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Avoiding the zero sum game in global cancer policy: Beyond 2011 UN high level summit

R. Sullivan [a,b,c,*], *A.D. Purushotham* [a,b]

[a] *King's College London, London, UK*
[b] *Guy's & St. Thomas' NHS Foundation Trust, London, UK*
[c] *European Institute of Oncology, Milan, Italy*

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ABSTRACT

In September 2011 a unique high level summit on non-communicable diseases will be held in New York. For cancer as for many of the other chronic diseases this marks their first high level recognition. However, the reality of cancer control in middle and low income countries is and will be very different from the trajectory experienced by developed countries. This perspective seeks to critically examine the approach being taken, mapping pitfalls and presenting alternative solutions for an international cancer control policy.

1. The politics of global cancer

Cancer has a devastating personal, social and economic impact on the global population. The figures provided in an upcoming Lancet Oncology Commission on Affordable Cancer Care are a stark warning that cancer specifically and non-communicable diseases (NCD) generally are a major and increasing burden on the health and wealth of nations. In the face of rapidly changing demographics – an ageing and expanding global population – there is a critical need for public policy action that moves beyond national boundaries.[1] Chronic diseases including cancer, heart disease and diabetes account for more than 60% of deaths worldwide but less than 3% of public and private funding for global health. Excluding the huge impact of disability and years of lost life, cancer's economic toll was $895 billion in 2008 — equivalent to 1.5% of the world's gross domestic product excluding the direct costs of healthcare which almost certainly push this figure above 1 trillion USD.[2] Cancer is a direct public health threat to economic development. Putting in place healthcare programmes and systems now to cost-effectively manage cancer using resource-level appropriate control measures, is a basic necessity, not a luxury. Cancer cuts productive lives short and has a major impact on essential social structures, e.g. through female mortality due to breast (developed countries) and cervical (mainly low/middle income countries) cancers. Kevin Murphy and Robert Topel at the University of Chicago have estimated that a 10% reduction in cancer mortality would be worth over 4 trillion USD to the global economy, of which over half of this will fall on low/middle income countries (LMC).[3]

In September, the first major UN summit will debate the future of non-communicable disease (NCD) funding and priorities. In this pressure cooker of disease politics, global cancer public policy must avoid the zero sum game with other critical domains – population and nutrition – and diseases, e.g. HIV/AIDS, unipolar depression, maternal and child health, in other words controlling cancer does NOT need to be at the expense of these other areas. Rather,

* *Corresponding author:* Address: Centre for Global OncoPolicy & Health, Section of Research Oncology, 3rd Floor Bermondsey Wing, King's Health Partners at Guy's Hospital, Great Maze Pond, London SE1 9RT, UK. Tel.: +44 20 7188 3027; fax: +44 20 7188 0919.
E-mail addresses: richard.sullivan@kcl.ac.uk, RSullivan@doctors.org.uk (R. Sullivan).
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(1) cancer and NCDs need to be integrated into all the major horizontal actions and,
(2) all aspects of cancer control plans – prevention, through to health systems design and research priorities – should be part of proper health systems planning. Cancer is a global issue and whilst developed countries have only had to deal with an epidemiological transition from acute to chronic diseases the reality for low/middle income countries (LMC) is one of the double and, even triple burdens of disease, i.e. the need for health systems that can deal with a disease burden that stretches from infections to chronic disease and Group III causes (accident, conflict etc.).

This is a unique and wholly untested situation for cancer control that will need novel ways of superimposing and integrating cancer prevention, management systems and programmes onto other disease areas. Furthermore, achieving good outcomes in cancer control at low cost is entirely achievable with the correct prioritisation of cost-effective modalities and care pathways (e.g. state of Kerala in India and Costa Rica).[4] There have also been notable exemplars of success in developed-developing country co-operation for cancer services. For example, Eldoret in Western Kenya and the Indiana University have successfully built up a community-based cancer service building on PEPFAR (HIV/AIDS programme) infrastructure. The key to success is bilateral leadership, long-term commitment, accessing and co-operating with other global health infrastructures and a 'public good' culture. There is a serious danger that the summit is seen as a top-down Pulitzer's iron triangle with little understanding and engagement in the reality of cancer control in LMI countries that are experiencing unique trajectories in double and even triple burdens of disease. UN summits can be seen as distant, uninformed and unrepresentative of the realities of day-to-day healthcare. All too quickly important statements can appear patronising.

