists in 53% of countries. HPV screening in 76% of countries. Among the countries with HPV screening, treatment, early diagnosis guidelines and palliative care are missing in 13%, 13% and 40%, respectively. In the African region, this discord is even more profound: 32%, 17% and 60%, respectively.

How might this impact on clinical practice?

► This study will help countries, especially low-income countries and low-middle-income countries, to be aware of the missing interventions and to symmetrically develop cervical cancer services, thus trying to reduce the impact of cervical cancer. As stated before, policies of countries should be aligned to provide not only effective but also concordant services and achieve the best outcomes with available resources. This is called ‘policy cohesion’.
infection to invasive cancer, are very clear and targetable. As a consequence, the greatest burden of cervical cancer lies in those countries where vaccination and screening programmes are missing, the health system is still fragile, and the NCCP or CRP is not operationalised, because of underfunding, inadequate expertise or lack of political will. In fact, cervical cancer is the first most common tumour among women and their leading cause of death in 38 LIC, especially in Sub-Saharan Africa, Guyana and Bolivia in South America. Without any action being taken, LIC will account for 95% of cervical cancer deaths by 2050. Being a preventable tumour, cervical cancer has always been seen by WHO as one of the main priorities to be handled through primary and secondary prevention, treatment and palliation. In 2013, as part of the Global Action Plan for the Prevention and Control of Non-communicable Diseases 2013–2020, several recommendations were made to assist member states in pursuing cost-effective interventions against cervical cancer. These recommendations were supposed be integrated in any CRP or NCCP. Human papilloma virus (HPV) vaccination of 9-year-old to 13-year-old girls and cervical cancer screening of women aged 30–49 years, through pap smear every 3–5 years, HPV test every 5 years or visual inspection, were identified as ‘best-buys’ (ie, very cost-effective interventions). The health and economic impact modelling suggests that every US$1 invested in HPV vaccination and cervical cancer screening will yield US$ 2.7 by 2030 in low- and middle-income countries. Treatment of cervical cancer stages I and II with surgery, chemotherapy or radiotherapy and basic palliative care were classified as ‘effective interventions’. In the wake of these WHO recommendations, a list of essential health services related to cervical cancer was identified by Gatti et al through the ‘Essential Cancer Package’, which included nine interventions: vaccination, cervical screening, early diagnosis, pathology, radiation, surgery, chemotherapy, palliative care and cancer registry. National progress in country capacity to adopt the above-mentioned WHO recommendations was periodically monitored by WHO Non-Communicable Disease Country Capacity Surveys (NCD CCS), over four time points (2010, 2013, 2015, 2017). Despite these efforts, not even best buys are widely adopted in national plans yet: in 2018, of 194 WHO member states, only 138 countries had CRPs available. Of these 158 countries, only 85% mentioned a plan for cervical cancer screening and 67% for HPV vaccination. All these single strategies are important to face the increasing burden of cervical cancer and should be included in NCCPs. What is even more important is not just a scale up of each intervention, but a symmetric and concordant development of every single service. For example, when screening is initially implemented, there will be an increased proportion of advanced stage cases identified. Thus, one would expect if cervical screening exists, then treatment of cervical cancer stages I and II with surgery, chemotherapy or radiotherapy, and palliative care are available. One would also expect that early detection criteria would exist prior to implementing cervical screening, in part because screen-positive cases would require the same diagnostic approach of biopsy (and in many cases using colposcopic visualisation). Therefore, policies of countries should be aligned to provide concordant services and achieve the best outcomes with available resources. This is called ‘cohesion’ and for the first time in literature we will analyse cervical cancer policy coherence in all the 194 WHO member states.

