27/2/15

Alliance for Cancer Prevention

Dear Harpal S Kumar and Cancer Task Force,

The Alliance for Cancer Prevention would like to contribute to your call for responses to the 5 year cancer strategy currently being compiled. We were heartened to see it described by CRUK as : *"A great opportunity for the cancer community to lead development of a cross-system, independent and ambitious new cancer plan.....and addressing the preventable causes of cancer will be key to seeing progress"* and the increasing cancer rates underlining a need for '*preventive strategies'*. [1]

Although the focus seems to be primarily on services and treatment which we agree are vital - we need the highest possible standards of care - we were very disappointed not to see environmental and occupational risk factors [2] addressed and actioned in any of the documents referenced for the strategy. Indeed in the report, Five Year Forward View, the emphasis appears to be only on lifestyle interventions.

We believe that unless we tackle the *primary* prevention of cancer i.e. stopping cancer before it starts, we are unlikely to see any improvement in the cancer epidemic. There are many barriers to action on the primary prevention of cancer; cancer is also caused by lack of political will. [3] In our view, the biggest barrier to addressing cancer services is the lack of action on primary prevention which necessitates greater resources into services in the first place.

The confounding risk factors

The ACP believes our current cancer strategies are failing us, they are inadequate, fragmented and unsustainable. Current cancer strategies and plans target lifestyle factors but not 'life circumstance' factors. [4] Not only do strategies and plans ignore social, economic and gender inequalities but also the interwoven and intrinsically linked environmental and occupational risk factors for cancer. There is little or no consideration given to the fact that lifestyle factors are influenced by economic and social aspects. By not addressing these *confounding* risk factors, strategies to tackle cancer seek to place the onus at the feet of the individual by focusing on individual (i.e. lifestyle interventions) instead of institutional action.

Science has progressed significantly over the last couple of decades, yet strategies to address cancer and public health have remained in the 'scientific jurassic'.[5] We are now experiencing an epidemic of cancer and diseases linked to our 21st century lifestyle and occupations. The ACP is worried that we will never stem this epidemic while current cancer strategies are based on outdated science.

The way forward

In 2011 the WHO acknowledged the environmental and occupational risk factors for cancer in the Asturias Declaration originating from its conference on Environmental and Occupational Determinants of Cancer: *"Primary prevention - prevention of the exposures that cause cancer - is the single most effective means of prevention".* It goes on to state that: *"Prevention of the environmental and occupational exposures that cause cancer must be an integral component of cancer control worldwide."*[6]

The World Health Organisation (WHO) gives a very conservative estimate of up to 24% of all human diseases which are at least in part due to environmental factors which includes chemical exposures. [7] Both the United Nations Environment Programme (UNEP) and the WHO report that the incidence of

chronic disease such as cancer is now greater than that of communicable disease. Twenty six different cancers alone have been linked to occupational and environmental exposures.[8]

Some countries have already addressed these risk factors, the cancer establishments in Canada [9] and France [10,11] have identified and targeted for action the environmental and occupational risk factors in their cancer plans while others are recognising the need for inclusion. In its critical review of the policies regarding cancer-related chemicals in our living environment, the Flemish Cancer League concluded that: *A cancer plan should contain initiatives in the area of primary environmental prevention of cancer.*[12]

The Danish Chemicals Action Plan 2010-2013[13] takes as its starting point the goal agreed at the 2002 World Summit on Sustainable Development in Johannesburg, that is to ensure that by the year 2020 there are no goods or products on the market which have significant adverse effects on human health and the environment. The focus is to be on EDCs and the 'cocktail effect' in relation to cancer.

For specific cancers, such as breast cancer, there have been repeated demands to prioritise prevention, most recently in 2013 from the Interagency Breast Cancer and Environmental Research Coordinating Committee (IBCERCC). [14] The report gives 7 recommendations which could apply to cancer action plans/strategies here in the England, Northern Ireland, Scotland and Wales and urges engagement across all disciplines.