Whilst national cancer control programmes (NCCP) and engagement with global prevention frameworks such as Framework Convention on Tobacco Control (FCTC) are now part of the normative socio-political structure of developed countries, the degree to which emergent market economies (EME) have implemented well-validated NCCP is highly variable and outcomes for many types of cancers in many countries remain poor in light of the knowledge of what can be achieved. Substantial gaps in cancer outcomes due to deprivation in EME with otherwise low index of inequality (Gini), for example, are unacceptable.[5] Numerous approaches to excellence in service delivery, research and education/training abound, along with a spectrum of options for their organisations based on centre or network models.[6] In developed countries the key public policy issues centre around over-regulation, the relative lack of supra-national funding for research, the escalating cost (and cost-effectiveness issues) around cancer care and the orphanisation of key domains such as cancer surgery and prevention relative to cancer medicines.[7] However, it is clear from data that the wealth of a country has a direct impact on its ability to support investment in health. Whilst we may wish for LMI countries to 'follow' and implement cancer control programmes, the harsh reality is that either there may not be the national resources low Gross National Product/Gross Domestic Product (GNP/GDP) and/or it is not a priority when compared to other domains (education, defence, etc.) or diseases (all Group I). Furthermore, and this is one of the more uncomfortable truths about global health, the *realpolitik* remains that one of the single biggest hurdles to health (and indeed the wealth) of nations is poor governance. In particular, corruption which is an endemic feature of many countries has a particularly corrosive effect on engaging in cancer control, or indeed on the public health of that country per se.

One of the critical challenges to all political organisations committed to cancer control is to understand the myriad of partnerships, global actors and initiatives currently at work. Beyond country-specific efforts there are a plethora of partners from WHO Non-Communicable Disease division and the International Atomic Energy Agency's cancer programme through to umbrella/advocacy organisations – e.g. Union for International Cancer Control, patient groups and trans-national research organisations e.g. International Prevention Research Institute and International Network for Cancer Treatment and Research. To the outsider these are a bewildering number of organisations, interconnected in a myriad of ways and through a variety of horizontal and vertical programmes to form what amounts to a cancer public policy nexus. Whilst the challenges of country-specific cancer control and supra-national programmes require a multitude of different alliances, perspectives and knowledge the current partnerships can be obscure and *ad hoc*; there is, for example, a need to constantly challenge the status quo with new policy approaches that bring cancer organisations in both developed and developing countries that are actually 'on the ground'. Important opportunities for enhancing global cancer control could also, for example, be driven out of World Bank NCD programmes[8] and let us not forget in the rush to embrace advocacy and treatment that the prevention of global NCDs rest equally and perhaps more in the hands of organisations such as the World Trade Organisation and Food and Agricultural Organisation (Magnusson ref). With so many cancer organisations and so much at stake there is a real danger of internicene conflict and zero sum gaming *within* the cancer community as well as missing the really important players in global cancer health.

Despite perceptions that HIV/AIDS holds the predominant position as the most politicised disease domain, we forget that cancer has a much longer history of political activism and engagement from the heady days of the creation of the National Cancer Act in the USA to the more recent (last decade) national political activism in the UK, with the creation of the NCRI, France (L'Inca) and others. In the last 10 years cancer has seen a huge upsurge in political prominence in the European Commission and Parliament. Lately, or belatedly, depending on one's viewpoint, cancer has also been taken up in the context of non-communicable diseases as a cause *celebre* by WHO (World Health Organisation). The lone voices in the global cancer wilderness such as the International Network for Cancer Treatment and Research (INCTR) have suddenly found a call for all hands on deck and a number of new initiatives, alliances, partnerships, all purporting to be the pre-eminent advocates and agents for global cancer

control and cure have leapt up in only in the last 2 years. Why? Global cancer has never been short of paper solutions, from non-operationalised national cancer control plans to weighty supra-national missives; indeed if cancer had been amenable to such approaches, the global cancer epidemic would have been under check long ago. But the investment in global cancer has been lamentable. A fraction of global public sector investment in cancer research is spent on R&D directly relevant to LMC and even the WHO total budget allocation for NCDs as a whole only amounts to some 7.6% at the last reckoning.[9] Good words on paper have not been followed by good deeds, except in some rare cases of genuine inward investments by supra-national organisations (e.g. IAEA IMPACT programme) or cancer centres with a genuine 'global mission' (e.g. Indiana University). Suddenly though there is the real possibility of tangible financial support from major international bodies and this has provided a massive pull, in addition of course to the seductive nature of the hierarchy in the power politics of disease.