METHODS

The 2017 NCD CCS was used to analyse availability and coverage of health services. The details of the survey, which focuses on objective measures, have been described in the 2015 survey report. The survey (available in English, Spanish, French and Russian) included detailed instructions and a glossary defining the terms used. Each country followed their own formal review process prior to submitting their response to WHO. The survey did not need institutional review board approval. No personal information was collected or stored. It was a web-based questionnaire on the WHO website developed to monitor the progress of national capacity in addressing NCDs both at global and at country levels. Countries have committed to provide data every 2 years under the WHO Global Action Plan for the Prevention and Control of Non-communicable Diseases 2013–2020. The purpose of the survey is to generate detailed information on each country’s capacity related to public health infrastructure, partnerships and multisectoral collaboration related to cancer, policies/strategies and action plans, health information systems and surveillance and health systems capacity for detection, treatment and care. The ultimate goal of the survey is indeed to identify progress over time and priorities. Data input was conducted by the focal points or designated persons within the Ministry of Health or national institute or agency in 194 WHO member states. Responses were validated by crosschecking with other known sources such as GLOBOCAN database of established cancer registries. Where discrepancies existed, clarification was requested. The final dataset is publicly available through the WHO global health observatory platform. While the survey covers several NCDs like heart disease, in this report we will only discuss those results pertaining to cervical cancer. All member states (194 countries) responded to the survey. The list of the countries, divided by World Bank income categories for 2017, is shown in table 1.

Based on the Appendix 3 of the Global Action Plan for the Prevention and Control of Noncommunicable Diseases 2013–2020, where ‘best-buys interventions’ and ‘cost-effective interventions’ were stated, we selected seven interventions related to cervical cancer: HPV vaccination, screening, early detection, surgery, radiotherapy, chemotherapy, palliative care. Screening can be done by visual inspection with acetic acid, cytology or oncogenic HPV
| High income | Lower middle income |
|-------------|---------------------|
| Antigua and Barbuda | Armenia |
| Austria | Bangladesh |
| Bahrain | Bhutan |
| Belgium | Cabo Verde |
| Canada | Cameroon |
| Cyprus | Côte d'Ivoire |
| Denmark | Costa Rica |
| Finland | Croatia |
| Germany | Dominican Republic |
| Hungary | Ecuador |
| Ireland | Fiji |
| Italy | Grenada |
| Kuwait | Iran (Islamic Republic of) |
| Latvia | Iraq |
| Lithuania | Jamaica |
| Malta | Kazakhstan |
| Malaysia | Lebanon |
| Marshall Islands | Libya |
| Mexico | Madagascar |
| Namibia | Maldives |
| Niue | Marshall Islands |
| Paraguay | Mauritius |
| Romania | Mexico |
| Saint Lucia | Montenegro |
| Samoa | Namibia |
| Serbia | Nauru |
| South Africa | Niue |
| Somalia | Nipal |
| Thailand | Oman |
| United Arab Emirates | Qatar |
| USA | Peru |
| Andorra | Romania |
| Azerbaijan | Russian Federation |
| Belarus | Samoa |
| Bosnia and Herzegovina | Saint Lucia |
| Botswana | Saint Vincent and the Grenadines |
| Brazil | Samoa |
| Cambodia | Saudi Arabia |
| Cameroon | Serbia |
| Cape Verde | Senegal |
| Colombia | Seychelles |
| Congo | Serbia |
| Côte d'Ivoire | Singapore |
| Costa Rica | Slovenia |
| Cuba | Spain |
| Dominican Republic | Sri Lanka |
| Ecuador | Suriname |
| Equatorial Guinea | Tanzania |
| Fiji | Tonga |
| Gabon | Trinidad and Tobago |
| Guyana | Tunisia |
| Iraq | Tuvalu |
| Jamaica | Ukraine |
| Kazakhstan | Vanuatu |
| Korea | Yemen |
testing. These interventions were considered generally available for people in need of the service if a country responded ‘yes’ or ‘generally available (reaches 50% or more patients in need)’ to the relevant questions of the survey. Non-positive responses (‘no’, ‘I don’t know’ and items left unanswered) were treated equally. Through the analysis of each service’s availability, we investigated the policy cohesion, defined as the alignment of policies to provide concordant services and achieve effective outcomes with available resources. For example, countries with a developed cervical screening identify a higher number of cervical cancer cases. So, along with the screening programme, they need to provide other services, such as treatment (surgery, radiotherapy, chemotherapy) and palliative care.

