

Reducing Pollution: Critical Pathway for Cancer Prevention

A Southwestern Pennsylvania Declaration

Adapting the WHO Asturias Declaration for Southwestern Pennsylvania

The World Health Organization's ***Asturias Declaration*** is a call for leadership to prevent occupational and environmental cancers [1]. In this tenth anniversary year, we take it as inspiration to chart a course towards an equitable future where no individual in our region is diagnosed with cancer due to exposures in the environments where they live, work, play and go to school. Signers of this "Southwestern Pennsylvania Declaration" recognize that realizing this vision will require concerted action by multiple sectors, and centering voices of people disproportionately harmed. We commit to taking actions currently available to us and to seeking new solutions with new partners; and we call on our neighbors, colleagues, elected officials and other leaders to do the same.

The Twin Crises of Cancer and Environment in Southwestern Pennsylvania

Cancers ravage people in Southwestern Pennsylvania. As community leaders, parents and caregivers, health care providers, business owners, researchers, advocates—we all want to do everything we can to support them and prevent others from having to face a cancer diagnosis.

In our region, we have taken important steps on cancer prevention—with programs and policies to reduce smoking and promote healthy lifestyles. These are important priorities—particularly when they address the structural barriers, rooted in racism, that put healthy lifestyles out of reach. But they are not enough, especially given the substantial contribution of factors other than smoking to cancer incidence in particular places across the country, including Allegheny County [2]. Rates of many kinds of cancer are strikingly high in our region—higher than the state and nation—with disproportionate burdens on people of color and marginalized communities [3]. In Southwestern Pennsylvania, there is need for bold action on a cancer prevention strategy that is often overlooked: reducing environmental chemicals that are put into our air, water, food, homes, workplaces, and products.

**People living in urban and rural communities in
Southwestern Pennsylvania are exposed unnecessarily
to environmental carcinogens.**

These include radon, the second leading cause of lung cancer in the U.S. behind smoking; Pennsylvania ranks third among all states for levels of radon in homes [4]. They include toxic chemicals in air pollution: 96% percent of counties nationwide have lower cancer risks from hazardous air pollutants

Cancer develops from a combination of genetic and external risk factors, a series of interactions, much like electric circuitry, where many components need to be in place to cause a light to turn on. In the case of environmental chemicals, exposure to any one pollutant may pose only a small increased risk of cancer in an individual, but if exposures to that pollutant are widespread and occur in most people, even small increases in individual risk can result in significant numbers of cases in the general population. Beyond that, when most people are exposed to multiple substances that increase cancer risk to varying degrees in various ways, that too can result in significant numbers of cases in the population. The more a population is exposed, the greater the number of cases of cancer that can be prevented by reducing those exposures.

(HAPs) and Diesel Particulate Matter (DPM) than Allegheny County [5]. Among predominantly urban counties, Allegheny County ranks in the worst 13% of cancer risk from HAPs, and some neighborhoods have even greater exposures because they are in the shadow of polluting facilities [5], compounding other health challenges rooted in racial injustice. Carcinogens released and formed during the process of fracking natural gas—such as benzene, formaldehyde, particulate matter, and radioactive compounds—threaten the wellbeing of residents in rural communities [6]. Studies in other states have shown that children living closer to oil and gas wells have higher rates of leukemia [7]. Drinking water in our region has been contaminated by radioactive and other hazardous materials [8], and additional carcinogen exposures will come with the manufacturing of plastics and other products made possible by fracked gas. Many of these same contaminants are used and emitted during existing industrial manufacturing and transportation, affecting workers and nearby communities; they contribute not only to cancers but also to asthma, neurological disorders, heart disease and other health problems [9]. Consumer products are also a concern. Chemicals known to cause cancer are in cosmetics, furniture, building materials, and home and garden pest control products, despite availability of safer alternatives [10]. Hundreds of chemicals manufactured, used and released in our region come from fossil fuel feedstocks, so dependency on them contributes to the climate crisis.

