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Environment, public policy, and human health: Implications of current events for the next generation of patients and physicians

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In this issue of the *Proceedings*, authors Demain et al., and Schmier and Ebi report their observations of our changing environment and its impact on human health. While the scientific and political communities debate whether the observed plant, microbial, and zoonotic changes in regional ecosystems are attributable to anthropogenic or natural origin, recent events have converged to place the sustainability of our environmental and health care policies in the forefront of the national consciousness.

At the March 2009 AAAAI meeting in Washington, allergy/immunology specialists and scientists from around the world convened to share their knowledge about clinical and scientific advances in allergy, asthma, and immunology. Simultaneously, only blocks away, influential decision makers with varied degrees of scientific and medical expertise were drafting environmental and health-related legislation that will affect the health and economic status of Americans and others around the globe for years to come.

On the day before the meeting, 20 allergy/immunology specialists from around the country met with their congressional representatives to frame the complex scientific, clinical, and public health questions now being considered as part of the evolving economic, environmental, and healthcare legislation on Capitol Hill. These meetings provided an opportunity for members of Congress to interact with the specialists who provide care to the millions of Americans affected by respiratory and immune disorders induced by allergens, toxic pollutants, and other environmental irritants.

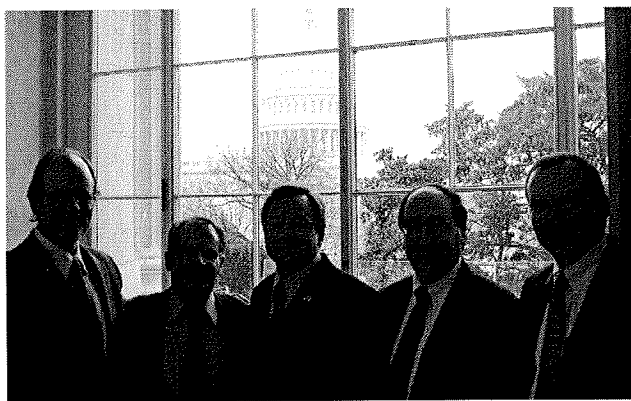
In a world where increasing numbers of people are developing environmentally induced disorders,¹⁻⁴ the number of trained physicians⁵ and other resources necessary to manage these individuals/populations are declining. A national study of physician demand/supply ratios in 2008 concluded that 71,440 patients with allergic disorders exist for each allergist/immunologist, compared with 2,875 patients per internal medicine and 5,579 patients per pediatric practitioner.⁵

From these discussions, it is clear that, in response to rapidly changing social and political events, legislators are moving swiftly to infuse a bolus of resources into the American economy, health care system, and environmental infrastructure. Ultimately, this will likely change the manner in which the environment and health care intersect at the physician, patient, and population levels for the foreseeable future. As patients wrestle with the fiscal and medical aspects of their environmentally induced medical conditions, allergy/immunology specialists, by the nature of their training, are optimally positioned to understand the complex relationships between scientific, clinical, public health, and environmental issues in micro and macro environments.^{6,7}

In an attempt to connect these parallel worlds, during the AAAAI meeting, thought leaders from the allergy and environmental health communities extended their knowledge as environmental experts to a broader audience through a series of presentations highlighting the connection between pathogenesis,⁷ patient health, public health,⁸ planet health,^{9,10} and public policy.¹¹ Before an audience from the physician, patient advocacy, environmental, legislative, and scientific communities these presentations underscored the value of investing in scientific research, physician manpower training, prevention programs, clinical initiatives, and proactive management of environmentally induced disorders through policies emphasizing healthier approaches to energy use, waste management, transportation, and housing.¹²

As legislators seek the best return on the nation's healthcare investment,¹³⁻¹⁶ the need to invest in an inte-

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Speakers at AAAAI Environment, Public Policy, and Human Health Forum, Capitol Hill, Washington, DC, March 2009. Left to right: Jeffrey Demain, MD, Paul Epstein, MD MPH, Hon. Steven Kagen MD, Daniel Steinberg, MD, and David Peden MD.

grated strategy addressing the continuum of environmentally induced disease is clear. By funding scientific research, graduate medical education, clinical initiatives, and translational strategies to optimize the health of indoor/outdoor environments, the existing infrastructure is further strengthened to address the burden of environmentally induced disorders that are accelerating in regional^{8,17,18} and global ecosystems.^{7-10,19}

Initiatives are underway to share the expertise within the specialty of allergy/immunology with the broader legislative community.¹¹ By getting more involved at the local, state, and national levels at this pivotal time in the decision-making process, allergy/immunology specialists have the opportunity to focus these issues for decision makers. By doing so, the specialty can provide the evidence-based context to address these interdisciplinary issues on behalf of the patients we serve.

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