NCD CCS dataset was downloaded directly from the web-based platform to an excel-readable file. Data cleaning was performed by the WHO Secretariat to ensure consistency and accuracy of responses within a question and its subquestions. The availability of interventions was analysed at a global level by World Bank national income quartile and by WHO region. Policy coherence was examined by the availability of diagnostic, treatment and palliative care services among countries with a national cervical cancer screening programme. All statistical analyses were performed using STATA V.15 software (Stata Corporation, 2017).

RESULTS

All member states, 194 countries, responded to the questionnaire. Among 194 countries in the survey, there were 31 LIC (16.0%), 51 low-middle-income countries (LMIC; 26.3%), 57 upper-middle-income countries (UMIC; 29.4%) and 55 HIC (28.4%). HPV vaccination exists in 53% of countries. Currently, 24% of countries have HPV vaccine coverage in 50% of the country. HPV vaccination was available under national programmes in 82% of HIC but less than half of non-HIC. LMIC had the lowest availability (35%) (table 2). Rates of HPV vaccination are directly proportional to the income strata. Achieving high rates of vaccine coverage of 70% or higher is poor across all income strata. Globally, only 23% of countries reach this target.

Globally, 76% of countries (147/194) offered cervical screening. Eleven per cent of countries met the target of screening 70% of the eligible population. Coverage of 10%–50% of the population happened in 30% of countries. By income class, access to cervical screening varied from 58% (LIC) to 85% (HIC) (table 3). However, access to a population-based screening was lower and varied by income strata from 16% (LIC) to 56% (HIC).

Among the 147 countries with some form of screening, countries with organised programmes (90 countries) had a higher participation rates compared with those with opportunistic screening (57 countries) (table 4).

Before implementing cervical screening one would anticipate that treatment (radiation, surgery and chemotherapy) would be available in the country. In 63% of countries, this spectrum of care was available but in 13% of countries it was not. This varied by income strata (35% of LIC had cervical screening but incomplete access to treatment) and by region (32% of African countries had cervical screening but incomplete access to treatment strategies) (figure 1). According to our data, 56% of countries offered both surgery and radiation therapy, while in 3% of countries radiation was available and not surgery. Global access to radiation therapy (58% of countries) was less than that to cancer surgery (72% of countries). Where surgery exists, access to radical cancer surgery could not be determined by this survey.

One would expect that early detection criteria would exist prior to implementing cervical screening in part because screen-positive cases would require the same diagnostic approach of biopsy (and in many cases using colposcopic visualisation). In 63% of countries, guidelines exist but in 13% they do not. Interestingly, approximately 10%–16% of all income strata countries have cervical screening but no early detection criteria. In 17% of AFR, EUR and WPR who have screening for cervical cancer, there are no early detection criteria (figure 2).

When screening is initially implemented, there is an increased proportion of advanced stage cases identified. Thus, one would expect if cervical screening exists then palliative care is available. In 40% of countries who had cervical screening available, there was no palliative care. This discord exists in the 61% of LMIC and 64% of South-east Asian region countries (figure 3).

It would be expected, in planning for cervical cancer care, that before a screening programme is implemented,
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access to early diagnosis criteria, treatment and palliative care is operational. However, in countries where screening exists, there are missing in 13%, 13% and 40%, respectively. In regions like Africa, where cancer care planning is likely to take sequential rather than concurrent programme planning due to fiscal constraints, this discord is even more profound (17%, 32% and 60%, respectively).

