Financial Protection for Cancer Care: Key Concepts and Methodological Insights

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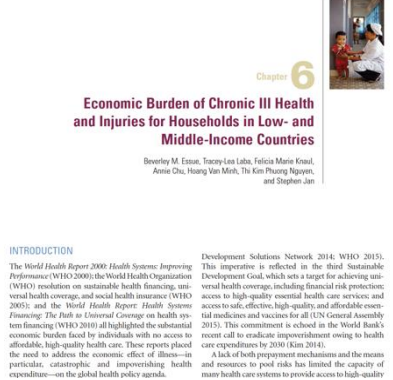
OUTLINE

- Background and rationale
- Definitions
- Approaches to measurement
- Magnitude for the issue: data on financial protection gaps for cancer
- Discussion and questions

Background


Chapter 6

Economic Burden of Chronic Ill Health and Injuries for Households in Low- and Middle-Income Countries

Beverley M. Essue, Tracey-Lea Laba, Felicia Marie Knaul, Annie Chu, Hoang Van Minh, Thi Kim Phuong Nguyen, and Stephen Jan

INTRODUCTION

The *World Health Report 2000: Health Systems: Improving Performance* (WHO 2000); the World Health Organization (WHO) resolution on sustainable health financing, universal health coverage, and social health insurance (WHO 2005); and the *World Health Report: Health Systems Financing: The Path to Universal Coverage* on health system financing (WHO 2010) all highlighted the substantial economic burden faced by individuals with no access to affordable, high-quality health care. These reports placed the need to address the economic effect of illness—in particular, catastrophic and impoverishing health expenditure—on the global health policy agenda.

Development Solutions Network 2014; WHO 2015). This imperative is reflected in the third Sustainable Development Goal, which sets a target for achieving universal health coverage, including financial risk protection; access to high-quality essential health care services; and access to safe, effective, high-quality, and affordable essential medicines and vaccines for all (UN General Assembly 2015). This commitment is echoed in the World Bank's recent call to eradicate impoverishment owing to health care expenditures by 2030 (Kim 2014).

A lack of both prepayment mechanisms and the means and resources to pool risks has limited the capacity of many health care systems to provide access to high-quality

The *Lancet* Taskforce on NCDs and economics 3

Action to address the household economic burden of non-communicable diseases

Stephen Jan, Tracey-Lea Laba, Beverley M Essue, Adrian Gheorghe, Janani Muhunthan, Michael Engelgau, Ajay Mahal, Ulla Griffiths, Diane McIntyre, Qingyue Meng, Rachel Nugent, Rifat Atun

The economic burden on households of non-communicable diseases (NCDs), including cardiovascular diseases, cancer, respiratory diseases, and diabetes, poses major challenges to global poverty alleviation efforts. For patients with NCDs, being uninsured is associated with 2–7-fold higher odds of catastrophic levels of out-of-pocket costs; however, the protection offered by health insurance is often incomplete. To enable coverage of the predictable and long-term costs of treatment, national programmes to extend financial protection should be based on schemes that entail compulsory enrolment or be financed through taxation. Priority should be given to eliminating financial barriers to the uptake of and adherence to interventions that are cost-effective and are designed to help the poor. In concert with programmes to strengthen national health systems and governance arrangements, comprehensive financial protection against the growing burden of NCDs is crucial in meeting the UN's Sustainable Development Goals.

Introduction

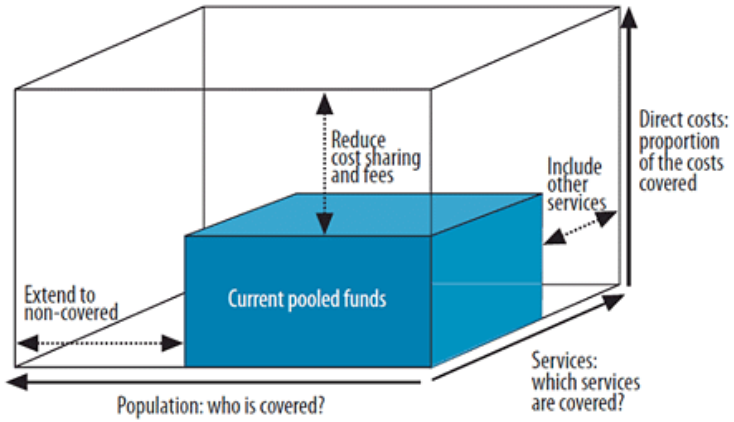
Of the 56 million deaths worldwide each year, 38 million (68%) are due to non-communicable diseases (NCDs), and 16 million (more than 40%) of these deaths are premature (before 70 years of age). About 80% of premature deaths from NCDs occur in low-income and middle-income countries (LMICs). By 2030, the annual number of deaths from NCDs is projected to increase to 52 million, whereas the number of deaths from infectious diseases is expected to decrease annually.[1] The growing burden of NCDs combined with technological innovation and heightened patient, community, and provider expectations pose challenges to the affordability of health care for households and governments alike. As chronic

households includes loss of employment for patients and caregivers and increased costs of living with disability, such as the need for mobility aids and the refitting of homes.

