PART 2.

MECHANISMS AND CONTEXT UNDERLYING SOCIAL INEQUALITIES IN CANCER

CHAPTER 10.

The role of health systems in addressing inequalities in access to cancer control

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Introduction

Substantial and, in many cases, worsening inequalities exist in cancer incidence and mortality, whereby women, socioeconomically disadvantaged groups, ethnic minorities, Indigenous populations, and other vulnerable groups experience poorer outcomes (see also Chapter 6). The observed inequalities in cancer outcomes reflect the differences in lifetime exposure to risk factors, such as health-related behaviours (e.g. smoking, excessive alcohol consumption, poor diet), infections, and environmental (e.g. radiation, air pollution) and occupational exposures, as well as unequal access to cancer care.

In May 2017, the Seventieth World Health Assembly adopted Resolution 70.12 on cancer prevention and control, emphasizing the importance of addressing inequalities in access to safe, affordable, and high-quality cancer-related health services and in cancer-specific risk factors in the context of strengthening health systems (WHA, 2017). The Resolution followed recommendations by the World Health Organization (WHO) Secretariat that national cancer control programmes should build on an "effective health system, founded on the principles of universal health coverage and strong primary health care" (WHO, 2016b). Universal health coverage (UHC), whereby all people have access to the health services they need, including preventive, promotive, curative, rehabilitative, or palliative services, of adequate quality to be effective without exposing users to financial hardship, has become an important global goal for countries to attain equitable health outcomes, founded on political commitments made in the United Nations 2030 Agenda for Sustainable Development (WHO, 2010; Kieny et al., 2017). Strong health systems, including a motivated, well-trained health workforce of sufficient capacity, are essential to achieve UHC (Sloan and Gelband, 2007; Evans et al., 2013; Kieny et al., 2017) and to meet Target 3.4 of the United Nations Sustainable Development Goals to reduce

premature mortality from noncommunicable diseases (NCDs) including cancer (UN, 2015).

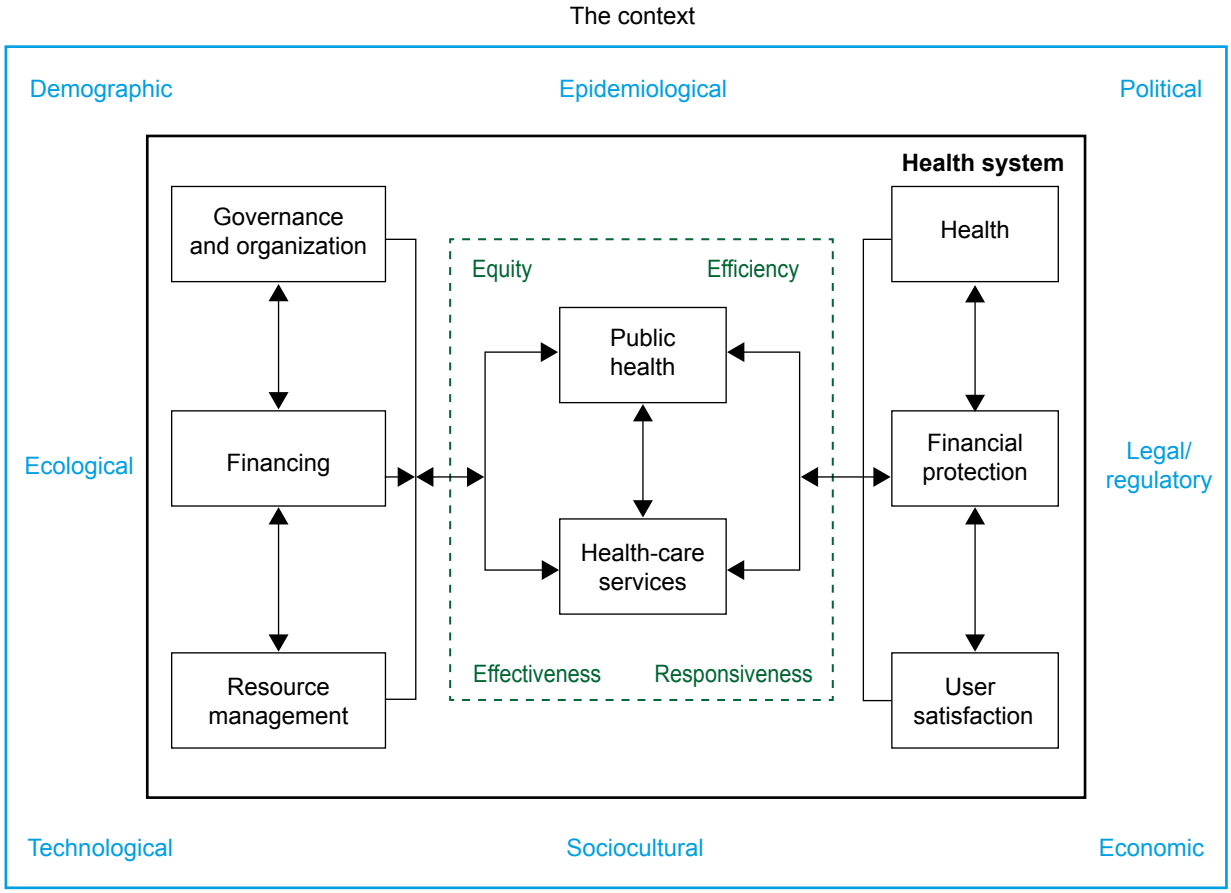
In this chapter, a health systems analytical framework (Atun et al., 2013) is used to provide an overview of the main health system features that would help to address inequalities in cancer outcomes. The focus is on key issues related to access to affordable and high-quality cancer care in the context of UHC. In this analysis, access is defined as the ability to use cancer care services, and refers to the degree of fit between an individual or community and the health-care system (Penchansky and Thomas, 1981; Gilson, 2007).

