



MYTH 2 – THERE ARE NO SIGNS OR SYMPTOMS OF CANCER

Early detection is multifaceted. Integrated strategies that raise awareness about cancer and the importance of seeking care when symptoms are present, along with practical and proven interventions for early diagnosis have the greatest chance of improving cancer outcomes. With few exceptions, early stage cancers are less lethal and more treatable than late stage cancers.

Despite the evidence to support early detection, for many populations, particularly in low resource settings, the value of early detection and the importance of seeking care when signs and symptoms are present are not understood, even among health professionals.

It is true that early signs and symptoms are not known for all cancers, but for many cancers, including breast, cervical, prostate, skin, oral and colorectal cancers, and some childhood cancers, the benefits of implementing systematic approaches to early detection and care are indisputable.

WORLD CANCER DECLARATION TARGET 6

A greater proportion of cancers will be diagnosed when still localized through the provision of targeted, population-based screening and early detection programmes and high levels of public and professional awareness about important cancer warning signs and symptoms

WORLD CANCER DECLARATION TARGET 9

Innovative training opportunities for health workers in different aspects of cancer control will have improved significantly, particularly in low- and middle- income countries

ACHIEVING EQUITY IN EARLY DETECTION

FACTS

A lack of investment in cancer services, particularly at the primary health care level, restrict individuals in low resource settings from accessing proven, cost-effective early detection programmes leading to many cancers being diagnosed at a late stage when treatment options are limited. The promotion of early detection and diagnosis in health settings across low- and middle- income countries (LMICs) should be a priority to achieve equity in access to timely treatment and care for cancer. This should include measures to raise awareness about the value of early diagnosis and counter misinformation about cancer.

A GLOBAL SOLUTION

Raise Awareness

Lack of information and awareness about cancer is a critical obstacle to effective cancer control and care in developing countries, especially for the detection of cancers at earlier and more treatable stages. Comprehensive early detection programmes should include strategies to improve knowledge of cancer among communities, health professionals and policy makers and increase awareness around the options for early detection of some cancers regardless of the resource setting. Understanding and responding to cultural beliefs and practices is



essential, particularly in settings where misconceptions about diagnosis and treatment; stigma associated with cancer; and gender and social inequities can lead individuals to seek alternative care in place of standard treatment or to avoid care altogether.

Recognise Signs and Symptoms

Equally important is the development of strategies to encourage help seeking behaviour, including awareness and education of ways to recognise the signs and symptoms for some cancers and understanding that timely evaluation of symptoms will increase the opportunities for cure and improved quality of life for people living with cancer. Early recognition of early warning signs of some cancers is particularly relevant in the context of primary care in low resource settings – it is cost-effective and in some cases does not require any specialist diagnostic technologies as is the case with inspection for oral cancers and clinical breast examination (CBE) for breast cancer (1, 2). CBE performed by primary health care workers in LMICs has the potential to detect cancers earlier, particularly in areas where the majority of breast cancers are diagnosed at an advanced stage (3). For cervical cancer, the screen and treat approach that combines visual inspection with acetic acid (VIA) or HPV DNA testing with cryotherapy for early detection for women 35 to 42 years is currently recommended as part of the WHO package of essential core non-communicable (PEN) disease interventions for primary health care in low-resource settings (4). For childhood cancers, equipping primary health care workers with the appropriate knowledge and tools to recognise the warning signs and symptoms of paediatric cancer is essential to reduce the likelihood of misdiagnosis and ensure prompt referral to specialist medical care at an early stage of the disease (5).

Tailor Screening Services

For some cancers, including breast, cervical and colorectal, there is compelling evidence to support the introduction of organised screening programmes through practical interventions that can be tailored to the resource setting and population-based need.

For cervical cancer, studies have shown that even a single screening between the ages of 30 and 40 can reduce a woman's lifetime risk of cervical cancer by 25 to 36% (6). IARC concludes that there is sufficient evidence that cervical cancer screening can reduce cervical cancer mortality by 80% or more among screened women (7). Recent developments in technologies adapted to low-resource settings make screening and treatment of cervical precancerous lesions feasible and highly cost-effective for all countries. These include new alternatives to cytology-based (Pap) testing such as visual inspection strategies and HPV DNA testing, along with cryotherapy for treatment of precancer (8). In low-resource settings, visual inspection methods, especially VIA, provide a reliable and effective means for reducing the burden of cervical cancer (7-9).

