

# The shifting global burden of cancer: Cancer Research UK's engagement with low- and middle-income countries

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This article sets out explain how one charity, Cancer Research UK (CRUK), based in United Kingdom has developed an effective contribution to global cancer challenges. Through a focus on tobacco control, cervical cancer and global scientific research, CRUK has been able to leverage its resources to make an impact on low- and middle-income countries and their cancer control response.

Global cancer incidence is rising rapidly. Eighteen million people were diagnosed with cancer in 2018 and this figure is predicted to be 29 million by 2040. There are numerous factors underpinning this statistic – some of which are to be celebrated. People are living longer than before: progress which is especially marked in low- and middle-income countries (LMICs) as communicable diseases are tackled and economic development takes root. But new wealth is linked to a rise in cancer risk factors including obesity and smoking. This burden is being increasingly borne by the low- and middle-income world, which is facing an increase in cancer cases of 81% over the next two decades, according to the latest World Health Organization (WHO) World Cancer Report.

The COVID-19 pandemic continues to be catastrophic, with well over one million deaths recorded worldwide, and little sign that it will be brought under control until an effective vaccine is found. The indirect health consequences of the pandemic will also be far-reaching: with healthcare systems temporarily diverted towards tackling the virus, in the case of cancer care this has meant vastly reduced access to services across the prevention, diagnosis and treatment pathway. In the UK alone it is estimated that there will be up to 35,000 excess deaths caused by cancer due to delays and cancellations of vital services. At the time of writing, the impact of COVID-19 in LMICs appears uneven and is an evolving picture, but it seems inevitable that in settings where resources and access to effective cancer care are already limited, the risks are significant.

As the world's largest independent cancer charity dedicated to saving lives through research, Cancer Research UK (CRUK) has a major role to play, now more than ever, in

improving cancer outcomes – both in the United Kingdom, and internationally. COVID-19 has exemplified the necessity of global collaboration in an increasingly interconnected world. CRUK has helped save millions of lives, including through its pioneering work in radiotherapy, screening and chemotherapy, as well as its role in developing eight of the world's top 10 cancer drugs and in establishing the link between tobacco and cancer. Through enhanced collaboration we can enable and invest in ground-breaking research, share knowledge and deliver impactful system change through influencing policy development. CRUK's response to the shifting global burden of cancer is anchored by three key priorities: global health, global science and global partnerships.

## Global health

### *Tobacco control*

Smoking remains the single biggest cause of cancer. Although there is a slow downward decline in smoking prevalence globally, 80% of the world's 1.1 billion smokers live in LMICs and this proportion is set to rise. New wealth, aggressive tobacco industry tactics and the continued cultural salience of non-combustible products such as smokeless tobacco in many parts of the world, are some of the factors that combine to provide fertile ground for future generations of smokers.

Since 2016, CRUK's International Tobacco Control Programme (ITCP) has sought to accelerate implementation of the WHO Framework Convention on Tobacco Control (FCTC) – the world's first global health treaty. The ITCP has focused primarily on increasing tobacco taxes and reducing the affordability of tobacco in LMICs. Evidence continues to demonstrate that taxation is the single most effective measure

in reducing smoking prevalence, which also raises additional revenue for governments (which can and should be earmarked for investment in health). But implementation of the FCTC is a mixed picture. In LMICs there is a dearth of funding and staffing for tobacco control programmes. High-income countries have provided only minimal development funding to address this gap, despite the consequences of inaction in terms of lives lost and economic development.

With a £5 million investment over five years, the ITCP has funded policy research grants in 28 LMICs, forging relationships with influential global stakeholders along the way. Not only has this research expanded the evidence base on the utility of increasing tobacco tax in terms of both health outcomes and national income, but it has also increased the profile and capacity of researchers working on tobacco control in LMICs. This model has sustainability and flexibility at its heart; local actors are best placed to work with decision makers to help deliver policy change that positively impacts cancer outcomes. In four years, the ITCP has established a meaningful footprint on global tobacco research, with funding achievements including:

- ➔ working with the Framework Convention Alliance (FCA) – a global civil society network of over 500 organizations working on tobacco control – to support Parties in developing a Medium-Term Strategic Framework for the Framework Convention on Tobacco Control (FCTC), adopted at the Eighth Session of the Conference of Parties (COP) in 2018. The strategy is an important tool which Parties to the Treaty and civil society can use to review implementation efforts, and to highlight the need for sustainable funding to support these efforts;
- ➔ funding the FCTC Tax Knowledge Hub at the University of Cape Town, which delivers workshops and capacity building on tobacco taxation to policy makers and civil society. Examples of recent Knowledge Hub achievements include supporting the Chadian government in simplifying their tobacco tax in January 2019 to avoid loopholes often exploited by the tobacco industry (with revenue earmarked for the Ministry of Health), and persuading the government of Pakistan to simplify its tobacco tax system to avoid loopholes that can be exploited by tobacco industry pricing;
- ➔ publishing a series in the *British Medical Journal* that looked at tobacco tax in seven LMICs across four WHO regions, which established that contrary to tobacco industry claims, increases in tobacco tax do not lead to a rise in the illicit trade in cigarettes. Vital work as the tobacco industry’s own data “estimates” are often taken into consideration by governments reviewing their tobacco taxation.

The centrepiece for the global tobacco control community in 2020 was the FCTC Conference of the Parties (COP), which was due to be held in the Netherlands in November. One of the many global meetings postponed due to the pandemic, this hiatus has demonstrated the sometimes over-reliance of civil society on leveraging international meetings to achieve their objectives. Nevertheless, the postponement of the COP provides an opportunity for the community to regroup and react to the “new normal” ahead of the delayed meeting in November 2021. In the current context, securing additional investment in tobacco control in LMICs – both domestically and by high-income countries – will be challenging. But the use of health taxes to provide much needed revenue could be an increasingly compelling option for governments.

#### CRUK’s grantees and funding partners:

- ➔ International Development Research Centre (Canada)
- ➔ University of Cape Town, Economics of Tobacco Control Project and WHO FCTC Knowledge Hub on Tobacco Taxation
- ➔ American Cancer Society
- ➔ KIVU International
- ➔ Framework Convention Alliance

#### Cervical cancer prevention

The approach of the ITCP has shown that building the capacity of local actors – supported as appropriate by international experts – ensures relevant and sustainable solutions are developed to tackle complex health challenges head-on. Building on the ITCP’s success, CRUK recently expanded the remit of its international prevention work in order to support global efforts on cervical cancer prevention – responding to the WHO Director-General’s call for action towards the elimination of cervical cancer. A call particularly pressing for LMICs, where around 84% of cervical cancer cases occur.

CRUK has well-established interest and expertise on cervical cancer: helping prove the link between the human papillomavirus (HPV) and cervical cancer in the 1990s, which paved the way for the development of the HPV vaccine that now offers protection from the most common cancer-causing strains. The charity is co-funding – with the Bill & Melinda Gates Foundation and the National Cancer Institute (a part of the National Institutes of Health) – the PRIMAVERA trial in Costa Rica, which is testing the protective immunity of a single dose of the HPV vaccine.

CRUK’s new cervical cancer prevention programme will support implementation of the WHO Global Strategy towards

the Elimination of Cervical Cancer adopted in July – which for the first time globally brings together targets under three pillars: HPV vaccination, screening and treatment of pre-cancerous lesions, and treatment and palliative care. CRUK's vision is to invest specifically in the proposed 2030 target for 90% of girls to be fully vaccinated against HPV by 15 years of age. As co-chair of Cervical Cancer Action for Elimination (CCAIE), CRUK is helping coordinate a network of civil society actors advocating and collaborating on cervical cancer elimination, with the aim of becoming truly global in scope. CCAIE will support incremental realization of the Global Strategy's 2030 targets through advocacy at all levels: to drive country implementation, and to hold governments to account on this agenda.

The scale of the task can hardly be overstated, but if the international community coalesces in support of the Strategy, the figures for averted cervical cancer deaths could be approximately 2 million by 2040, 4.5 million by 2050, 39 million by 2100, and 62 million by 2120.

#### *Global science and global partnerships*

CRUK seeks to bring together the best scientific minds to address global challenges in cancer. India has long been recognized as a priority in terms of both scale and opportunity to make progress on cancer. Over one million Indians are diagnosed with cancer each year, and new cases are expected to rise to 1.7 million by 2035. Today, fewer than 30% of Indian cancer patients survive for five years or more after their diagnosis: a mortality rate disproportionately higher than across the rest of the world. It has the third highest number of cancer cases in the world and the second highest number of cancer deaths. Addressing this burden has become an area of priority for the Government of India, with the development of affordable approaches to fighting cancer at the top of its agenda.