What a new cancer plan would look like

The ACP believes a new approach is needed any **new Cancer Action Plan** needs to specifically address environmental and occupational risk factors for all cancers with targeted actions for those risk factors and specifically allocated funding. The plan needs to encompass social, economic and gender inequalities and would need to be rolled out across England, Scotland, Wales and Northern Ireland taking into account all countries specific cancer plans and strategies.

The ACP would like to contribute to such an approach.

The Alliance calls for a **Cancer Action Plan** which includes:

- Environmental and occupational **risk factors** (determinants) addressed as risk factors for cancer and rolled out in all cancer plans and strategies with definitive targets for action and appropriately allocated funding.
- **Phase out** of all IARC classified Group 1 carcinogens and Group 2A potential carcinogens.[15]
- **Targeted** toxics reduction initiatives across all environments, the lived, worked and the first environment, the womb.
- Government **support** for green chemistry and engineering. Hazardous substances should be replaced with safe alternatives utilising the substitution and precautionary principle.
- **Elimination of** all toxic and man-made chemicals which are found in breast milk and cord blood.
- **Inclusion of** *Just Transition* [16]principles in all toxics use reduction initiatives and product lifecycle management analysis.
- **Elimination** of the future use of all types of asbestos and ensure proper management of the asbestos currently in place to protect workers from asbestos exposure and to prevent future asbestos-related deaths. [17]
- **Readdress** the unsustainable costs of cancer in terms of prevention.
- **Education** on environmental and occupational insults for all cancer specialists.
- **Bringing** cancer policy into the 21st century, by embracing new and emerging science.
- **Use** of relevant language and ensuring that references to the environment [18]and primary prevention are universal and PP is defined in terms of stopping cancer before it starts.

- **Factoring in** environmental justice principles and the right to a clean and safe environment into all in cancer plans.[19]
- **Equal** consideration given to precautionary and preventive approaches to cancer, alongside better treatment and care.

Cancer at work

Occupational factors are thought to cause in excess of 40,000 cancers each year [20] and cost up to £59bn. Certain occupations carry with them greater cancer risk yet: "*the actual scale of cancer caused by work goes unacknowledged, the numbers of workers exposed is underestimated and there is no sense of urgency to tackle this massive but preventable workplace epidemic.* [21]

The scale of occupational cancer has been denied for three decades. Research relies too heavily on epidemiology which is only capable of seeing widespread, long-established problems amongst large numbers of workers, employed for long periods of time, in large workplaces such as mines, mills and manufacturing.

This is totally unsuitable for today's smaller, gender diverse and fast evolving workplaces with more complex, cumulative and multiple exposures. Research based on these outdated theories about exposures at work and gender blindness will continue to contribute to the rising number of work related cancers. It is incapable of picking up high risk exposures affecting smaller groups of workers. On diesel fumes exposure alone, it is 'simply incomprehensible that well over a million workers will have a raised risk of a cancer because they work in diesel-exposed jobs'.[21]

What's needed is *a massive preventive proactive enforcement of elimination and an abandonment of the use of cost-benefit analysis in setting exposure limit for carcinogens in EU, as there are no safe levels of exposure to carcinogens.*[22]

In 2007 a group of international unions put together a union campaign guide, Zero Cancer, on occupational cancer prevention and called for a global campaign on occupational cancer. [23] The actions outlined in this document should be included in any new cancer strategy. The conservative estimate then for deaths from occupational cancer was 1 death each 52 seconds, cancer accounted for 32% of work related deaths worldwide, the figure now will be far higher.

The approach to women's cancers where there can be a *triple jeopardy* effect for women with exposures happening daily not only in the workplace, but also in the home and then again in the wider environment, is largely ignored. Some examples are those working with cleaning or cosmetic products or in agriculture.

Canadian researchers found excesses of breast cancer among women in working in agriculture, automotive plastics and the food canning industries. There was an elevated breast cancer risk, up to 5 times higher than the controls among those working in certain sectors such as automotive plastics.[24]

Danish studies of occupational work patterns such as shift work have shown that working night shifts more than twice a week is associated with a 40% increased risk of breast cancer. [25]The Danes gave compensation to those women whose illness was brought on by working night shifts and sought to reducing the risk from night shift work. Action should be taken immediately to eliminate or reduce exposures in those identified industries and workplaces and make simple interventions to reduce shift work risks.