First, we briefly present the analytical framework used in this chapter to analyse health systems, and its key functions and goals. We then discuss barriers to access to cancer care in terms of availability (including physical accessibility), acceptability, and affordability. After that, we consider some key features of a health system required to address inequalities in access to cancer care in the context of UHC, before providing some concluding remarks.

Health systems and cancer control

A health system consists of all actors and actions whose primary interest is to promote, restore, or maintain health (WHO, 2007). Health systems include both the delivery of health-care services and broader individual- and population-level public health interventions within the health sector and across sectors (WHO, 2008; Atun et al., 2013; see also Box 10.1). The health system framework depicted in Fig. 10.1 identifies three goals – improving health (both the level and the distribution), promoting financial risk protection, and ensuring user satisfaction (satisfaction of the population with health services) – guided by overarching principles (i.e. intermediate objectives) of equality, effectiveness, efficiency, and responsiveness (Tandon et al., 2000; Atun et al., 2013), and has many commonalities with the WHO health system framework (WHO, 2007). Health

Fig. 10.1. Health system and context. Source: reprinted from Atun et al. (2013), copyright 2013, with permission from Elsevier.



Box 10.1. Health system functions in relation to cancer care. Source: compiled from Atun and Menabde (2008) and Atun et al. (2013).

- *Governance and organization:* governance of cancer care systems and regulatory environment, including national cancer policies, programmes, and targets; development of evidence-based guidelines and quality management for the integrated management of cancers; workforce policies; intersectoral action; community participation and feedback
- *Broader health financing policies:* how funds are collected and pooled; costing (and budgeting) of the national cancer control programme
- *Resource management:* how pooled funds are allocated to health providers (purchasing); what services are provided (priority setting and health technology assessment); development of human resources, capital investments, and equipment
- *Service delivery:* population- and individual-level public health interventions and health-care services provided within the community; primary health care; hospitals and other health institutions

programmes and interventions for cancer are delivered through health systems to achieve these goals, and thereby influence the cancer incidence and mortality of various subgroups within the population (Mills and Ranson, 2006).

To achieve the overall goals of a health system within a given set of contextual factors, it is important to consider the broader political economy context within which it is embedded, as well as demographic, economic, political, legal, social, environmental, and technological factors, which can interact to influence health system functioning and the attainment of these goals (Atun and Menabde, 2008). Health systems are now understood as complex adaptive systems that exhibit properties of self-organization and nonlinearity (Paina and Peters, 2012). This complexity and the broader context may enable or disable efforts to implement and scale up cancer control activities.

Over the past decade, there have been many efforts in the field of health systems research to develop methods to understand health systems and/or their performance, acknowledging that the health system is a complex system (De Savigny and Adam, 2009; Gilson, 2012). Comparisons of cancer outcomes between settings reveal the significant potential of high-performing health systems to advance the health of an entire population (Barber et al., 2017). Studies have consistently shown the central prominence of a highly functional health system in the attainment of cancer-related goals. For example, a report produced by the Organisation for Economic Co-operation and Development (OECD) ("Cancer care: assuring quality to improve survival") found an almost 4-fold difference in cancer survival rates among OECD countries, attributed to differences in health system capacity, functions, or governance (OECD, 2013). The performance of the health system can explain differences in health outcomes between countries and subpopulations, and should be examined to strengthen the scientific foundations of health policy at the international and national levels (Barber et al., 2017).