**DISCUSSION**

Achievement of universal health coverage is a generational commitment from governments to improve healthcare for all, without facing financial burden. Such coverage could ensure availability of systems, personnel, equipment and consumables needed to reduce cervical cancer and its impact on individuals, families and population. The starting point, especially for LIC, should be adopting best buys and effective interventions, as shown in the Global Action Plan for the Prevention and Control of Noncommunicable Diseases 2013–2020,12 to produce the most significant and lasting improvements in cancer prevention and control. In this plan, the ‘Best Buys’ were defined as cost-effective interventions with a cost-effectiveness analysis ≤$100 per DALY averted in LIC; the ‘Effective interventions’ were defined as interventions with cost-effectiveness analysis >$100 per DALY averted in LMIC.10–12 Vaccination and screening are ‘Best Buys’ interventions, treatment of cervical cancer including surgery, chemotherapy, radiotherapy and palliative care are ‘Effective interventions’. Some progress has been made according to the WHO NCD CCS from 2015, but while most HIC had HPV vaccination and cervical cancer screening implemented in their national programmes, only about 35% and 65% of LIC did so.7 This is even more problematic, given that the first cause of death in LIC and MIC is now cardiovascular diseases, but they will soon be replaced by tumours.3,16 Cervical cancer is already the fourth most common cancer among women globally.1 Desirable percentages to control cervical cancer, as stated by Simms et al.,12 are still very far from reality both in LIC and in HIC: increasing HPV vaccine coverage to 80%–100% by 2020 and providing 70% of women worldwide with cervical screening twice in their lifetime will avert an additional 12.5 million to 13.4 million cases over the next 50 years and will help to eliminate cervical cancer as a public health problem by the end of the century. On the basis of this forecast, the new WHO ‘Global Strategy Towards the Elimination of Cervical Cancer as a Public Health Problem’ is being developed with the aim of reaching the age-adjusted incidence rate of cervical cancer less than 4 per 100,000 women-years. At present, age-standardised incidence rates vary from 80 per 100,000 in the highest risk countries to less than 10 per 100,000 in the lowest risk countries.18 This new WHO strategy proposes key interventions for 2030 to be reached by all the countries: 90% of girls fully vaccinated with the HPV vaccine by 15 years of age; 70% of women screened with a high performance test at 35 and 45 years of age; 90% of women identified with cervical disease receive treatment. Here, a ‘high performance test’ means a test with performance at least as good as an HPV test; and ‘treatment’ means that 90% of women with pre-cancer are treated and 90% of women with invasive cancer receive management and care. These goals must be pursued in combination. Unfortunately, as reported in this article, based on the 2017 WHO NCD CCS,15 only 23% of countries globally reach vaccine coverage rates of 70%. HPV vaccination is available under national programmes in 82% of HIC but less than half of non-HIC. LMIC had the lowest availability of 35%. Concerning cervical screening, it is offered only by 76% of countries (147 countries on 194). Of these, 90 countries (61.2%) had organised population-based programme, with higher participation rates and 57 had opportunistic programmes. If screening is performed inappropriately, for example, low coverage of population, wrong age cohort, unorganised programmes, protection from the disease is not guaranteed and public spending is wasted. The WHO screening recommendations for age of screening for cervical cancer are 30–49 years. They allow for screening of women aged 20–29 years. The CCS showed that a number of countries had no recommended start age (45% LIC, 36% LMIC, 24% UMIC and 18% HIC) and no recommended end age (55% LIC, 39% LMIC, 27% UMIC and 30% HIC).19 In addition, several countries do not have an organised screening programme (77% LIC, 55% LMIC, 46% UMIC and 40% HIC). By income class, access to cervical screening varied from 58% (LIC) to 85% (HIC). From this data, it is evident

| Table 2 | Distribution of HPV vaccination by World Bank income strata |
|---------|----------------------------------------------------------|
|         | LIC          | LMIC         | UMIC         | HIC          | Total       |
| HPV vaccination | 13 (41.9)   | 18 (35.3)   | 27 (47.4)   | 45 (81.8)   | 103 (53.1) |