But the UK has chosen instead to fund yet more research. [26]These studies won't be completed until Dec 2015 by which time another 1,500 women will have died of breast cancer related to night work.

The American Public Health Association has passed a ground breaking resolution on breast cancer and occupation. [27]This is a significant step in public health policy, highlighting the importance of primary prevention and renewed commitment to occupational health research in the United Kingdom and North America, where breast cancer rates are among the highest in the world.[28,29]

Cancer, a disease of old age or a disease of our age?
We question the statement that cancer is a disease of old age. Although we have to acknowledge that *'cancer has always been with us'* it was extremely rare in ancient times. [30] But it has risen exponentially over the last 50 years to the point where 1 in 3 of us are expected to live or die from the disease at some point in our lives. We might be living longer but we spend fewer years of our lives without disease. [31]

Childhood cancers (in those who have none of the lifestyle risk factors associated with adult cancers such as smoking) in industrialised countries are increasing by 3% every 3 yrs [32]and 1 in 500 children develop a cancer before the age of 15 and before the age of 6 years for almost half of them. Evidence suggests pre-birth exposures can dictate future cancers. [33] In the UK childhood cancer rates have increased by 40% since the late 1960's. Prenatal exposure to certain chemicals has been documented to increase the risk of cancer in childhood. Tests show babies and small children are exposed to multiple carcinogens in the home. [34]

The American College of Obstetricians and Gynecologists and the American Society for Reproductive Medicine recently joined *"leading scientists and other clinical practitioners in calling for timely action to identify and reduce exposure to toxic environmental agents while addressing the consequences of such exposure".*[35] They called on their members to advocate for policies to identify and reduce exposure to environmental toxic agents while addressing the consequences of such exposure given that prenatal exposure to certain chemicals has been documented to increase the risk of cancer in childhood.

When the Royal College of Obstetricians and Gynaecologists suggested that *"despite uncertainty surrounding the effects of common environmental chemicals, mothers should be made aware of the sources and routes of exposure, the potential risks to the fetus/baby and the important role that the mother can play in minimising her baby's chemical exposure".* They were unjustly accused of scaremongering. [36]

Cancer Task Force - Invite for submissions
The ACP is concerned about the fact that the only input from outside the cancer establishment or cancer community to the task force is to be given in the form of submissions. We would like to know more about the process for assimilating these into the strategy? We would like to see a wider stakeholder involvement in this process and look forward to increased engagement with the strategy.

If, as stated in the conclusion to the BMJ paper [37]
"The results of this analysis should enhance public health messages and improve resource planning for both commissioners and providers of healthcare in the UK. It may also assist clinicians and patients to weigh the lifetime risk of developing cancer versus other challenging health risks. Whereas the results of this analysis are specific to the British population, the methodology can be applied to other populations."

We would wish that any roll out methodology would include and address the occupational and environmental risk factors for cancers; otherwise we fear that we will continue to look forward to a cancer-forever-future.

Yours Helen Lynn
Facilitator Alliance for Cancer Prevention

Recommended research and viewpoints on approaching primary prevention of cancer
While we assume a thorough literature review has been carried out to inform the strategy and we would wish to see this review publically available. Here are some important pieces for your consideration.

- WHO State of the Science on EDCs: http://www.who.int/ceh/publications/endocrine/en/
- American Public Health Association resolution on Breast Cancer and Occupation: the need for action http://www.apha.org/policies-and-advocacy/public-health-policy-statements/policy-database/2015/01/07/14/55/breast-cancer-and-occupation Nov 2014
- State of the Art Assessment of Endocrine Disrupters: http://ec.europa.eu/environment/chemicals/endocrine/pdf/sota_edc_final_report.pdf
- US Presidents Cancer Panel - Reducing Environmental Cancer Risk – What we can do now: http://deainfo.nci.nih.gov/advisory/pcp/annualReports/pcp08-09rpt/PCP_Report_08-09_508.pdf
- Breast Cancer and the Environment: Prioritizing Prevention: Interagency Breast Cancer and Environmental Research Coordinating Committee (IBCERCC): http://www.niehs.nih.gov/about/boards/ibcercc/ Feb 2013
- Endocrine-Disrupting Chemicals: An Endocrine Society Scientific Statement: http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2726844/
- Breast cancer risk in relation to occupations with exposure to carcinogens and endocrine disruptors: a Canadian case–control study. http://www.ehjournal.net/content/11/1/87?utm_campaign=06_11_13_EnvironHealth_APHA_Award_Mailing_3rdP&utm_content=7387543941&utm_medium=BMCemail&utm_source=Emailvision

