

***The Lancet*: Progress against cancer in low-income and middle-income countries possible with package of targeted priority interventions**

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In low-income and middle-income countries (LMICs), where 5.5 million of the world's 8 million cancer deaths occur each year, most people with cancer have little or no access to treatment and many die in severe pain for lack of inexpensive opioid pain medicine.

A new analysis published in *The Lancet* from the Disease Control Priorities project describes a set of cancer control interventions that should be effective, cost-effective, feasible and affordable in middle-income countries and with some financial assistance, in low-income countries. The interventions span prevention, treatment, palliation and research, and could vastly decrease the cancer burden in LMICs by 2030, with even greater declines by 2050, if a start is made in the next few years.

The recently announced UN Sustainable Development Goals for 2030 aim to reduce premature deaths from NCDs, to which cancer is a substantial contributor, by a third. On the current cancer mortality trajectory this goal cannot be met, but, with widespread adoption of the interventions named in the Disease Control Priorities analysis, many LMICs can achieve the goal.

Disease Control Priorities, 3rd edition (DCP3) is a global effort led by a team at the Department of Global Health, University of Washington, Seattle, USA, to synthesize and report evidence on the major health challenges of the 21st century. It involves a worldwide network of about 400 researchers, and applies epidemiological, economic and health system analyses to provide evidence-based blueprints for countries to chart better health outcomes by 2030.

DCP3 is supported by the Bill and Melinda Gates Foundation. *Cancer*, the third in the nine-volume series, had additional support from the US National Cancer Institute and the World Health Organization's International Agency for Research on Cancer. The Review in *The Lancet*, published today, is drawn from *Cancer*'s 18 chapters, which were written by 79 authors from more than 20 countries. Hellen Gelband, Center for Disease Dynamics, Economics & Policy, Washington, DC, USA and Professor Prabhat Jha, Centre for Global Health Research, St. Michaels Hospital, University of Toronto, Canada, led colleagues from the Disease Control Priorities Cancer Group in the analysis.

The number of cases of cancer in low- and middle-income countries (LMICs) will rise substantially over the coming decades, due mainly to adult population growth. The burden of cancer will also increase as a percentage of deaths in all LMICs, since all populations are ageing and mortality from major causes of death other than cancer –especially cardiovascular diseases— is falling faster than is the cancer mortality rate.

Although most of those people with cancer in LMICs receive little or no effective treatment, many families become impoverished paying for treatment, even if such treatment is ineffective. In LMICs, public financing is essential for wide access to cost-effective cancer treatments, and global initiatives could help lower the costs of treatment inputs and expand capacity to deliver cancer services.

To help countries expand locally appropriate strategies, *Cancer* reviewed worldwide evidence on cancer interventions to develop its ‘essential package’ of measures for countries to adapt as locally appropriate and begin the process of making available to substantial proportions of their populations. Most middle-income countries could achieve wide coverage within a few years. Some of the interventions can also be put in place by low-income countries in the near term, and others in the longer term.

“In most populations, helping current tobacco users to quit and young people not to start smoking are the most urgent priorities in preventing cancer (and other NCDs), along with vaccination against the cancer-causing hepatitis B virus and human papillomavirus (HPV). Higher tobacco taxes will reduce cancer incidence and generate substantial extra revenues for governments,” explain the authors.

Other than tobacco- and virus-related cancers, they note that most of the expected increase in cancers incidence is not currently preventable. However, many cases of cancer can be effectively treated if caught early. They say: “Breast and colorectal cancer are common, and moderately curable if treated early. In addition, for the next several decades, until the protective effects of HPV vaccination are widespread, cervical pre-cancerous changes and early cancers are eminently treatable.” Most childhood cancers are also highly curable, and their treatment is included in the DCP package.

This essential package of cost-effective and feasible interventions, which includes access to opioid-based pain medications, would, if fully implemented, require US\$20 billion per year, or 3% of total public spending on health at current levels in LMICs: 2.6% in upper-middle-income and 5% in lower-middle income countries, but 13% in low-income countries. In per capita terms, this would cost \$5.7, \$1.7 and \$1.7 extra annually per person in upper-middle-income, lower-middle income, and low-income countries, respectively.

The authors conclude: “Such increases are potentially feasible in all but the low-income countries, which would require external support.” They say further that “cancer interventions considered appropriate for a national cancer strategy should be available and affordable. Global initiatives for cancer control in LMICs are needed to lower the costs of key inputs for the essential package, including large-scale commodity purchases; to expand technical assistance and dissemination of skills; and to promote locally-relevant cancer research.”

The analysis also makes clear that the cancer burden will continue to grow unless practical measures are begun to address it. The authors say*: “Money alone will not instantly make cancer treatment and other interventions available. In many countries, the lack of trained personnel—from laboratory technicians to analyse cancer biopsies, to radiotherapy technicians to surgeons—impedes progress, and fully correcting this lack of human resources may take years or decades. Delaying a start, however, will just mean more lives lost unnecessarily to cancer.”

NOTES TO EDITORS:

*Quote direct from authors and not within text of the Review

Additional materials (video and PowerPoints) will be available at www.cghr.org/cancer

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(Note Hellen Gelband is travelling and not available for interviews)

For full Review and Appendix, please email c.brogan@lancet.com (UK) or a.vandorn@lancet.com (USA)

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