HIC, high-income countries; LIC, low-income countries; LMIC, low-middle-income countries; UMIC, upper-middle-income countries.

| Table 3 | Distribution of HPV screening by World Bank income strata |
|---------|----------------------------------------------------------|
|         | LIC          | LMIC         | UMIC         | HIC          | Total       |
| Cervical cancer screening | 18 (58.1)   | 38 (74.5)   | 44 (77.2)   | 47 (85.5)   | 147 (75.8) |

HIC, high-income countries; LIC, low-income countries; LMIC, low-middle-income countries; UMIC, upper-middle-income countries.
how LIC and LMIC are experiencing the worst situation. In those countries, where the burden is greatest and resources are low, high-impact, low-cost interventions should be prioritised in the NCCP. That means vaccination and screening to prevent the disease to become advanced and incurable, but also basic palliative care, since the majority of cancer patients are diagnosed in advanced stages. Surgery, radiotherapy or chemotherapy are expected to grow on the NCCP too. Prioritising HPV vaccination over cervical screening again is an investment in the future followed by developing early detection criteria and programmes and later implementation of low-cost cervical screening programmes (like VIA with immediate cryotherapy for screen-positive cases). Unfortunately, lack of a systematic approach, lack of political will, weaknesses in priority settings and wrong use of resources are big obstacles in effective cancer programmes, both in HIC and in LIC. In many cases, vaccination, early detection and palliative care are neglected in favour of treatment approaches regardless of patient’s quality of life or whether they are cost-effective. Palliative care for cervical cancer, for instance, is present in only 13% of LIC. Policies should be aligned to provide effective services and achieve good outcomes with available resources. Unfortunately, a multisectoral commission or agency that can oversee policy coherence and engagement on cervical cancer programme is still missing in two-thirds of countries. For example, when a country adopts a screening programme, it implies the availability of treatment services for the new cases identified. Therefore, in

| Table 4 | Participation rates of cervical cancer screening programmes by strategy (organised or opportunistic) and World Bank income strata |
|---------|----------------------------------------------------------------------------------------------------------------------------|
| LIC     | LMIC | UMIC | HIC | Total |
|---|---|---|---|---|
| **Organised screening** | | | | |
| <10% | 2 | 2 | 3 | 1 | 8 (8.9%) |
| 10%–50% | 1 | 14 | 13 | 7 | 35 (38.9%) |
| 50%–70% | 0 | 1 | 8 | 10 | 19 (21.1%) |
| >70% | 0 | 1 | 4 | 12 | 17 (18.9%) |
| Unknown | 2 | 4 | 4 | 1 | 11 (12.2%) |
| **Opportunistic screening** | | | | | 57 |
| <10% | 6 | 6 | 1 | 1 | 14 (24.6%) |
| 10%–50% | 5 | 6 | 4 | 5 | 20 (35.1%) |
| 50%–70% | 0 | 2 | 2 | 1 | 5 (8.8%) |
| >70% | 0 | 1 | 1 | 3 | 5 (8.8%) |
| Unknown | 2 | 1 | 4 | 6 | 13 (22.8%) |

HIC, high-income countries; LIC, low-income countries; LMIC, low-middle-income countries; UMIC, upper-middle-income countries.