The Alliance is a multi-stakeholder group which includes representatives from: NGOs, Trade Unions, environmental and occupational health organisations, public health advocates and civil society groups, working together on cancer prevention. We aim to; challenge the existing perception of control and treatment of cancer being the only way forward; get equal recognition for primary prevention and ensure that the cancer establishment acknowledges the environmental and occupational risk factors for preventable cancers.
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[1] Half of the UK population can expect a diagnosis of cancer. *Ingrid Torjesen* http://www.bmj.com/content/350/bmj.h614 *BMJ* 2015; 350: http://dx.doi.org/10.1136/bmj.h614 (Published 04 February 2015)
[2] Definition of environmental and occupational risk factors: Environmental and occupational risk factors are potential risk factors for cancer from exposure (including environmental, occupational and pre-birth exposure) to certain chemicals, substances, or particles or through ingestion, inhalation or absorption or to certain behavioural work patterns such as shift work which contribute to a cancer outcome by nature of their carcinogenic, mutagenic, or endocrine disrupting properties and abilities.
[3] Donner, L and Chernomas, R. The Cancer Epidemic as a Social Event. 2004 Canadian Centre for Policy Alternatives. Manitoba.
[4] Watterson, A. Public Health in Practice. Nov. 2002. Published by Palgrave Macmillan .
[5] Phrase coined by Dr. Pete Myers. Chief scientist for Environmental Health Sciences and co-author of Our Stolen Future.
[6] WHO Asturias Declaration – Environmental and Occupational Determinants of Cancer http://www.who.int/phe/news/events/international_conference/Call_for_action_en.pdf
[7] WHO/UNEP report on the State of the Science for Endocrine Disrupting Chemicals Report.
[8] Environmental and Occupational Causes of Cancer (New Evidence 2005 - 2007) Richard Clapp. Lowell Centre for Sustainable Production. www.sustainableproduction.org
[9] Canadian Cancer Society. Environmental Risk Factors for Cancer. *http://www.cancer.ca/Canada-wide/Prevention/Environment%20and%20you/Risk%20factors%20for%20cancer.aspx?sc_lang=en*
[10] Cancer and the Environment - A collective expert report by Inserm 2008. http://english.inserm.fr/thematiques/public-health/collective-expert-reports
[11] Cancer Plan 2009 – 2013. National Institute of Cancer. www.e-cancer.fr/component/.../4787-plan-cancer-version-anglaise
[12] A Critical Review on the Policies Regarding Cancer – related chemicals in our living environment. The Flemish Cancer League. 2012 http://www.tegenkanker.be/sites/vlk/files/executive_summary_Report_VLK_EN_0.pdf

[13] Chemicals Action Plan. 2010 -2013. The Government of Denmark 2010 http://www.mst.dk/pv_obj_cache/pv_obj_id_3A6CA37C4C911EBF95CE1CF6983DD8F9B6810C00/filename/chemicals_action_plan_20102013.pdf

[14]Breast Cancer and the Environment: Prioritizing Prevention: Interagency Breast Cancer and Environmental Research Coordinating Committee (IBCERCC): http://www.niehs.nih.gov/about/boards/ibcercc/ Feb 2013

[15] IARC Monographs on the Evaluation of Carcinogenic Risks to Humans. http://monographs.iarc.fr/ENG/Classification/

[16] Just Transition is the concept that transition process to a greener economy has to be inclusive of all stakeholders, and that the unavoidable employment and social costs of the transition have to be shared by all.

[17] Zero Cancer/Occupational Cancer. International Trade Union Confederation (ITUC) and Global Unions.