Health systems that protect individuals and their households from the economic burden of NCDs are crucial if the UN's Sustainable Development Goal (SDG) of poverty reduction is to be achieved. Health and economic outcomes are linked—social disadvantage increases an individual's risk of chronic disease and predisposes them and their households to illness-related poverty and economic hardship through loss of employment and out-of-pocket costs, which in turn can reduce quality of life and lead to depression and non-adherence

- There is an ongoing reliance on private expenditure in the form of out-of-pocket costs to pay for health care in many countries
  - Financial barrier = limits access to necessary AND unnecessary care
- Existing (conservative, old) estimate: at least 150 million people a year face financial catastrophe and 100 million are driven into poverty by expenditure on health care
- Noncommunicable diseases = driver of economic burden
  - Aging population; double disease burden
  - Repeated and lifelong costs associated with the management and treatment of illness
  - Inadequate coverage of NCD care (incl. cancer control) in developing health systems

Universal health coverage and the Sustainable Development Goals



Three dimensions to consider when moving towards universal coverage

"Financial risk protection is concerned with safeguarding people against
the financial hardship associated with paying for health services…[it] implicitly involves protection against the financial uncertainty associated with the need to use health services and pay for them"

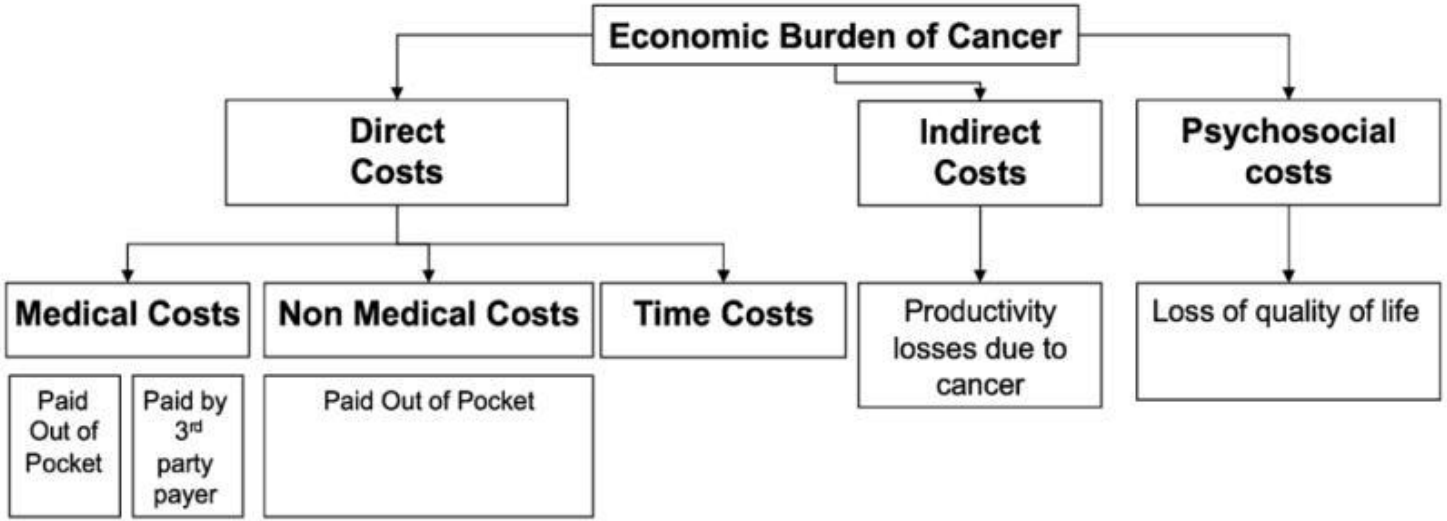
Saksena P et al. 2014. Financial Risk Protection and Universal Health Coverage: Evidence and Measurement Challenges. PLoS Med 11(9): e1001701

Financial protection and cancer costs

- ~50% of households affected by cancer in the ASEAN region experienced catastrophic out-of-pocket expenditures leading to impoverishment and economic hardship within a year after the diagnosis *The ASEAN Costs in Oncology Study*
- Even with UHC, patients with cancer may not be fully protected against economic impacts of cancer:
  - **India:** CRC study – 90% of pts reported CHE, 9% reported cost-related treatment attrition
  - **Mexico:** CHEF led to reductions in out-of-pocket expenditure breast cancer for surgery (70% to 39%), breast reconstruction (69% to 25%), chemo therapy (64% to 22%) and oncology consults (53% to 18%)
  - **Malaysia**: subsidized cancer care is available to all citizens regardless of their insurance status, CHE reported in >50% of cancer survivors at 1 year; cost-related delays
  - **Thailand**: high rates of CHE and medical impoverishment reported in the year following dx.