Why are health systems relevant to cancer prevention and control? Historically, health systems interventions in cancer prevention and control have focused on population health, that is, strategies to mitigate cancer risk factors. The objective of these interventions has been to realize the potential of cancer prevention to avoid 30–50% of incident cancer cases through population health interventions, such as tobacco control measures, and general improvements in living conditions that can reduce the burden of select infection-related cancers (Fitzmaurice et al., 2017). Successful population health interventions generally mandate intersectoral action with shared objectives.

In addition to public health, a core function of health systems is health service provision, that is, to care for individuals who develop cancer or precancerous lesions by providing high-quality services across the care continuum in an effective, efficient, equitable, and responsive way to improve their health while ensuring financial protection and user satisfaction. However, all too often, in most health systems current service provision for cancer care is inefficient, inequitable, and fragmented, resulting in a substantial number of avoidable deaths and disability, especially in low- and middle-income countries (LMICs) (Farmer et al., 2010; Knaul et al., 2013; Atun et al., 2015). Indeed, in LMICs services are often unavailable, population coverage is low, and financial catastrophe is all too common. A fundamental shift in the way health services are funded, managed, and delivered is needed to progress towards UHC,

which can help protect outcomes for those with cancer even in times of economic downturns (Maruthappu et al., 2016).

Impact of health system performance on cancer outcomes

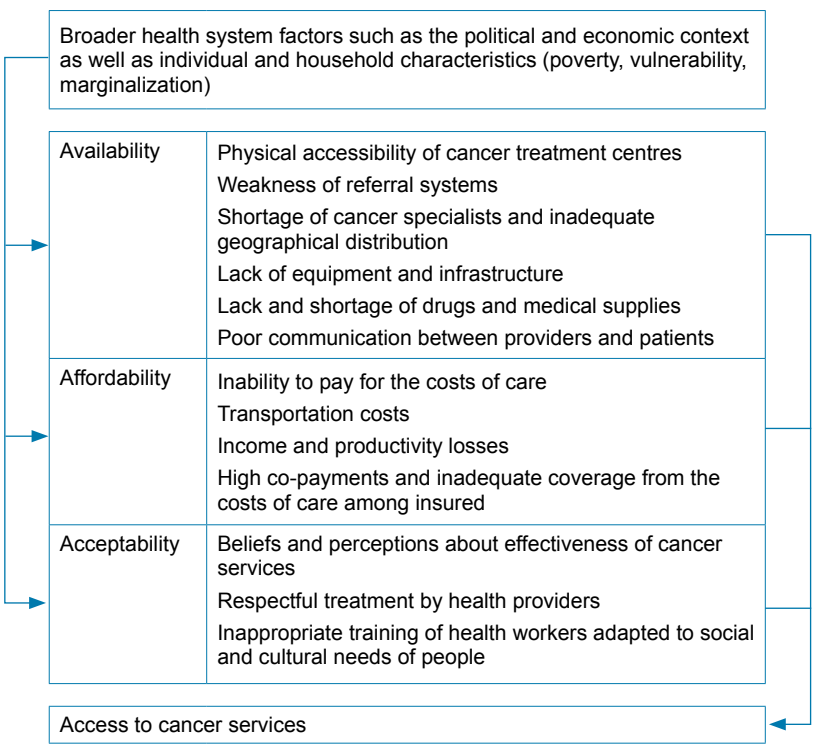
Karanikolos et al. (2013) identified three mechanisms through which health systems influence cancer outcomes: coverage and access to cancer care, innovation, and quality of care. Innovation or access to technology is discussed in detail in Chapters 16 and 18; here, we focus on issues related to access to and quality of cancer care.

Inequalities in access to cancer care between and within countries are well demonstrated. Individuals with low incomes, ethnic minorities, Indigenous populations, and other socioeconomically disadvantaged groups face considerable barriers to accessing needed cancer services in LMICs as well as in high-income countries (HICs) (see Focus 5 and Focus 7). The ability to obtain and use the needed health services is associated with both demand-side barriers, which deter individuals, households, and communities from accessing services, and supply-side barriers, with services that are either not available or not of sufficient quality to be effective (e.g. because of shortages in the health workforce and in the supply of medicines). Inequalities in accessing cancer care begin at the earliest stage, from the onset of symptoms, and exist throughout the care continuum, from symptom awareness to accessing treatment and receiving palliative care (Knaul et al., 2018).