2. Don't forget the social determinants of cancer

It is essential in the hurly-burly of high cancer politics to come that no one losses sight of socio-economic nature underlying most of the problems we have with the global cancer burden. The human ecology of cancer control is at least as complex, if not more so than any aspect of the biomedical science of oncology. The human ecology policy frame, first described in the 1920's by Roderick McKenzie encompasses all the complex dynamic spatial and sustenance interrelationships within which human society is organised and through which cultural forces act.[10] Thus, cancer control is seen not as a collection of molecular and cellular processes but as a result of multi-dimensional processes that bring to act such values and concepts such as equity, distributive justice, access and sustainability. By its nature this is a hugely challenging area for cancer public policy and one that is frequently neglected, in part because of its intrinsic challenge but more so because it forces a dialogue about political ideology and the prioritisation of expenditure and efforts in cancer control.

In framing the human ecology of cancer it is essential to develop a global cancer public policy that is convergent and complementary with existing direction articulated by the Commission on Social Determinants of Health.[11] By mapping onto existing public policy that covers the full spectrum of health and well-being, policies that specifically address cancer control can be developed into coherent strategies with real chances of implementation, rather than *ad hoc* documents unlinked to core national and supra-national social policy-making. One of the critical failings time and time again is the development of public policy and actions around inequality and cancer outcomes that are completely dissociated from the actual lifestyles and concepts of individual responsibility that give rise to the situation in the first place. Before even setting the policy agenda for the social determinants of cancer there needs to be an explicit political mechanism that stitches cancer into the various vertical political silos of social policy – for example education and urban planning.

2.1. *Inequality and cancer*

Inequality in cancer remains one of the most fundamental issues that both developed and LMC societies struggle to address. Here cancer reflects the broad problem of health inequality; one that has been globally recognised since the 1978 Alma Ata declaration that saw health promotion as a system that acted on the underlying economic, social and political causes of poor health. For LMC this dream of Primary Health Care was shattered by the imposition of a series of market-orientated models and decades of structural adjustment programmes following the Washington consensus that all but put social health to the sword. Against this background, the combined effect of poor governance and inequality has ensured that in many LMCs, the huge gaps in cancer outcomes between the affluent and deprived are deeply entrenched. Furthermore, because of the double burden of disease many health programmes in these settings focus exclusively on Group I (infectious disease, maternal mortality etc.) without recourse to thinking how to map on specific cancer control and other NCD control measures. Because of the tight relationship between cancer outcomes and cumulative life experience, generic measures to address inequality from the start of life will over time enhance cancer control. A diagnosis of cancer is not only a personal tragedy but is often a financial disaster for patients and their dependents as well. Such individuals will either not present for treatment, present too late and/or only complete primary treatment without follow-up. In terms of gender equity the impact of cancer on women has a dramatic knock-on effect to the health and economic productivity of their families. Some 64% of all illiterate adults are women (an estimated 495 million world wide)[12] and this directly impacts on the ability to deliver effective cancer control; the stigmata of cancer for women in many societies leads to substantial social disruption. Policies that directly work to address gender equity will, coupled with early detection and good universal cancer management systems, ensure the improvement of the health and wealth of families as a whole. The seemingly entrenched deprivation gaps manifested in developed countries also need urgent attention. For developed countries like the United States of America (USA)[13] and the United Kingdom (UK)[14] the public policy solutions are clear; they simply lack socio-political motivation.