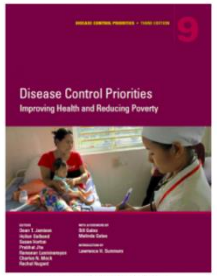
Lozano, WHO, 2015
Eala MA and Bhoo Pathy, Cancer, 2022
Bose, Lancet Regional Health – SE Asia, 2022

A conceptual framework of cancer costs



Pisu et al., 2010 (adapted from Brown and Yabroff 2006)

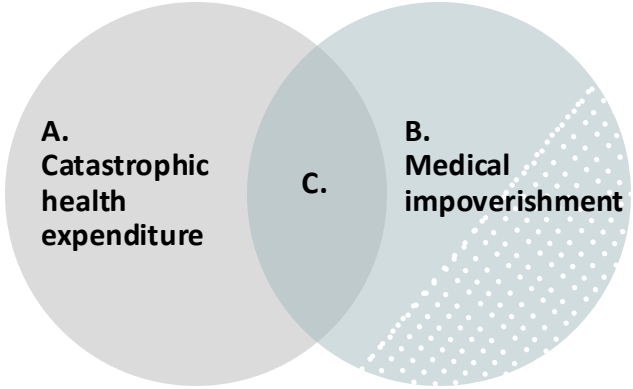
Definitions



Disease Control Priorities

Catastrophic health expenditure

- 10-40% of household resources
- Household resources:
  - Income
  - Capacity to pay
  - Expenditure
  - Disposable income
- Incidence of CHE
- Catastrophic overshoot



A. Health care expenditure is defined as catastrophic using any of the conventional definitions
B. Impoverishing health expenditure results at any level of expenditure
   - Darker shaded area: for the population already in poverty, any level of spending further entrenches social disadvantage and there is a high likelihood of forgoing care
C. Health care expenditure is catastrophic and impoverishes the household

Medical Impoverishment

- Poverty line: $1.90 & $3.20 /day
- May or may not include people already poverty

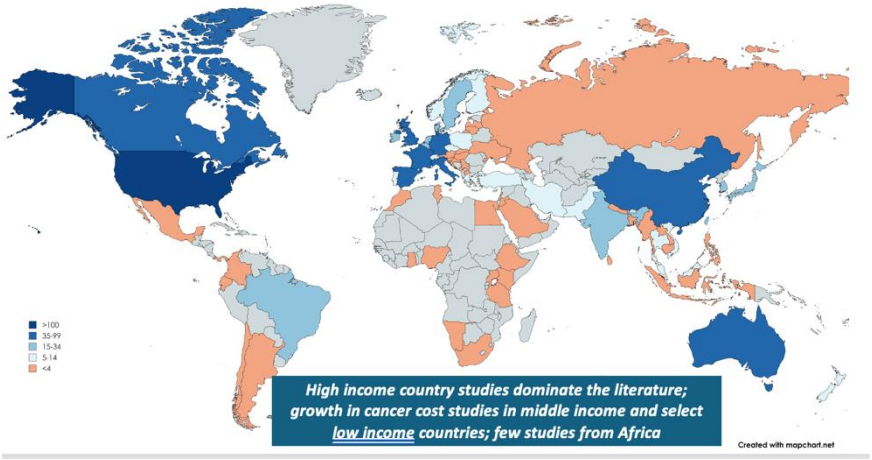
Essue B. et al. "Economic Burden of Chronic ill-Health and Injuries for Households in Low- and Middle-Income Countries". In: Disease Control Priorities (third edition): Volume 9, Disease Control Priorities, 2018.