Delays in diagnosis, resulting from prolonged duration in the presentation, diagnosis, and/or treatment intervals, are often associated with education level, socioeconomic status (SES), ethnicity, rural residence, and other risk factors (Freitas and Weller, 2015; WHO, 2017a; McKenzie et al., 2018). In LMICs, the stigma and discrimination that is still associated with cancer may further delay care-seeking, diagnosis, and treatment (Knaul et al. 2012a). Studies in multiple settings have reproduced these findings, which highlight the failures in health systems to promote health and early diagnosis for certain populations. A systematic review of delays in breast cancer diagnosis in LMICs found consistent evidence that certain demographic, sociocultural, and economic factors contribute to presentation delays (Sharma et al., 2012). Failure to diagnose cancer in a timely manner is generally associated with lower survival rates and worse overall outcomes (Neal et al., 2015).

Disadvantaged groups are also less likely to access any type of treatment; the geographical accessibility and availability, affordability, and acceptability of health services contribute to low rates of effective coverage for cancer patients (Fig. 10.2) (OECD, 2013; Ambroggi et al., 2015; Niessen et al., 2018). Geographical accessibility is particularly relevant in cancer care; across many settings and countries, it has been noted that the further a patient lives from a cancer treatment centre, the greater the delay in diagnosis and/or the more advanced the stage of disease at diagnosis (Galukande et al., 2014). In South Africa, a study of the association between distance to a hospital and stage of breast cancer at diagnosis showed that women living

Fig. 10.2. Common factors that influence equitable access to cancer care. The barriers to access are categorized according to typology proposed by McIntyre et al. (2009). Source: compiled from McIntyre et al. (2009).



more than 20 km from the hospital were more likely to present with late-stage cancer at diagnosis (Dickens et al., 2014). Longer distances to health-care facilities have also been shown to affect the appropriateness of and adherence to treatment, and to negatively affect quality of life (Ambroggi et al., 2015).

Poor geographical accessibility is compounded by a general lack of available services, particularly in LMICs. Data from the WHO NCD Country Capacity Survey have shown that, in approximately three quarters of low-income countries and half of lower-middle-income countries, basic cancer diagnostic and treatment services are not generally available (WHO, 2016a). An insufficient number of available diagnostic and treatment centres results in long waiting times and is often compounded by low-quality care (Dare et al., 2015). Poorly delivered cancer care results in worse overall outcomes for those affected, thereby subjecting vulnerable subpopulations to the costs and harms of cancer care without the benefits. The underlying causes of low-quality services vary between settings but have been attributed to shortages of human resources, poorly trained or low-volume providers, an inadequate supply of drugs, and a lack of equipment, among other factors (Sullivan et al., 2015). For cancer, as with many other conditions, there is a volume–outcome correlation for both providers and facilities: the higher the volume of services, the more likely a cancer patient is to have a successful outcome (generally until a threshold is reached) (de Cruppé et al., 2015; Sullivan et al., 2015). Accordingly, health systems are generally organized to achieve efficiencies; recognizing that centralizing services can also improve outcomes must be balanced against over-centralization, which can negatively affect other desirable outcomes, such as equality and user preferences. Inequalities then arise when certain subgroups, generally those living in urban centres or those with higher SES, have access to high-volume centres with highly trained providers and appropriate equipment (Massarweh et al., 2011; Yun et al., 2012; Sun et al., 2014; Wasif et al., 2016).

In addition to ensuring equality, efficiency, and effectiveness, health-care services must also be person-centred and acceptable. In practice, however, and in most settings, cancer treatment decisions are not sufficiently informed by user preferences or oriented around the person. Effective communication with patients plays a particularly important role in cancer management, because of the complexity of decisions about the risks, benefits, and uncertainties of treatment. The conversation-recall and critical-thinking ability of patients may be further affected by the general fear and anxiety that accompanies a cancer diagnosis (Sanders et al., 2018). Studies have consistently shown failure in communications (Miller et al., 2014), whereby sociodemographic factors, such as income, education level, and race, influence the amount of time that physicians spend communicating with patients (Siminoff et al., 2006). For example, in the USA, most patients who receive cancer treatment for metastatic cancer believe that the treatment is being given with curative intent; in reality, however, it is being given to extend the quality and quantity of life or for palliative care (Weeks et al., 2012). Communication between cancer patients and their health-care providers is further compromised by the fragmentation of services and the number of providers. In one study in Canada, a cancer patient saw a median of 32 providers over the course of their treatment (Smith et al., 1999).