“The people have a right to clean air, pure water, and to the preservation of the natural, scenic, historic and esthetic values of the environment.”

ARTICLE 1, SECTION 27, PA CONSTITUTION

The Opportunity of Cancer Prevention

These widespread exposures to environmental chemicals are critical priorities for cancer prevention. They are also economic opportunities given increasing demand for non-toxic products and a growth in sectors prioritizing clean and sustainable production [11]. Across the country, companies are designing, manufacturing and using products with safer chemicals [12]. Major retailers are requiring their suppliers to make products without carcinogens [13]. State and local governments are providing support to companies to reduce their use of toxic chemicals and are increasing demand for safer alternatives through their purchasing [14]. In places across the US, and in Southwestern Pennsylvania, diverse coalitions and communities are calling for a new economy in which people have safe secure jobs producing goods and services that optimize human health and for investment in communities disproportionately polluted and starved of economic opportunity [15].

We believe our region can be a beacon for a transition away from hazardous chemicals and production systems that contribute to the twin crises of high cancer rates and elevated environmental exposures.

The technological and research capabilities of our universities and healthcare institutions; the investment capacity of our philanthropies; the unparalleled leadership of our non-profit sector and our community-based organizations; and champions in the public sector give us the potential to act at the scale needed. The task is big, and it is doable, starting with environmental exposures that are unacceptably high, strongly tied to specific cancers, disproportionately impacting marginalized people, and preventable.

With this Declaration, we come together to lift up a vision—of a region where clean environments generate health and well-being on their way to reversing cancer rates. We come together to commit to realizing this vision, recognizing that changing a system that is stuck requires concerted action across the system.

Priorities for Action

Each sector has an essential role to play in reversing the cancer and environmental crises in Southwestern Pennsylvania. The following are areas for action: guideposts for organizations in different sectors. Achieving them requires specific steps to be taken within each sector, as well as collaboration across sectors, as actions in one arena will make possible or reinforce actions elsewhere, and the absence of action in any one sector will impede success in others. We commit to taking such steps within and across sectors, lifting up and aligning activities already underway, working together on new activities, tracking progress, and transforming relationships in the process.

All of us

- Help shift dominant narratives about cancer by acknowledging that environmental exposures are important and under-recognized contributors to the cancer burden in Southwestern Pennsylvania and can be substantially reduced.
- Ensure that the voices and priorities of communities most impacted by environmental risk factors for cancer are centered and that prevention efforts focus on reducing systemic inequities that have magnified health disparities and harms.
- Increase demand for alternatives to carcinogens by advocating for purchasing that prioritizes safer chemicals, materials and products—by institutions, schools, businesses, other large-scale organizations as well as individuals.

Elected officials and government representatives

- Champion a healthy future by enacting smarter policies across multiple sectors to reduce environmental pollution and drive an equitable transition away from dependence on hazardous technologies and chemicals, towards safer alternatives.
- Enforce laws and regulations and issue substantial and escalating fines to companies that repeatedly violate regulations and pollute the food we eat, the air we breathe and the water we drink.
- Invest in economic development strategies, innovative industries, small businesses and worker training programs that are “Benign by Design,” especially in high-risk communities, reserving subsidies only for businesses that do not pollute.
- Prioritize toxics reduction in communities impacted by the legacy of exposure to environmental pollutants with prompt and effective community-designed action to remediate, repair, and restore local environments and economies.

Local community leaders and stakeholders

- Speak up about exposures to carcinogens, and mobilize community institutions—including childcare centers, schools, businesses and places of worship--to take their own steps to reduce pollution and create healthy environments.
- Educate other community leaders and equip people impacted by environmental carcinogens with the information and tools necessary to advocate effectively for solutions.
- Provide opportunities for members of affected communities to elevate their stories of lived experiences on social media platforms and in local events and programming.