Selection of Evidence on GAPS in Financial Protection for Cancer

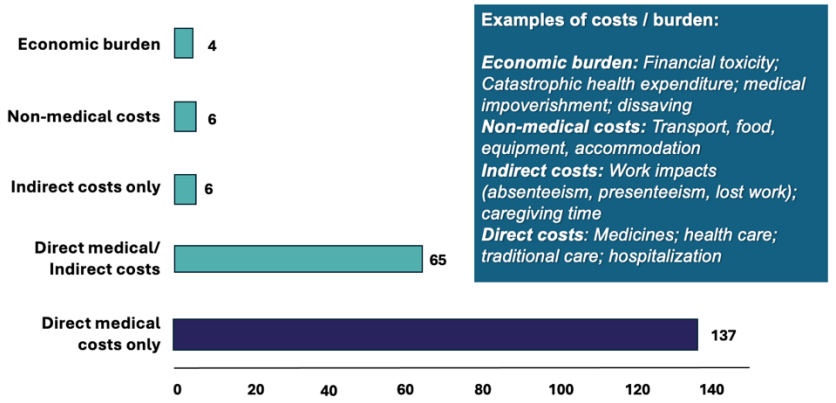
Selection of evidence

Umbrella review findings: current state

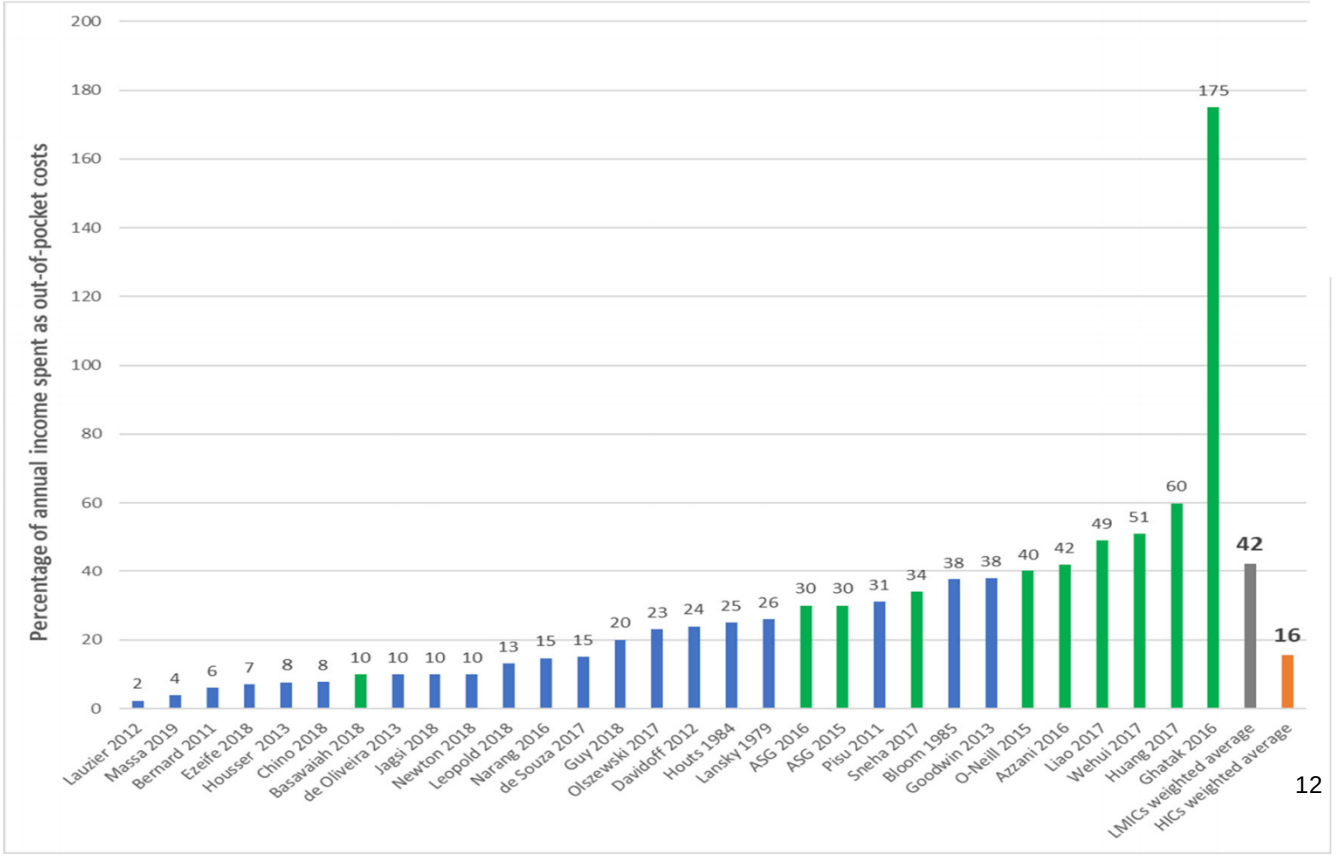
Coverage of cancer cost studies



Cost Categories Reported



Out-of-pocket costs as a % of annual income



Current Oncology

MDPI

Article

The Out-of-Pocket Cost Burden of Cancer Care—A Systematic Literature Review

Nicolas Iragorri [1,2,*], Claire de Oliveira [1,2,3,4], Natalie Fitzgerald [2] and Beverley Essue [1,2]