[18] ENVIRONMENT means 'surroundings'. We use 'environment' to represent the totality of circumstances and conditions of the external and internal environments which 'surround' us from conception to death and which we share with all life forms. Environment is a complex aggregate of the natural and man-made; of physical, chemical, and biological factors that act upon and determine the growth, health and survival of all life forms. http://www.frompinktoprevention.org/resources/glossary/

[19] Business and Human rights. A resource website. Why environmental issues are human rights issues.

[20] Burying the Evidence. Hazards Magazine. http://www.hazards.org/cancer/hsecriticism.htm

[21] HSE's dithering, denial and delay on workplace cancer is deadly! Press Release from the Alliance for Cancer Prevention 21/8/12. http://allianceforcancerprevention.org.uk/hses-dithering-denial-and-delay-on-workplace-cancer-is-deadly-workers-enquiry-needed-to-identify-and-eliminate-all-exposures-to-carcinogens/

[22] This man knows about cancer. Hazards Magazine. http://www.hazards.org/cancer/thismanknows.htm

[23] Occupational Cancer/Zero Cancer. A union guide to prevention and campaign materials. http://www.hazards.org/cancer/preventionkit/index.htm

[24] J. T. Brophy et al., "Breast Cancer Risk in Relation to Occupations with Exposure to Carcinogens and Endocrine Disruptors: A Canadian Case-Control Study," *Environmental Health* 11(87) (2012): 1-17, doi: 10.1186/1476-069X-11-87

[25] Johnni H, & Lassen, CF. Nested case-control study of night shift work and breast cancer risk among women in the Danish military, OEM, Online First, 28 May 2012, doi 10.1136/oemed-2011-100240

[26] Letter to the Guardian from the Hazards Campaign. http://www.hazardscampaign.org.uk/pressrelease/breastcancer.htm

[27] American Public Health Association. Cancer and Occupation: The Need for Action. http://www.apha.org/policies-and-advocacy/public-health-policy-statements/policy-database/2015/01/07/14/55/breast-cancer-and-occupation Nov 2014.

[28] Press Release: Stirling breast cancer research shapes prevention policy with leading US health body http://www.stir.ac.uk/news/2015/01/stirling-breast-cancer-research-occupation/

[29] Press Release: ACP - http://allianceforcancerprevention.org.uk/#!/american-public-health-association-passes-resolution-on-breast-cancer-and-occupation/

[30] Cancer is a modern, man-made disease caused by environmental factors such as pollution and diet, a study review by University of Manchester scientists has strongly suggested. Oct 2010. http://www.manchester.ac.uk/aboutus/news/display/?id=6243

[31] We're Living Longer Than Previous Generations But Not Healthier. Science 2.0 Dec 2010. http://www.science20.com/news_articles/were_living_longer_previous_generations_not_healthier

[32] IARC study shows increasing cancer rates in children in Europe. IARC 10/12/04. *http://www.iarc.fr/en/media-centre/pr/2004/pr155.html*

[33] Soto, AM & Sonnenschein C. Environmental causes of cancer: endocrine disruptors as carcinogens. *Nature Reviews Endocrinology* ***6,*** 363-370 (July 2010).

[34] BEUC members test shows children's multiple exposure to chemicals. 12/2/15 http://www.beuc.eu/press-media/news-events/beuc-members-test-shows-children%E2%80%99s-multiple-exposure-chemicals

[35] Committee Opinion from the American College of Obstetricians and Gynecologists Committee on Health Care for Underserved Women et al. Oct 2013. http://www.acog.org/Resources_And_Publications/Committee_Opinions/Committee_on_Health_Care_for_Underserved_Women/Exposure_to_Toxic_Environmental_Agents

[36] Chemical Exposures During Pregnancy: Dealing with Potential, but Unproven, Risks to Child Health. RCOG. https://www.rcog.org.uk/globalassets/documents/guidelines/5.6.13chemicalexposures.pdf May 2013.

[37] Ahmad, A. Trends in the lifetime risk of developing cancer in Great Britain: comparison of risk for those born from 1930 to 1960 http://www.nature.com/bjc/journal/vaop/ncurrent/full/bjc2014606a.html 3rd Feb 2015.