Cultural factors and the attitudes of health providers and patients have consequences for the type of care and support that patients receive. Substantive research has shown that, compared with groups with high SES, groups with low SES are more likely to receive more aggressive treatment, for example, mastectomy rather than breast conservation (Liu et al., 2012), permanent stoma without reconstruction (Averyt and Nishimoto, 2014), and laryngectomy rather than larynx preservation therapy (Hou et al., 2012), without post-treatment survivorship care or psychosocial support. Sociodemographic characteristics also influence the likelihood of initiating and completing therapies, and these characteristics of both patients and health-care professionals can have a profound effect on the acceptability of cancer services (Chaturvedi et al., 2014). Social exclusion and marginalization can further negatively affect both the care received and the decision to pursue care (Quinn et al., 2015).

Beyond accessibility, effectiveness, efficiency, equality, and patient-centredness of services, which can all affect health outcomes, lack of financial accessibility or affordability has been found to be a major barrier to accessing cancer care services. The costs of cancer care can have a considerable economic impact on individuals (and their health, because of barriers to access and interruption to treatment) and their households, leading to catastrophic health expenditures that either push families

into poverty or lead to further impoverishment. There is ample evidence showing the profound impact of out-of-pocket payments for medical expenses. For example, using data from 553 household surveys covering 133 countries, Wagstaff et al. (2018a) found that about 12% of the world's population (nearly 810 million people) incurred catastrophic health expenditures in 2010, with out-of-pocket payments exceeding 10% of total household expenditure. In 2010, nearly 100 million people were impoverished as a result of out-of-pocket spending on health (Wagstaff et al., 2018b). The evidence is more limited for cancer specifically, in particular in LMICs. A recent systematic review by Jan et al. (2018) examined the economic burden of NCDs, including cancer, in LMICs. They found that the incidence of catastrophic health expenditures was highest for cardiovascular diseases, followed by cancer, and "consistently higher" in low-income groups. Being uninsured was associated with a 2–7-fold higher odds of catastrophic out-of-pocket expenditures (Jan et al., 2018). In the Association of Southeast Asian Nations region, a cohort study that followed up newly diagnosed cancer patients for 12 months showed that after 1 year, 48% of households had incurred catastrophic expenditures, with a much higher odds of catastrophic expenditure among those in lower-income groups (Kimman et al., 2015).

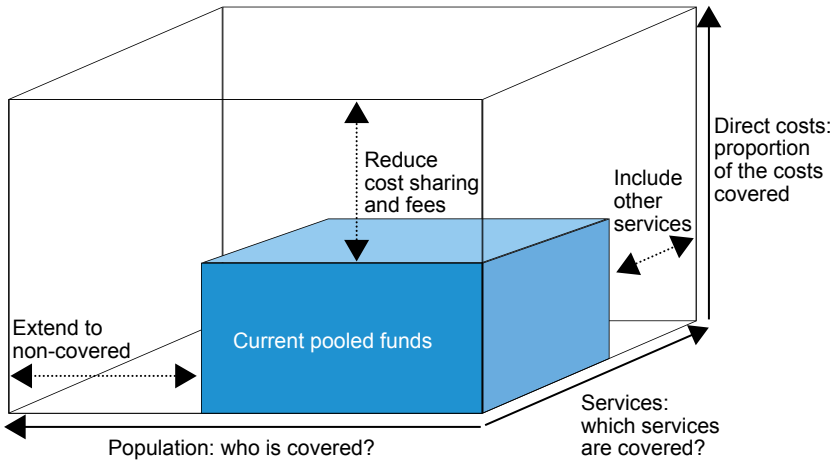
The economic burden of cancer is not limited to payments for direct medical costs; direct non-medical costs, such as transportation costs, as well as indirect costs, such as loss of income and costs associated with various coping strategies (e.g. borrowing money to cover the costs of care), negatively affect the economic well-being of a household. For example, in the Democratic Republic of the Congo, Guinea, and Madagascar, not having to pay for the costs of transportation reduced the proportion of patients not attending for surgery by 45% (Shrime et al., 2017). In addition to out-of-pocket costs, financial barriers to cancer care have also been found to lead to a lower uptake of preventive health services, delays in diagnosis or seeking treatment (Freitas and Weller, 2015; McKenzie et al., 2018), and failure to initiate treatment or the premature discontinuation of treatment (e.g. Arora et al., 2007; Israëls et al., 2008; Jan et al., 2015).