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[2] The Canadian Partnership Against Cancer, Toronto, ON M5H 1J8, Canada; natalie.fitzgerald@partnershipagainstcancer.ca
[3] Centre for Health Economics and Hull York Medical School, University of York, Heslington, York YO10 5DD, UK
[4] Centre for Addiction and Mental Health, Institute for Mental Health Policy Research and Campbell Family Mental Health Research Institute, Toronto, ON M6J 1H4, Canada
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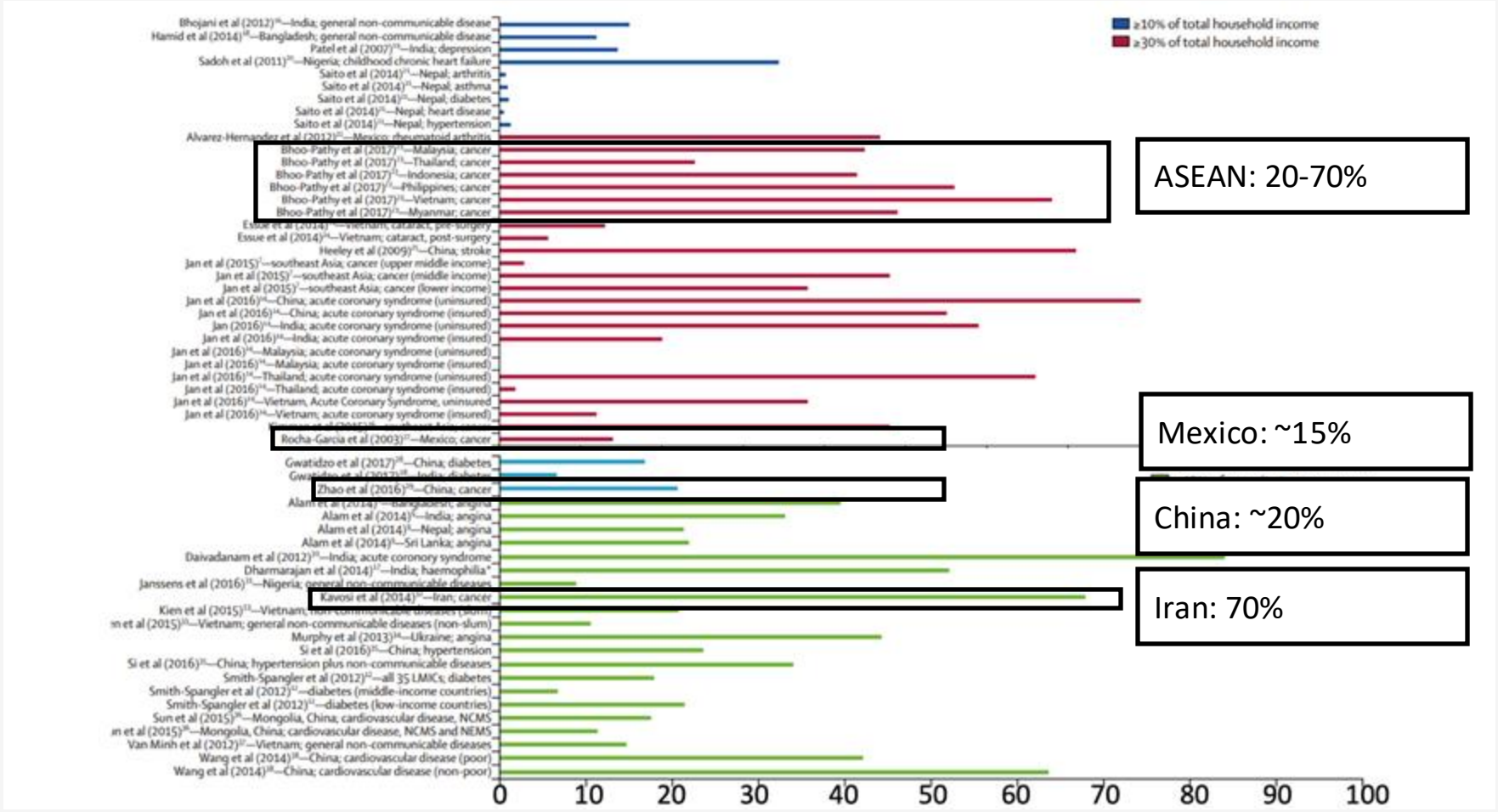
Current Oncology 2021, 28, doi.org/10.3390/curroncol28020117

LMIC (green) = low- and middle-income countries;
HIC = high-income countries (blue bars)
Studies conducted in high-income countries include the U.S., Canada, and Australia.
Studies conducted in low- and middle-income countries include China, Malaysia, India, Haiti, Brunei, Thailand, Indonesia, Philippines, Vietnam, Laos, Cambodia, and Myanmar