- Promote investment in healthy jobs, safer alternatives and other cancer prevention strategies as part of neighborhood-level planning and development, including solutions such as carcinogen-free building materials; retrofitted school buildings; the use of non-toxic cleaners in public spaces, and pesticide-free public spaces.

Businesses

- Commit to transparent, responsible and proactive business practices that comply with all existing laws and regulations intended to protect the public's health, and seek measurable continual improvements over time.
- Invest in innovative technologies and practices as well as business development strategies aligned with healthy thriving communities and a future independent of toxic chemicals.
- Protect workers and fence-line communities from exposure to toxic chemicals used and released in manufacturing by implementing state-of-the-art operations that reduce pollution and preserve resources.

Cancer-focused advocacy and support organizations

- Elevate attention to environmental contributors to cancer in education of board, staff, members and clients, and in broader outreach.
- Promote actions by individuals as well as by businesses and government to reduce environmental carcinogens and advance safer alternatives, as part of cancer prevention programming and advocacy.
- Reduce exposure to hazardous chemicals in spaces where people with cancer gather for treatment and support, via education, advocacy and purchasing.

Clinicians and other health professionals

- Invest in learning about environmental health, including how to communicate with cultural competence information about environmental risk factors to marginalized people impacted by cancer, and how to practice culturally humble engagement and outreach in overburdened and under-resourced communities.
- Educate people in clinical and community settings about steps they can take to reduce hazardous environmental exposures.
- Engage in policy and community-level efforts to eliminate environmental carcinogens.
- Advocate for health care institutions—for example via procurement policies--to purchase safer products and specify healthy building materials for construction and renovation.

Research institutions

- Conduct multi-discipline and collaborative research to deepen understanding about the role of environmental chemicals in cancer and to develop tools for identifying and prioritizing exposures for reduction.
- Invest in Community Based Participatory Research and other data-driven and solution-oriented approaches that center community members as key partners in research and prevention efforts.
- Promote attention to environmental carcinogenesis and pathways to prevention in education of students and via professional associations.
- Prioritize research and development to meet necessary societal needs with materials, technologies and chemistries that do not contribute to cancers and other health problems.
- Develop and model institutional practices that advance safer alternatives.

Environmental and public health-focused groups

- Elevate the opportunity of cancer prevention via toxics reduction in education and outreach.
- Partner with scientists and their research partners to educate members, constituents, clinicians and communities about the evidence base for environmental contributors to cancer and solutions.
- Engage new constituencies to maximize impact of collaborative work to reduce toxic chemicals and promote safer alternatives.
- Hold government decision makers accountable for implementing and enforcing policies that protect public health and increase reliance on safer alternatives over time.

Philanthropic organizations

- Support organizations and partnerships led by marginalized people which seek to reduce exposure to toxic chemicals and address systemic root causes.
- Include environmental chemicals and safer alternatives as a priority area in science, medicine, chronic disease prevention and community development funding.
- Invest in cancer-focused organizations seeking to incorporate environmental risks into their cancer prevention programming.
- Encourage collaboration across sectors and systems approaches to catalyze change at the scale needed.
- Provide seed funding for innovative programs that enable the public sector to advance pollution prevention and development of safer alternatives to hazardous chemicals.
- Promote with investments and grants equitable transitions to a clean and sustainable regional economy that thrives without relying on fossil fuels.

The Pennsylvania Constitution enshrines the right of people to healthy environments.

Exercising this right is our responsibility, and our opportunity.

To sign on to this Declaration, and/or become involved in developing sector-specific action agendas, please visit CENSWPA.org.