Current evidence from randomised screening trials from both low- and high- resource settings supports the use of HPV DNA testing alone as a primary screening test in women aged 30 years or older and that high-risk HPV-negative women have an extremely low risk of developing cervical cancer in the 5 to 10 years after screening (8). HPV DNA testing has the additional advantage of cost-effectiveness, gained from lengthening the screening interval for HPV-negative women.

In high-income countries HPV DNA testing is increasingly being introduced - the United States being the first country to introduce HPV DNA testing as a primary screening protocol in conjunction with the Pap test (9). Introduction of HPV DNA testing in low-resource settings is



more challenging as a result of the costs associated with current HPV DNA tests and the associated infrastructure. To address these issues, the *careHPV* test, an innovative HPV DNA testing platform adapted for use in areas with minimal laboratory infrastructure has been developed (CCA). Current field studies examining the introduction of the *careHPV* test are researching the effectiveness of self-sampling coupled with HPV DNA testing (9).

For breast cancer, there is a direct relationship between the median invasive tumour size and access to early detection programmes and education/ awareness initiatives (10). Countries in which median invasive tumour size is large (5cm) are more likely to have high breast cancer case mortality rates, and also likely to lack public awareness regarding the importance of early detection and/or facilities where breast diagnostic procedures can be performed. Effective and efficient breast cancer early detection methods including screening mammography and clinical breast examination (CBE) can be tailored to the resource setting and population-based need.

Likewise, for colorectal cancer, there is a wide and growing range of testing options (including faecal occult blood tests, flexible sigmoidoscopy and colonoscopy) that can be tailored to a country's resources and burden of disease (11).

The critical issues for all screening programmes are to select the test that is most appropriate for the context in order to achieve high screening coverage, high quality testing and reliable follow up. Ultimately, success of early detection programmes for cancer can be measured by a reduction in mortality.

Unfortunately, some of the cancers with the poorest survival, such as ovarian and pancreatic cancers, rarely show early warning signs. Cancer researchers globally are seeking innovative ways to improve early detection and develop novel tests for early diagnosis for these cancers.

COMMITMENTS BY MEMBER STATES:

The 2011 UN Political Declaration on NCDs (PD) acknowledges the need to develop strengthen and implement multisectoral public policies and action plans to promote health education and health literacy. This can include evidence-based education and information strategies and programmes in and out of schools and through public awareness campaigns. The PD also promotes increased access to cost-effective cancer screening programmes.

Subsequently, the *WHO Global Monitoring Framework for NCDs* has recommended that the "Proportion of women between the ages of 30–49 screened for cervical cancer at least once, or more often, and for lower or higher age groups according to national programmes or policies", be used as an indicator of an effective health systems response to cervical cancer. Other cost-effective interventions recommended for consideration by Member States in the *WHO Global Action for NCDs 2013-2020* are:

- Prevention of cervical cancer through screening (visual inspection with acetic acid [VIA] (or Pap smear (cervical cytology), if very cost-effective), linked with timely treatment of pre-cancerous lesions
- Population-based cervical cancer screening linked with timely treatment
- Population-based breast cancer and mammography screening (50–70 years) linked with timely treatment



- Population-based colorectal cancer screening, including through a fecal occult blood test, as appropriate, at age >50, linked with timely treatment
- Oral cancer screening in high-risk groups (e.g. tobacco users, betel-nut chewers) linked with timely treatment

GLOBAL ADVOCACY MESSAGES:

- Awareness is the first step to early detection and improving cancer outcomes
- With few exceptions, early stage cancers are less lethal and more treatable than late stage cancers.
- The approach and scope of an early detection programme should be tailored to resources as well as cultural beliefs and practices, with the flexibility for governments to initiate and expand services as resource levels increase.
- Ultimately, the success of early detection programmes can be measured by a reduction in the stage of the cancer at diagnosis with earlier diagnosis associated with a reduction in the risk of dying from cancer.