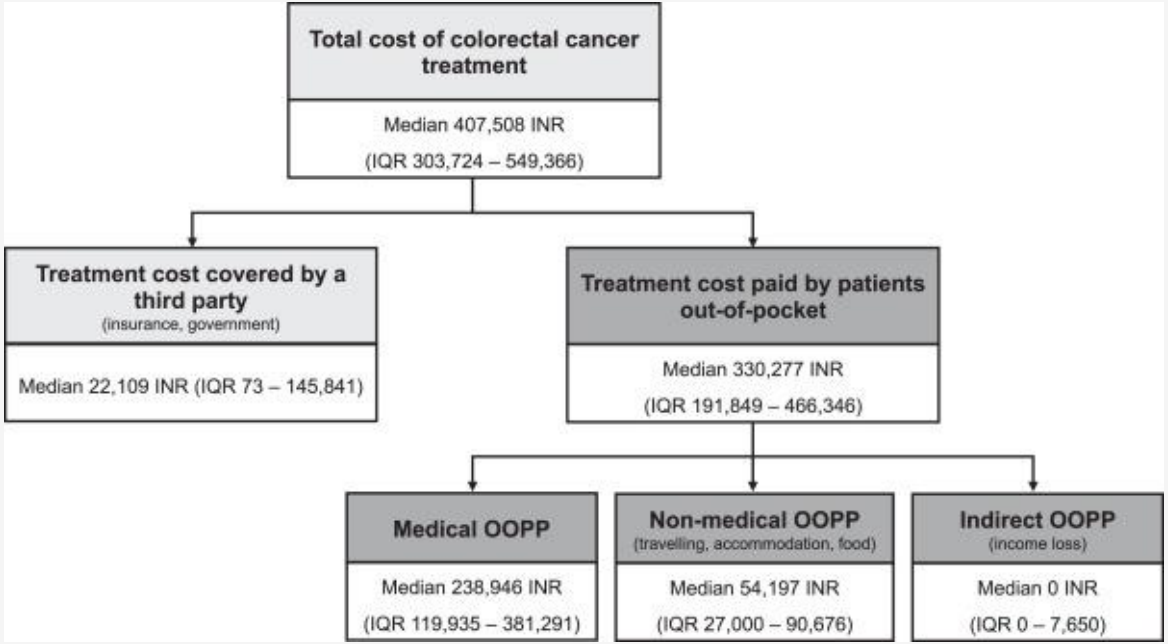
Proportion of households affected by CHE in LMICs

Jan, Laba, Essue, The Lancet, 2018



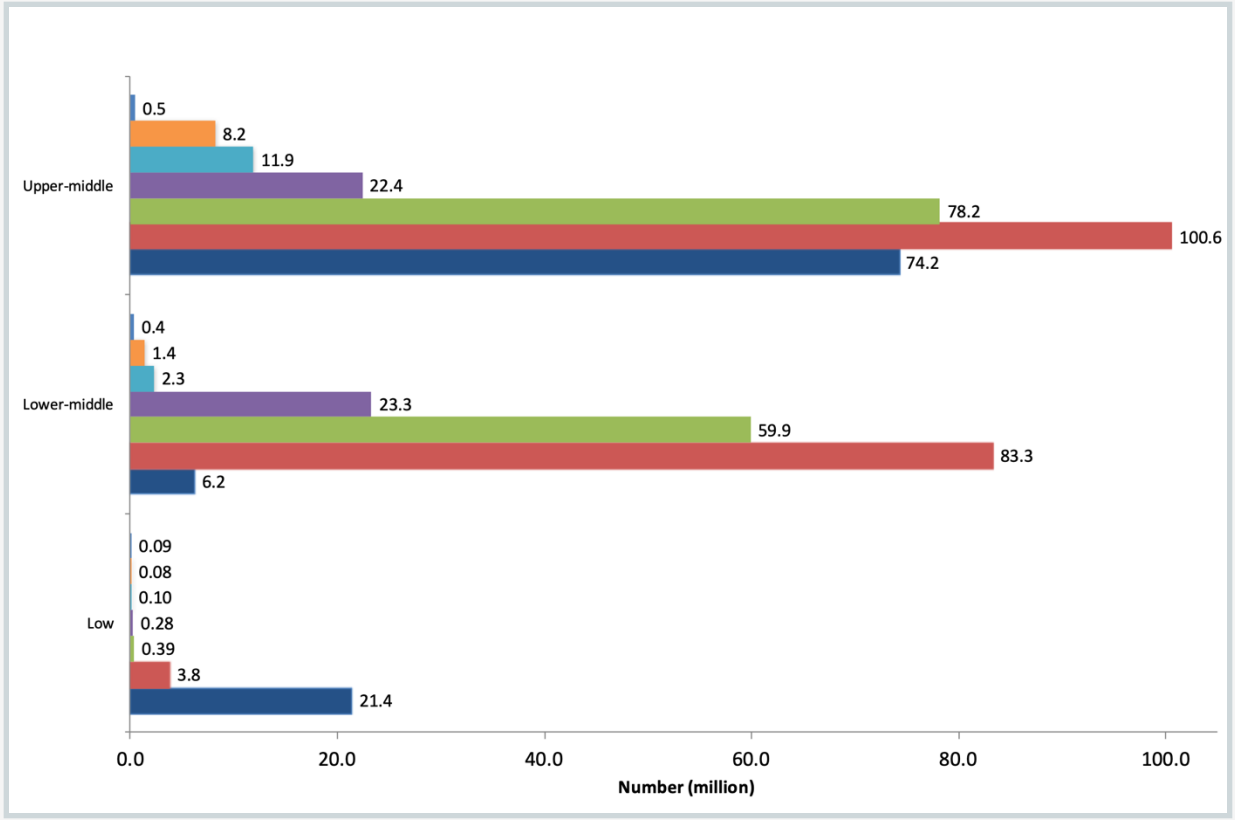
90% of households subject to catastrophic expenditure within six months of a new treatment plan