Cancer & Environment Network
of Southwestern Pennsylvania

REFERENCES

- [1] International Conference on Occupational and Environmental Determinants of Cancer: Interventions for Primary Prevention [Asturias Declaration: Call to Action](#). March, 2011.
- [2] (a) Myers DJ, et al. [Cancer rates not explained by smoking: a county-level analysis](#). Environ Health. 2020;19(1):64. (b) Myers DJ, et al. Letter to the Editor: [Cancer rates not explained by smoking: how to investigate a single county](#). Environ Health. 2021; 20:62.
- [3] (a) [State Cancer Profiles](#). National Cancer Institute and Centers for Disease Control and Prevention; (b) Pennsylvania Department of Health, [Cancer Statistics Dashboard and Enterprise Data Dissemination Informatics Exchange \(EDDIE\)](#).
- [4] PA Department of Environmental Protection. [Radon in the Home](#).
- [5] US EPA. [National Air Toxics Assessment](#). 2014. Analyzed by John Graham, Clean Air Task Force.
- [6] EHN Staff. [Fractured: the body burden of living near fracking](#). Environmental Health News. March 1, 2021
- [7] (a) Elliott EG, et al. [Unconventional oil and gas development and risk of childhood leukemia: Assessing the evidence](#). Sci Total Environ. 2017;576:138-147; (b) Lin CK, et al. [Residential exposure to petrochemical industrial complexes and the risk of leukemia: A systematic review and exposure-response meta-analysis](#). Environ Pollut. 2020;258:113476.sf
- [8] (a) Warner, NR., et al. [Impacts of shale gas wastewater disposal on water quality in Western Pennsylvania](#). Environ Sci Tech. 2013;47:20; (b) PA Department of Environmental Protection. [Water Supply Determination Letters](#). Updated February 1, 2021.
- [9] (a) Byrwa-Hill BM, et al. [Lagged association of ambient outdoor air pollutants with asthma-related emergency department visits within the Pittsburgh region](#). Int J Environ Res Public Health. 2020 Nov 20;17(22):8619; (b) Gentile DA, et al. [Asthma prevalence and control among schoolchildren residing near outdoor air pollution sites. J Asthma](#). 2020 Nov 5:1-11; (c) Fabisiak JP, et al. [A risk-based model to assess environmental justice and coronary heart disease burden from traffic-related air pollutants](#). Environ Health. 2020 Mar 16;19(1):34; (d) Erqou S, et al. [Particulate matter air pollution and racial differences in cardiovascular disease risk](#). Arterioscler Thromb Vasc Biol. 2018 Apr;38(4):935-942; (e) Sram RJ, et al. [The impact of air pollution to the central nervous system in children and adults](#). Neuro Endocrinol Lett. 2017 Dec;38(6):389-396.
- [10] (a) Li D, et al. [Health risks of chemicals in consumer products: A review](#). Environ Int. 2019;123:580-587; (b) Singla V. [Carcinogens in products: Inadequate protections raise cancer risks](#). Trends Cancer. 2020; S2405-8033(20)30136-9.
- [11] Examples include: (a) Georgeson L and Maslin M. [US green economy's growth dwarfs the fossil fuel industry's](#). ARS Technica. October 19, 2019; (b) Henderson A. [A sustainable refocus helps a historic Chicago community rebuild](#). Energy News Network. December 2, 2020.
- [12] U.S. EPA. [Safer Choice Partners of the Year Awards](#).
- [13] Mind the Store. 2019 [Retailer Report Card](#).
- [14] Examples include: (a) [Massachusetts Toxics Use Reduction Institute](#); (b) [US Federal Executive Order Planning for Federal Sustainability in the Next Decade](#); (c) [U.S. Oregon State Executive Order No. 12-05 on Fostering Environmentally Friendly Purchasing and Product Design](#); (d) [Massachusetts State Executive Order 515 Establishing an Environmentally Preferable Purchasing Policy](#).
- [15] Examples include: (a) [BlueGreen Alliance](#); (b) [Cancer Free Economy Network](#); (c) [New Economy Coalition](#); (d) [Reimagine Appalachia](#); (e) [Re-imagine Beaver County! 2019 report](#).