Figure 1 Correlate access to treatment in countries with cervical screening, conducted by World Bank income category (A) and WHO region (B). The number of countries without cervical screening is shown in grey; the number of countries with cervical screening but without treatment (percentage of countries without treatment) is shown in red; the number of countries with cervical screening and treatment is shown in blue. AFR, African region; AMR, American region; EMR, Eastern Mediterranean region; EUR, European region; HIC, high-income countries; LIC, low-income countries; LMIC, low-middle-income countries; SEA, Southeast Asian region; UMIC, upper-middle-income countries; WPR, Western Pacific region.
those countries, there is a need to prioritise early detection guidelines, basic cancer treatment and palliation care expansion prior to implementing more secondary prevention strategies. In Africa and in some LIC, where screening exists, access to early diagnosis criteria, treatment and palliative care is missing in 17%, 32% and 60%, respectively. So, if policy promotes screening but no capability of biopsy or access to cervical cancer treatment, it makes the diagnosis irrelevant. To have treatment available means to have national cancer treatment guidelines. In 58% of countries with the three treatment strategies, guidelines exist, but in 19% there are no guidelines, especially in LMIC and American region. The absence of national treatment guidelines in the presence of expensive cancer treatment modalities suggests an individual practitioner or centre-specific approach to cancer care rather than an organised national approach or structured evidence-based approach to care. Surgery, radiation and chemotherapy should be considered all together as possible treatments. According to our data, 56% of countries offered both surgery and radiation therapy, while in 3% of countries radiation was available but not surgery. Global access to radiation therapy is less than that to cancer surgery. Where surgery exists, access to radical cancer surgery could not be determined by this survey. This may be called a ‘discordant access to local control’

Figure 2 Correlate access to early detection guidelines in countries with cervical screening, conducted by World Bank income category (A) and WHO region (B). The number of countries without cervical screening is shown in grey; the number of countries with cervical screening but without early detection guidelines (percentage of countries without early detection guidelines) is shown in red; the number of countries with cervical screening and early detection guidelines is shown in blue. AFR, African region; AMR, American region; EMR, Eastern Mediterranean region; EUR, European region; LIC, low-income countries; LMIC, low-middle-income countries; HIC, high-income countries; SEA, Southeast Asian region; WPR, Western Pacific region; UMIC, upper-middle-income countries.

Figure 3 Correlate access to palliative care in countries with cervical screening, conducted by World Bank income category (A) and WHO region (B). The number of countries without cervical screening is shown in grey; the number of countries with cervical screening but without palliative care (percentage of countries without palliative care) is shown in red; the number of countries with cervical screening and palliative care is shown in blue. AFR, African region; AMR, American region; EMR, Eastern Mediterranean region; EUR, European region; LIC, low-income countries; LMIC, low-middle-income countries; HIC, high-income countries; SEA, Southeast Asian region; WPR, Western Pacific region; UMIC, upper-middle-income countries.
but it is not a matter of policy coherence. In fact, access to radical surgery, or great radiotherapy, may actually decrease the need for the other modality in case where either one can provide adequate local control. In addition, surgery can also be an opportunity for diagnosis. The strengths of this manuscript are the high response rate of the 194 countries surveyed. Given this survey has been repeated several times since 2000 means the questions have been clarified over time and countries have developed a facility with the process. Confidence in the survey results is high, given that questions have been crosschecked across other databases (eg, International Agency for Research on Cancer and registries). The limitation of this work is that coverage estimates are reported nationally and not validated at a household level (such as corroborated with the WHO STEPs survey data). In addition, the CCS question structure is subject to interpretation as it pertains to service availability. In this case, the responses were corroborated with the WHO NCD plans. Our next step will be to reanalyse our data on the basis of the new ones that will be published soon in the new WHO 2019 CCS questionnaire to verify if progress has been made. Deeper economic insights will be given to our research to demonstrate that an effective management of cervical cancer requires parallel development of multidisciplinary services. Surgeons, oncologists, pathologists, nurses, radiotherapists and others, as well as general supportive system infrastructure, have to cooperate all together across the continuum of disease. One service cannot be scaled-up without the increasing of the others. The ultimate hope is to finally see the impact of cervical cancer reduced and the return on healthcare investments maximised.

CONCLUSION

In all countries, and especially in those settings where resources are limited, it is important not just an expansion, but a symmetric and concordant development of each service related to cervical cancer, since it is a preventable tumour. Early detection guidelines, treatment and palliative care should be implemented along with secondary prevention strategies. Symmetric development of concordant cervical cancer services maximises cervical cancer control efficacy.

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