Disease Control Priorities, 3rd Edition
CANCER
Volume 3: Cancer

Editors:
Hellen Gelband
Prabhat Jha
Rengaswamy Sankaranarayanan
Susan Horton

Publication: November 2015
• 1993 World Development Report

• *Disease Control Priorities in Developing Countries, Second Edition* 2006 (*DCP2*)

• *Disease Control Priorities, 3rd Edition* 2015-2016 (*DCP3*)
# DCP3 Volume Topics

1. Essential Surgery - 2015

2. Reproductive, Maternal, Newborn and Child Health - 2016


4. Mental, Neurological, and Substance Use Disorders - 2015

5. Cardiovascular, Respiratory, Renal and Endocrine Disorders - 2016

6. HIV/AIDS, STIs, Tuberculosis and Malaria - 2016

7. Injury Prevention and Environmental Health - 2016


Multiple Volumes, Common Elements

9 DCP3 Volumes

- Costing of Essential Packages
- Burden of Disease
- Intervention Effectiveness
- Universal Health Coverage
- Uniform Economic Evaluation
- Policies, Platforms & Packages
DCP3 Overall

- Summarize and synthesize evidence of the effectiveness and comparative evaluation of global health interventions.

- Strengthen the capacity of evidence based priority-setting in global health.

- Introduce new methods for assessing the equity and financial protection considerations of health and policy.
World Bank country income groupings, 2013
Cancer already major cause of death in LMICs, and will continue to increase as a percentage of deaths, driven by population ageing and greater decreases in mortality from other causes.

2012 Global Cancer Deaths:
- 8 million worldwide
  - 4.4 million in people <70
    - 3.1 million in middle-income countries
    - 0.3 million in low-income countries
Top 10 causes of death worldwide, 2012

- Malignant neoplasms
- Ischaemic heart disease
- Stroke
- Lower respiratory infections
- HIV/AIDS
- Diarrheal diseases
- Preterm birth complications
- Road injury
- Chronic obstructive pulmonary disease
- Cirrhosis of the liver

*Source: Global Health Observatory, WHO 2013.*
Estimated cancer incidence and mortality, 2012
Incidence and mortality before age 70: selected cancers

Source: Based on IARC GLOBCAN data (Ferlay and others 2015).
Global breast cancer mortality, women, 2012

Source: Forlay and others 2013.
Vote: Values are estimated ASR per 100,000 women. ASR = age-standardized rate.
Age-standardized cervical cancer incidence and mortality by country income group, 2012

Source: Ferlay and others 2013.
Most urgent priority in cancer (and other NCD) control:

- Tobacco cessation and preventing young people from starting smoking
  - Increased tobacco taxation will help to reduce cancer incidence and generate substantial extra revenues for governments.

- HBV vaccination (including birth dose)

- HPV vaccination
Retail price of most popular brand and excise tax

Source: Adapted from WHO 2013b.
Most other common cancers are not preventable (other than tobacco-related and virus-related cancers), but many cases of early cancer can be effectively treated—eg, breast, cervical, and colorectal cancers are common and curable if treated early. Most childhood cancers are also curable.
Cancer death is often accompanied by severe pain in the last months of life. Strong opioids, the bedrock of palliative care pain control, is unavailable to most people who die from cancer (and other painful diseases).

In 2006, of the global population:

- 66% lived in countries with no opioid consumption
- 13%, low consumption
- 4%, moderate consumption
Opioid consumption per capita by WHO region, 1980-2010

Source: Cleary, Radbruch, and others 2013.

Note: AFRO = Africa; AMRO-North America = Latin America and Caribbean (America not including North America); EMRO = Middle East (Eastern Mediterranean); SEARO = Southeast Asia; WPRO = Western Pacific.
<table>
<thead>
<tr>
<th>Cancer type/Number of deaths, ages</th>
<th>Platform for intervention delivery</th>
</tr>
</thead>
<tbody>
<tr>
<td>0–69 years, 2012 (thousands)</td>
<td>Nationwide policies, regulation, or community information</td>
</tr>
<tr>
<td>All cancers 3,230</td>
<td>Education on tobacco hazards, value of HPV and HBV vaccination, and importance of seeking early treatment for common cancers</td>
</tr>
<tr>
<td></td>
<td>Palliative care, including, at a minimum, opioids for pain relief</td>
</tr>
<tr>
<td>Selected tobacco-related cancers (oral, lung, and esophagus) 900</td>
<td>Taxation; warning labels or plain packaging; bans on public smoking, advertising, and promotion; and monitoring</td>
</tr>
<tr>
<td>Breast cancer 280</td>
<td></td>
</tr>
<tr>
<td>Cervical cancer 180</td>
<td>School-based HPV vaccination</td>
</tr>
<tr>
<td>Colorectal cancer 210</td>
<td></td>
</tr>
<tr>
<td>Liver cancer 380</td>
<td>Hepatitis B vaccination (including birth dose)</td>
</tr>
<tr>
<td>Childhood cancers 80</td>
<td></td>
</tr>
</tbody>
</table>
Cost-effectiveness of selected interventions

- Treat breast cancer LIC (1)
- Screen and treat breast cancer LIC (1)
- Screen and treat breast cancer MIC (2)
- HPV vaccination @ $240+/girl (3)
- Treat colorectal cancer LIC (4)
- Non price interventions for tobacco (5)
- Treat breast cancer MIC (2)
- HPV vaccination @$50/girl MIC (6)
- Hepatitis B vaccination LIC (7)
- 33% Price increase via tobacco tax (5)

Cost per DALY saved US $2012

Range
Cost of essential package

- Cost of essential package = US$20 billion per year—3% of total public spending on health in LMICs:
  - 2.6% in upper-middle-income countries
  - 5% in lower-middle-income countries
  - 13% in low-income countries
- Annual expenditure per capita:
  - $5.7 in upper-middle-income countries
  - $1.7 in lower-middle-income
  - $1.7 in low-income countries
- Potentially feasible in all but low-income countries without external support.
Essential cancer services should be included in universal health coverage:

Eventual coverage of all people for essential services, but cost-ineffective services should not be covered for anyone

Global initiatives needed:

- reduce the costs of key inputs (drugs, radiotherapy, testing)
- expand technical assistance and human resource development
- promote cancer research
THANK YOU

For more information visit: dcp-3.org
@dcpthree
#dcp3