Following consultation with leading researchers in both India and the United Kingdom, and a visit by Prime Minister Modi and the then Prime Minister May to the Francis Crick Institute in April 2018, CRUK and the Government of India's Department of Biotechnology (DBT) agreed to partner for a £10 million, five-year bilateral research initiative. The theme of affordable approaches to cancer was selected in response to growing global challenges related to affordability of cancer prevention and care, and the potential to make significant progress against cancer outcomes. Building on specific areas of scientific opportunity in India and the United Kingdom, the initiative focuses on prevention, early detection, diagnosis and treatment, and is likely to include large-scale population studies, development of new technologies and research into re-purposing existing drugs.

In March 2019, the India-United Kingdom Advisory Panel finalized the initiatives' research challenges that cover a range of issues in affordability and formed the basis for a funding call. A total of seven bilateral teams have now been awarded seed funding grants and, despite the impact of the COVID-19 pandemic, have made significant progress. Challenges such as travel restrictions and being unable to access laboratories have been problematic, but teams have been utilizing virtual technology to ensure they are in regular contact and can develop their projects. Several have been able to recruit new institutes into their studies, along with expanding their collaborations in both India and the United Kingdom, to include further expertise.



*Meeting between Prime Minister Modi and then Prime Minister May in 2018 to discuss affordable cancer care*

Furthermore, teams have been conducting patient and public engagement through online events supported by specialists in this area along with promoting their projects at international research conferences. One team have had strong interest in their study from a global group of gynaecological cancer specialists and other countries may be added to their study in the future. This progress highlights the determination of the teams to meet their research aims and the importance of this initiative for developing much needed affordable approaches to cancer. The hope is that, by bringing together the complementary strengths of India and the United Kingdom, the initiative will accelerate progress in research that will impact cancer outcomes on a global scale.

#### *Lessons from CRUK's global engagement*

CRUK is a charity that has traditionally focused on the cancer pathway in the United Kingdom, and its adaptation to a global setting has been a complex and incremental process that continues to evolve. This has been facilitated by the identification and development of relationships with local partners and a range of cross-sectoral actors already active in global health and development, to ensure collaboration and complementarity on shared objectives, as well as sustainability. Further lessons learned so far include:

- ➔ There is space and need for new thinking on global cancer control, in particular to reach new audiences and collaborate on high profile agendas, such as the SDGs and Universal Health Coverage, and to reflect the interplay between communicable and noncommunicable disease, which COVID-19 has so starkly illuminated.
- ➔ Global political trends affect seemingly straightforward ambitions. On tobacco control, the unpopularity of

development assistance among many donor country populations and government reticence to increase and earmark taxes both significantly affect what is achievable on tobacco taxation.

- ➔ Understanding national ecosystems is key. Low- and middle-income countries have distinct contexts and challenges, albeit with regional trends that present opportunities for wider geographic impact. It is not possible to make a meaningful policy intervention without understanding the wider factors influencing governance.
- ➔ Influencers and ambassadors could be more regularly identified and utilized. High profile champions for specific issues have the potential to cut through and be heard by governments, on behalf of civil society actors.
- ➔ Sustainable funding is a challenge to the whole global health agenda – although noncommunicable diseases suffer from particularly chronic underfunding. The most realistic and potentially achievable approach is to build and maintain salience around pressing issues, while mainstreaming where possible into existing development funding systems. ■

**Bekki Field** leads the international cancer prevention programme at Cancer Research UK, which supports tobacco control and cervical cancer prevention efforts in low- and middle- income countries through policy research grants and advocacy. Prior to this, she spent a decade in the British diplomatic service and was posted to the UK Representation to the European Union, and the UK Delegation to the Organisation for Security and Cooperation in Europe, based in Vienna.

**Caroline Mitchell**, Research Grants & Communications Officer, India-UK Cancer Research Initiative

Caroline Mitchell is a Research Grants and Communications Officer in the International Partnerships team at Cancer Research UK and works on the India-UK Affordable Approaches to Cancer Initiative.

Prior to Cancer Research UK, Caroline spent time working in Uganda for a youth-led development charity before joining an international development charity, based in Scotland, that focuses on growing businesses in developing economies through providing training and consultancy.

“Achieving policy change in low- and middle-income countries on issues like tobacco tax is tough. It is inherently political and rarely achieved by outside organizations alone. That is why CRUK has been pioneering a combination of local insight – think tanks who understand how things really get done in their countries – and specialist international support. In Sri Lanka and Nepal this is beginning to pay dividends. New organizations, plugged into local politics and well positioned to influence change, are establishing themselves as new players in the tobacco control world.”

*Will Paxton, Director and founder, Kivu International*