2.2. *Healthy environment*

The human environment is constantly changing. Over three quarters of the population in developed countries is urbanised and LMCs are catching up fast with 40.9%. In the latter, however, some 43% of the urban population lives in slums (UN-HABITAT 2003 data). The rural–urban environments have a dramatic effect on the full spectrum of health. On the one hand there has been chronic under-investment in rural medical infrastructure,[15] thus there are a few treatment options in this setting. On the other hand urbanisation is a 'pro-cancer' environment that promotes 'nutrition transition' – high consumption of fats, energy dense and highly processed foods – and thus, coupled to less physical activity leads to obesity which, after tobacco usage, is one of the most important can-

cer risk factors. Poor environmental conditions can also exacerbate poor cancer outcomes due to the triad of deprivation-elderly-ethnic minority. Each feeds back and reinforces poor outcomes. Public policy solutions aimed at tackling urban planning, rural support and access, rural–urban migration and the natural environment would all have positive long-term effects in terms of both prevention and the outcomes in cancer.

2.3. *Society and cancer*

The culture and structures of societies play a critical role in how cancer is perceived, what action is taken to prevent and alleviate suffering, and the socio-political priority assigned to action the required public policies. "*Social system influences… may account for as much (if not more) of the variation in health and/or illness statistics as do environmental influences, or even the attributes and lifestyles of individuals*"[16] and numerous facets of these systems – the role, position and liberty of women, the social stigma of cancer, perceptions of the causes of cancer, taboos in seeking help outside the 'in-group' etc. – contribute to the global burden of cancer but at a local level. The heterogeneous nature of the global society makes broad public policy particularly difficult, especially when it challenges entrenched culture. Policies aimed at promoting and supporting grass roots advocacy for cancer control are absolutely essential and the only effective means of changing, long-term, cultural artefacts that promote cancer and poor outcomes. Political governance woven into the fabric of societies is also a critical determinant of cancer control, and indeed in delivering universal health. Political governance needs to be held to account by national advocates in civil society and where the formal sector of the economy is weak and government limited, community health insurance schemes need to be initiated to provide social health protection. Policies to provide sickness funds can also help mitigate the social consequences of cancer and defray catastrophic expenditures as a result of this.

2.4. *Finance and market responsibility*

Cancer control relies upon an adequate supply of services and material resources. For many countries the free market has failed to deliver not least because economic growth remains so low that even with the political will to mobilise 15% or more in taxes from the domestic economy the absolute level of per capita income is too low for this to be an effective sum. Part of the solution, particularly for the better financed middle income countries lies in the need for fiscal transfers to directly support cancer control in higher burden, greater 'at-risk' regions and better economic management (budgeting, payment contracting, etc.). For upper low income countries where cancer is becoming a significant public health threat there are a variety of basic strategies, articulated by the WHO Commission on Macroeconomics and Health that would directly support cancer control, for example prepayment schemes and community finance programmes that would support families hit by a diagnosis of cancer.[17] This is particularly important. In India, for example, some 86% of women and 83% of men employed in areas outside the agricultural sector are in informal employment.[18] Over 45% of this group with a diagnosis of cancer will have catastrophic expenditure with around a quarter being pushed below the poverty line (2004 data).[19] How governments work with the private market is hugely challenging and no easy public policy solutions exist. Little information is available to measure private sector performance and pricing but it is clear that tighter federal oversight is required. For very different reasons developed countries also need to challenge the role of the market as the cost of cancer control continues to go up. The glass ceiling has already been reached, and in some cases breached. A continual increase in cancer control for high income countries is simply not affordable and public policies targeting cost-effectiveness and driving greater value from services are essential.

These examples of the complexity and breadth of the socio-economic determinants of cancer control provide what must be one of the greatest policy drivers for prosecuting a non-zero sum approach to this year's UN summit and beyond. In this context what is happening in cancer cannot and should not be disconnected or traded-off with other aspects of globalisation and public health.[20]