Within the wider context of global equality in cancer care, there are also major disparities between countries. Less than 25% of the global population has access to basic, high-quality cancer surgery (Sullivan et al., 2015). Similarly, only 40–60% of patients with cancer are estimated to have access to radiotherapy services (Atun et al., 2015). In approximately three quarters of all low-income countries, the majority of the population generally has no access to basic cancer diagnostic and treatment services or palliative care (WHO, 2016b). It is from these profound disparities in health system capacity that greater inequalities emerge. The few people who are able to receive cancer care in LMICs are typically from the most privileged subpopulations; for most people, services are inaccessible. This global inequality is far too great and cannot be ignored. For specific cancer types, such as childhood cancers, survival can be greater than 80% in high-resource settings and less than 20% in low-resource settings (Gupta et al., 2015; Howard et al., 2018). This cancer divide in outcomes is one of the largest inequalities known in health service provisions (Knaul et al., 2012a).

Which health system strategies promote equality in cancer care? An overview of key policy issues

The response to cancer requires an integrated and coordinated effort across the continuum of care, from prevention and early detection to diagnosis, treatment, survivorship, and palliative care; effective action is needed across the different functions of the health system to reduce inequalities and achieve UHC. Several middle-income countries, such as Mexico, Thailand, and Turkey, have demonstrated that progress towards UHC with the inclusion of cancer interventions in their health benefits package is possible (Knaul et al., 2012b; Atun et al., 2013). Generally, to move towards UHC, countries need to consider three interrelated elements corresponding to the three dimensions of coverage depicted in the UHC cube and used in the *World Health Report 2010* (Fig. 10.3): (i) financial protection, by reducing the reliance on out-of-pocket payments in favour of mandatory pre-payment mechanisms; (ii) service coverage, by gradually expanding services from pooled resources, starting with essential services that are of good quality; and (iii) population coverage, by ensuring equality in access to services whereby everyone is covered (WHO, 2010, 2014). To ensure an equitable approach towards UHC, progressive realization of UHC should be adopted whereby the poor and disadvantaged are prioritized or benefit as much as others as countries progress towards UHC (Gwatkin and Ergo, 2011; Jamison et al., 2013).

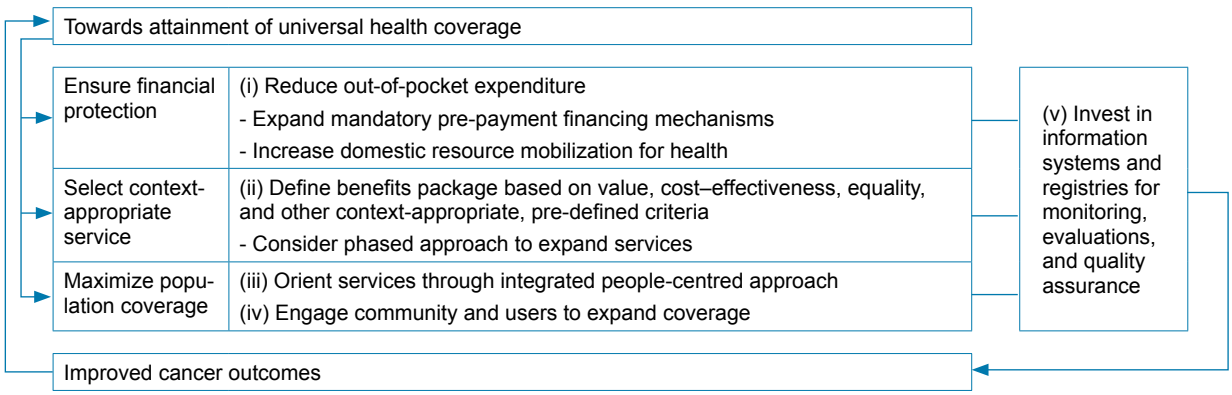
Fig. 10.3. Dimensions to consider when moving towards universal health coverage. Source: reproduced from WHO (2010).