Colorectal cancer, 5 tertiary hospitals in India



The Lancet Regional Health - Southeast Asia 2022 6DOI: (10.1016/j.lansea.2022.100058)

Number of Catastrophic Health Expenditure cases by condition and region



Essue B et al, Disease Control Priorities, Volume 9, 2018

"While illness occurs in individuals, its costs do not fall on ill individuals alone…It [is] the household…that [make] decisions regarding health care choice and the allocation of time and financial resources to treatment. Sickness of one member affects the time use of healthy members and influences household decisions regarding the allocation of financial resources"

Sauerborn R, Adams A, Hien M. Social Science and Medicine 1996; 43(3): 291-309

Other relevant and related outcomes

Financial toxicity

Household economic hardship

Distressed financing

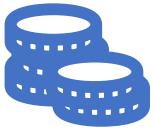
Productivity changes

Cost-related nonadherence or discontinuation

Tools and measurement

Common features across studies

Cross-sectional measurement



Focus on direct costs (absolute and relative)

Inconsistency in cost categories

Lack of consistency in tools

Cost Diaries

TABLE OF CONTENTS

2. Care you receive from doctors and other health care providers

In this section you should record information about every doctor or other health care provider you see.

Some examples of health care providers include:

- Doctors (e.g. general practitioners, surgeons, specialists)
- Nurses (e.g. community nurses)
- Dieticians
- Social workers
- Mental health workers (e.g. psychologists, psychiatrists, counsellors)
- Physical therapists (e.g. physiotherapists, occupational therapists, chiropractors)
- Other providers you see for health care and advice (e.g. naturopaths, homeopaths, acupuncturists).

Date of appointment	Name of health care provider	Type of health care provider	Reason for visit	How much did you pay?
10 January 2010 (example)	*Dr. Smith*	*GP*	*To discuss test results*	*$45*

4. Medications – prescription, non-prescription, vitamins and herbs

In this section record every time you or a family member or friend buy any type of medicine, vitamin or herb for your care.

Medicines may include:

- Prescription medications (pain-killers, antibiotics, anti-nauseants)
- Non-prescriptions medications (pain-killers, vitamin or mineral supplements, herbal therapies)

Date you bought medication	Name of medicine	Purpose of medicine	Dosage (# of tablets per day)	How much did you pay?
4 March 2010 (example)	*Pain-ease*	*To help with pain management*	*2 every 6 hrs (if needed)*	*$40*

Recall of Costs

How much money has been paid out of pocket for the following expenses as a result of your illness in the past 3 months? (i.e. the amount spent of your own money and not covered by Medicare or by health insurance)
Please indicate $ amount

		Out of pocket spending in the past 3 months ($)
26.	Medications (total for prescription and non–prescription)	$
27.	General Practitioner	$
28.	Specialists	$
29.	Hospitalisations (for treatment and complications)	$
30.	Medical Tests	$
31.	Ambulance services	$
32.	Transport costs (e.g. gas, bus fare, parking)	$
33.	Home and self care assistance (e.g. self–care, cooking, cleaning)	$
34.	Medical equipment and supplies	$
35.	Home modifications (e.g. plumbing, ramps)	$
36.	Special foods	$
37.	Other, please specify: _____	$

Consider:
Relevant reference period

Economic hardship

In the last 12 months, have any of these happened to your household on at least one occasion because you were short of money?

		YES	NO	N/A
2.	Could not pay the gas, electricity or telephone bills on time	○	○	○
3.	Could not pay rent or mortgage payments on time	○	○	○
4.	Could not pay for car registration or insurance on time	○	○	○
5.	Could not make a minimum payment on credit cards	○	○	○
6.	Could not pay for prescription or non–prescription medications	○	○	○
7.	Could not pay for medical consultations or tests (including specialist and general practitioner appointments)	○	○	○
8.	Could not pay health insurance premiums on time	○	○	○
9.	Could not pay for dental appointments	○	○	○
10.	Could not pay child care costs	○	○	○
11.	Could not pay transport costs	○	○	○
12.	Went without meals	○	○	○
13.	Did not attend medical appointments	○	○	○
14.	Did not fill prescriptions	○	○	○
15.	Were unable to heat your home	○	○	○

Coping strategies

THE ECONOMIC IMPACT OF ILLNESS ON HOUSEHOLDS

In the last 12 months did your household do any of these things because you needed money for living expenses?