3. International Cancer Control Planning (ICCP): prioritisation and focus

How are we to address global cancer control when even today we are faced with some basic truths that we have failed to adequately deal with the most simple of public health measures? As a recent Lancet editorial starkly put it, "*adequate sanitation is the most effective public-health intervention the international community has at its disposal. Yet 40% of the world's population still lacks access to a toilet*".[21] Formulating a new paradigm that constructs programmes, systems and public policy that is inclusive and coherent with the variety of needs *on the ground* rather than the needs of the political economy of global heath is a real challenge. Cancer is only one part of a cross-sectoral approach that will have many commonalities with the control of other NCDs but will also need very specific vertical programmes. Working out the ven diagram for how the various NCDs fit together is something that cannot be achieved at high level beyond the broadest framework. Likewise, the much needed call for the inclusion of cancer as a Millennium Development Goal,[22] and this partial recognition by the recent UN General Assembly to work towards a high level meeting of the General Assembly[23] is a positive international response. Nevertheless, it is still a long way from tangible adequately-funded global cancer action plan. The failure to endorse a global cancer fund to support specific bilateral capacity building is a serious omission. Philanthropic leaders could do much to catalyse this sort of actionable engagement. This should and will require careful thought. Donors should be willing to ask the hard questions as to whether proposals will lead to better cancer public policy and, through this, better control. Different countries, regions and even domains of cancer control (surgery, palliative care etc.) will need bespoke vertical local action and as these are evolved, the need to weave them horizontally with cancer control as a whole and wider into health will be a serious intellectual and logistical challenge. There is plenty to guide

policy leaders with analysis of ODA policies as well as the lessons learnt from other global health (mis)adventures. Multilateral co-ordination is the ultimate goal but confidence-building steps between donors, advocates, and national leaders will be required for a full International Cancer Control Plan.

For both prevention and early detection, the critical factors will be the social determinants of health, fit-for-purpose technologies and the requisite infrastructure (this includes manpower and training). Other domains of cancer control also need strong international public policy. Palliative care access programme from the INCTR and WHO policies on this area have created a strong advocacy movement which can be built on. Likewise the efforts of the International Atomic Energy Agency (IAEA) in bringing radiotherapy provision to many LMC countries are a model start. However, we have yet to see a concerted effort and advocacy around surgical oncology or indeed around how LMCs are going to access essential cancer medicines. There is a critical need for new public policies in both these areas and this policy is not in the gift of governments. Furthermore, there needs to be recognition of the 'fallacy' of trying to translate clinical guidelines and/or systems from developed countries to LMC. International Cancer Control Planning is not amenable to 'one-size-fits all'. Dealing with, for example the complexities of orthodox and 'traditional' approaches and systems used by most LMCs for cancer treatment requires a deep understanding and empathy with the socio-cultural norms of these societies in order to develop the most effective systems and programmes. Increased Institutional-to-Institutional co-operation would be a major step forward. Cancer centres in developed countries can provide faculty, funding and other support for networks and centres in LMCs. The relationships should be reciprocal; developed countries have much to learn both in terms of novel cost-effective management techniques but more importantly the critical issues under which much of the world operates when developing their cancer control plans.

Research is vital and absolutely integral to ICCP. Many developed countries take their responsibility to fund cancer research seriously but in practice do not always do so. Data gathered during the European Cancer Research Managers Forum (ECRM) project identified major shortfalls in many countries.[24] More seriously though are (a) the in-balance between different domains of research and (b) the lack of funding to support research into controlling the cancer burden in LMCs. In the latter case our current estimates from the Kings Health Partners Centre for Global OncoPolicy indicate less than 2.7% of global funding goes to cancer research specifically relevant for LMCs. This is an astonishing 97/3 gap. On the former issue cancer research funding has been extremely generous towards fundamental biology and drug development, and far less so towards many other crucial areas. Proactive measures to stimulate and fund research in prevention, early detection, childhood cancers and cancer surgery, to name but a few are needed. Improvements in global cancer outcomes need research findings across the full spectrum. Data on the challenges and priorities for the public sector for global health, including cancer,[25] are now readily available and whilst totals have risen, the spread of contributions has not changed significantly.[26] There is a strong case both for the creation of a global cancer fund and for increased corporate social responsibility and national research funding organisations to support work outside their borders.

This year's UN summit is one more step along a very long and what will be a rather difficult road. However, such is the scope of the current NCD vision that in an effort to be all things to all people, such a vision ends up being nothing to anyone. Prioritisation is urgently needed and this can only happen within the socio-political framing of nation-states. Ultimately, putting the politics aside it will be up to the cancer community, particularly the major cancer centres, associations and site specific groupings to come together and work on effective co-operative partnerships with like minded colleagues in countries most at need, to assist, fund and monitor a wide range of care, R&D and training and development opportunities. Sustainable long-term partnerships on a basis of mutuality and solidarity are urgently needed. Cancer politics are a side-show to the real need for dedicated working partnerships supported through an existing and novel mechanism such as the global cancer fund.

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