Countries face several challenges in their quest to achieve UHC and to provide effective, efficient, equitable, and responsive cancer services. Five health system strategies are proposed to promote equality in cancer care while advancing attainment of UHC (Fig. 10.4). The first strategy relates to the financing of health services. How the health system is financed will be different between countries, but recent contributions have shown the importance of progressive domestic public resources, in particular tax-based funding, to progress towards UHC (Moreno-Serra and Smith, 2015; Reeves et al., 2015). In many countries, in particular LMICs, out-of-pocket payments are still a large share of total health-care expenditure and are an important source of financing for the health system. For example, out-of-pocket payments in low-income countries are twice as high as those in HICs (40% vs 20%) (WHO, 2018). Generally, out-of-pocket payments are a regressive source of financing, with lower-income groups contributing a disproportionately higher share of their income compared with higher-income groups (Whitehead et al., 2001; Mills et al., 2012). In the few countries where out-of-pocket payments were found to be progressive (e.g. some countries in the Asia-Pacific region), this was likely due to lower-income groups not using services because they could not afford them (O'Donnell et al., 2008).

To improve access to health services while providing financial protection, countries need to expand mandatory pre-payment financing mechanisms based on ability to pay, pool risks to the greatest extent possible, and eliminate out-of-pocket payments at the point of service use. Both mandatory pre-payment and risk pooling are essential to provide financial protection and ensure cross-subsidization of risks (between high- and low-risk individuals) and income (between rich and poor), and can be achieved by increasing domestic resource mobilization through taxation or other government revenue, and/or by introducing mandatory health insurance. These are also the most progressive ways of financing the health system and increasing population coverage (Fig. 10.5) (Mills et al., 2012). Generally, most LMICs are not spending enough on

Fig. 10.4. Sample health system strategies to improve access to cancer prevention and control programmes through universal health coverage.



health. The Centre on Global Health Security Working Group on Health Financing suggested that countries should strive for domestic government funding for health services to be at least 5% of gross domestic product (Chatham House, 2014; Mcintyre et al., 2017); in 2015, funding for health services amounted to 1.3% in low-income countries, 2.9% in middle-income countries, and 7.8% in HICs (WHO, 2018). However, these or other proposed spending targets (such as the estimates of the High Level Task Force on Innovative Financing for Health Systems) will not raise sufficient resources in low-income countries, and external support will still be needed to finance an essential package of interventions, including cancer care (Gelband et al., 2016).

The second important strategy relates to which services should be included in the benefit package. This should be informed by transparent priority-setting processes based on considerations of cost–effectiveness, budget impact, and equality that maximize population health but also include vulnerable and underserved populations from the start (Gwatkin and Ergo, 2011; WHO, 2014). The benefit package should be sufficiently comprehensive with no or limited co-payments to minimize out-of-pocket expenses relative to income. This is even a concern in HICs, where the financial burden of cancer can still be severe because of limited coverage, high co-payments, and/or high deductibles for insured individuals (Ubel et al., 2013; Zafar et al., 2013). For low-resource settings, a phased approach to the expansion of cancer services will be needed; priority should initially be given to essential, cost-effective, and good-quality cancer services. Several countries have established systems of health interventions and technology assessment to inform the setting of priorities and the formulation of sustainable benefit packages, such as the Health Information and Technology Assessment Programme in Thailand. Several other initiatives have also provided guidance on essential packages of health services for NCDs and cancer that countries can implement according to their level of resources, including the WHO list of "best buys" (WHO, 2017b) and the Disease Control Priorities Project (Gelband et al., 2016).

The third strategy relates to the delivery of responsive and person-centred cancer services and the use of evidence-based standards of care. When UHC policies are implemented, strong emphasis should be placed on an integrated approach, with a particular emphasis on the primary health care level. For most cancer patients, primary health care is the first point of entry to the entire health system. Primary health care therefore has an essential role in organizing health services, in promoting prevention and early diagnosis, improving cancer screening uptake, informing treatment decision-making, and providing end-of-life care (Rubin et al., 2015). Providers must be enabled to identify cancer symptoms, have established referral mechanisms for diagnosis and treatment, and remain engaged to promote continuity of care and support decision-making. Countries need a sufficient and appropriately trained health workforce to ensure delivery of health services in general and of cancer care in particular, a major resource constraint in LMICs. However, having the required health workforce capacity and simply providing access to cancer services is not sufficient; these services also need to be effective and of good quality. It has been estimated that improving the quality of existing health services could prevent millions of deaths from cancer, and it is essential to improve cancer outcomes (Dare et al., 2015). Health systems must therefore be enabled, though governance, organization, and resource management, to provide the highest attainable quality.

Multiple frameworks exist to define domains of quality and implement quality strategies in health services (WHO, 2006). Fundamentally, approaches should be tailored to a specific context and health system; there is no one-size-fits-all approach. Wide variations in standards of health-care delivery exist within and between health-care systems. However, quality strategies are relevant in all settings and should be prioritized to include national policies and quality assurance programmes, regulatory or administrative agencies, clinical guidelines and

Fig. 10.5. Progressivity of financing mechanisms.