		YES	NO	N/A
16.	Reduced home loan payments	○	○	○
17.	Drew on accumulated savings you had put away for other reasons (e.g. retirement, vacation)	○	○	○
18.	Moved house	○	○	○
19.	Increased the balance owing on your credit cards by $1000 or more	○	○	○
20.	Sought financial assistance from friends or family	○	○	○
21.	Sought assistance from welfare or community organisations	○	○	○
22.	Entered into a loan agreement with family or friends	○	○	○
23.	Took out a personal loan	○	○	○
24.	Sold assets (e.g. household goods, jewellery, shares, stocks, bonds)	○	○	○
25.	Used any other strategy in order to pay for living expenses Please describe: _____	○	○	○

Financial Toxicity - Comprehensive Score for Financial Toxicity

	COST (COmprehensive Score for financial Toxicity) Patient – Reported Outcome Measure	Not at all	A little bit	Some-what	Quitea bit	Very much
1	I know that I have enough money in savings, retirement, or assets to cover the costs of my treatment.	0	1	2	3	4
2	My out-of-pocket medical expenses are more than I thought they would be.	0	1	2	3	4
3	I worry about the financial problems I will have in the future as a result of my illness or treatment.	0	1	2	3	4
4	I feel I have no choice about the amount of money I spend on care.	0	1	2	3	4
5	I am frustrated that I cannot work or contribute as much as I usually do.	0	1	2	3	4
6	I am satisfied with my current financial situation.	0	1	2	3	4
7	I am able to meet my monthly expenses.	0	1	2	3	4
8	I feel financially stressed.	0	1	2	3	4
9	I am concerned about keeping my job and income, including work at home.	0	1	2	3	4
10	My cancer or treatment has reduced my satisfaction with my present financial situation.	0	1	2	3	4
11	I feel in control of my financial situation.	0	1	2	3	4

Supplementary Table 3. Final 11-item COST measure. Items 1, 6, 7 and 11 should be reversed scored, as higher scores indicate higher distress.

Innovations and Opportunities to Improve Measurement of Financial Protection in Cancer Populations

1

Development of concept and measurement

Original Reports | Pediatric Oncology

Check for updates

Novel Framework of Financial Hardship in Childhood Cancer: Incorporating Stakeholder Perspectives

Julie Ritter, DrPH[1]; João de Bragança, MA[2]; Carmen Auste, MSc[3]; Alejandra Mendez, EdM[4]; Phillip D. Cohen, MD[5]; Andrés Felipe Fajardo, MD[6]; Patricia Loggetto, MPP[7]; Karla Emília de Sá Rodrigues, MD[7]; Beverley M. Essue, PhD[8]; Felicia M. Knaul, PhD[9]; Sara M. Malone, PhD, LCSW[10]; Troy Quast, PhD[11]; Russell S. Kirby, PhD[12]; Eva Steliarova-Foucher, PhD[13]; I-Chan Huang, PhD[14]; Filip Meheus, PhD[15]; and Nickhill Bhakta, MD[1]

DOI https://doi.org/10.1200/GO.24.00093

2

Leverage existing data

Current Oncology

MDPI

Article

The Burden of Health-Related Out-of-Pocket Cancer Costs in Canada: A Case-Control Study Using Linked Data

Beverley M. Essue [1,2,*,†], Claire de Oliveira [1,2,3,4,†], Tracey Bushnik [5], Sharon Fung [2], Jeremiah Hwee [5], Zhuolu Sun [2], Elba Gomez Navas [2], Jean Hai Ein Yong [2] and Rochelle Garner [5]

3

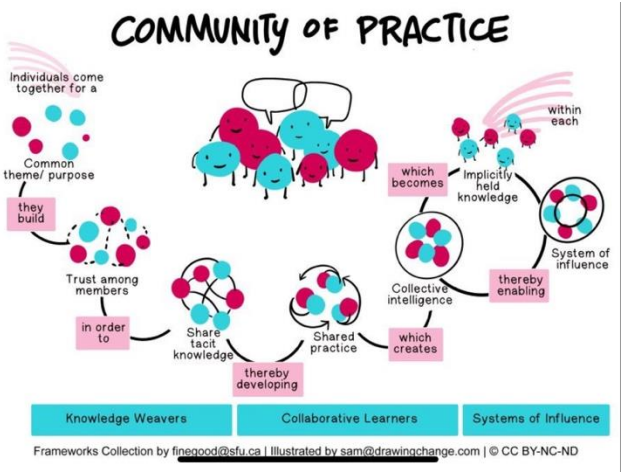
Awareness

The *Lancet* Commission on cancer and health systems: harnessing synergies to achieve solutions

Strong health systems require strong cancer systems and strong cancer systems strengthen health systems. This symbiotic relationship should be cultivated and leveraged to substantively advance universal health coverage. Yet, it has been largely ignored in global health.[1,2]

4

Quality, consistency and learning



Thank you!

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