BUILDING CAPACITY OF HEALTH CARE WORKERS

FACTS

For many developing countries, the provision of a skilled cancer workforce to diagnose and manage cancer remains a challenge, with most facing a severe shortage of oncologists, and other specialists including pathologists. While access to some specialty care is essential, this can be complemented in many ways to build capacity in a skilled workforce at the primary care level to facilitate greater access to cancer control and care initiatives including early detection programmes.

A GLOBAL SOLUTION

The concept of optimal tasking for cancer care has been proposed whereby tasks are both shared among health workers with differing levels of training combined with the shifting of some tasks from specialist health care providers to other groups of health workers such as mid-level and lay health providers (12). This has proven an effective way to engage expert patients, community health workers, clinical health assistants, nurses and physicians working in primary care level facilities to provide more and better access to cancer control and care services at each stage of the cancer control and care (CCC) continuum.

Using breast cancer as an example, to support early detection, health workers at the primary care level, including nurses, should be trained to identify risk factors related to family history, teach women about breast health and assist them in recognising warning signs, and help women seek a diagnosis. Primary health care workers can also be trained to perform effective breast clinical exams, especially where the objective is to reduce the number of very late cases that are easily detected with clinical examination. This does not require sophisticated technology such as mammography. Likewise, for colorectal cancer, studies have shown that nurses and non-medical endoscopists can satisfactorily perform diagnostic tests (13, 14).



Investment in continuing professional development (CPD)¹ to equip health care workers with the appropriate tools and knowledge to recognise the early signs and symptoms of some cancers, as well as appropriate early detection measures, is essential. Studies from developing countries show that understanding of cancer signs and symptoms can be low even among nurses. For example, a recent study from Nigeria indicated that only 20% of nurses correctly identified that a painless lump in the breast may be an early warning sign of breast cancer (15).

Beyond conventional teaching methods, the potential exists to increase the utilisation of Information and Communication Technologies (ICTs) to address the gaps in the training of health care workers to equip them with the skills and knowledge to engage in early detection programmes. At the primary level, initiatives that integrate multimedia approaches (e.g. video, animation, audio) can enhance organizational learning and skill development of health workers (16). For community health workers, combining face-to-face, paper based learning with multimedia content in the classroom and remotely, can deliver content that is understandable and easily remembered (16). At the organizational level, using digital content can create opportunities for collaboration and sharing of content with other institutions and assist with standardization of treatment protocols and clinical guidelines.

For more specialized training, online distance education programmes can facilitate mentoring, networking and collaboration as part (12). For example, the St Jude Cure4Kids international medical education website and online collaboration centre provides high quality content for continuing education and web communication tools to support collaborations among paediatric oncologists and health professionals in 187 countries (<https://www.cure4kids.org/ums/home/>).

While the educational format used should be the most effective and efficient method for meeting the learning objectives, the ability to build on programmes already in existence is an important consideration. For example, the VUCCnet Africa project builds on existing materials, African training networks and African infrastructure to ensure that VUCCnet Africa cancer education and training programmes are embedded into established education and training institutions (17).

COMMITMENTS BY MEMBER STATES:

The WHO Global Action Plan includes the following policy options for Member States to strengthen human resources for the prevention and control of noncommunicable diseases:

- Identify competencies required and invest in improving the knowledge, skills and motivation of the current health workforce to address noncommunicable diseases,
- Incorporate the prevention and control of noncommunicable diseases in the training of all health personnel including community health workers, social workers, professional and non-professional (technical, vocational) staff, with an emphasis on primary health care.

¹ CPD is a systematic and ongoing process of education, in-service training, learning, and support activities that build on initial education and training to ensure continuing competence, extend knowledge and skills to new responsibilities or changing roles, and increase personal and professional effectiveness.



- Optimize the scope of nurses' and allied health professionals' practice to contribute to prevention and control of noncommunicable diseases, including addressing barriers to that contribution.

GLOBAL ADVOCACY MESSAGES:

The provision of a skilled and supported cancer workforce is critical to the success of early detection programmes for cancer.

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