Source of funding	Extent of pooling	Progressivity
General tax	+++	
Hypothecated tax (flat)	++	
Social insurance	++	
Private insurance	+	
Out-of-pocket payments	–	

standards, health workforce training and certification programmes, and strengthening information systems and monitoring outcomes with a focus on equality by disaggregating relevant data (Dare et al., 2015; Ghebreyesus, 2018). For example, the development of evidence-based standards in cancer has resulted in significant improvements in cancer outcomes. Data from HICs have demonstrated that centres that have cancer treatment guidelines and that adhere to these guidelines deliver better care, resulting in improved outcomes for the populations served (Boland et al., 2013; Kuehnle et al., 2017). Multidisciplinary tumour board services also have the potential to improve cancer outcomes, but there is variable participation, particularly among vulnerable subpopulations (Lawrenson et al., 2016). In settings where cancer and other health-care services are less well developed, an emphasis on quality is particularly relevant to rapidly scale up capacity, optimize resource use, and expand population coverage (WHO, 2006). Centralization of services must be balanced against equality, enabling people to receive care closer to their homes and thereby reducing indirect costs and facilitating timely care. Community outreach and engagement can help to reduce barriers to care, improve health literacy, and empower patients in decision-making (Hahlweg et al., 2017).

The fourth strategy relates to effective user engagement in the design and delivery of person-centred cancer services. For improved equality in cancer care, the health system must be oriented around the individual rather than around the disease (WHA, 2016). Communities should be empowered and engaged through interventions such as peer support groups and patient navigators, who can facilitate access to and reduce delays in receiving care, particularly for marginalized communities (Gervès-Pinquié et al., 2018). Promoting participatory decision-making is an important principle of integrated, people-centred health services. Treatment guidelines are important to inform health-care providers about the best available treatment, but they generally fail to consider patient preference and are often not designed for informed, participatory decision-making (Chong et al., 2009; OECD, 2010; Institute of Medicine, 2011; Mead et al., 2013). Care planning across the service delivery continuum, from primary care to specialty care, should be prioritized, particularly for subpopulations who are non-native speakers or with lower SES and/or lower education level. To achieve patient-centred health systems, mechanisms to incorporate patient preferences and to assess health-care quality should be established, such as the use of patient-reported outcomes (Kruk et al., 2018; National Academies of Sciences, Engineering, and Medicine, 2018) as recently recommended by OECD (2017).

The fifth strategy relates to the availability and use of data for decision-making. Most health systems have limited data on cancer, especially in relation to outcomes. For example, in a recent global study on cancer survival, only 71 countries and territories had cancer registries that could be used to estimate 5-year net cancer survival. Of these, only 47 could provide data with 100% population coverage (Allemani et al., 2018). Few data exist in LMICs on the equality, efficiency, effectiveness, and responsiveness of the cancer services provided; this critical information is necessary to inform not only what services are provided but also how these services should be provided and to whom, and would enable health systems to truly fulfil their potential to improve cancer outcomes and reduce inequalities.

Conclusions

The effective implementation and expansion of cancer prevention and control interventions require an appropriate understanding of health systems and their interrelated functions. In this chapter we have briefly summarized some of the barriers that countries face and methods to address these, including raising appropriate financing of health systems, ensuring financial protection, providing person-centred cancer services, and improving infrastructure and information and data systems. Health systems have an important role to play in promoting health equality by ensuring that every patient has access to high-quality cancer services throughout the care continuum from prevention and early detection to diagnosis, treatment, survivorship, and palliative care. Equality is also a crucial dimension of UHC, in terms of both financial protection and service coverage. When moving towards UHC, it is essential that service coverage is provided across the social gradient. This may involve initially focusing on a limited number of high-priority health services (including cancer-related health services), for which high coverage of the entire population at risk can be achieved.

Key points

- Health systems have an important role to play in promoting health equality by ensuring that every patient has access to high-quality cancer services throughout the care continuum, from prevention and early detection to diagnosis, treatment, survivorship, and palliative care.
- The effective implementation and expansion of cancer prevention and control interventions require an appropriate understanding of health systems and their interrelated functions.
- When poorly designed, health systems can exacerbate inequalities in cancer care and worsen outcomes for disadvantaged populations.
- National cancer control programmes should be informed by the principles of universal health coverage, including financial protection and maximal coverage of high-quality services.

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