Glenn Duns

Medicine and the environment

Environmental medicine, in the broadest sense, can be seen as being concerned with the interaction between humans and the environment. This covers a great deal of territory and allows for various interpretations. For example, The Australasian College of Nutritional and Environmental Medicine describes it as being 'concerned with the interaction of nutritional and environmental factors with human biochemistry and physiology, and the resulting physiological and psychological symptoms and pathology'.[1] The Australasian Faculty of Occupational and Environmental Medicine defines environmental medicine as 'the prevention, research, investigation, assessment and treatment of human health impacts of industrial activities on the environment beyond the confines of the industrial site'.[2] The unifying premise is that exposure to adverse environmental conditions results in ill health.

General practice education emphasises the fact that the individual cannot be separated from the environment and that environmental factors exist beyond the biological. A nutritionist may focus on dietary factors, such as excess fat in the diet or a lack of a particular nutrient. An occupational physician may specialise in exposures to industrial toxins. Within the field of emergency medicine and its focus on acute presentations, the adverse environmental exposure could be extreme temperatures or snake venom. General practice needs to concern itself with all of these exposures and expand the definition of environment to include the psychological and social. Not only do we deal with toxic organisms, we also deal with the consequences of toxic relationships, toxic societies and poisonous ideologies.

Traditionally this has been neatly and somewhat simply summarised as the biopsychosocial model. The distinction between the biological and psychosocial spheres may also be expressed in a primary care versus primary healthcare dichotomy, where primary care is defined as referring to the biomedical sphere and primary healthcare as including social and environmental factors.[3]

In this issue of *AFP* our articles cover a range of environmental exposures. Leggatt[4] addresses risks associated with medical and dental tourism and provides guidance for general practitioners (GPs) in educating their patients. Isbister and Berling review marine envenomations and injuries that may occur in the Australian environment.[5] Leder's article[6] tackles the common problem of travellers' diarrhoea and offers practical guidance on prophylaxis and self-management. Finally, Sankoff, in his article on heat illness,[7] describes the management of these potentially life-threatening conditions and refers to the evidence for climate change, a topic that has generated much debate and that may represent the primary global environmental threat of our time.

What role does the GP have in advocating for changes in the environment of our patients and community in order to improve health outcomes? Where does the responsibility end in caring for patients? If the responsibility of general practice extends to the environment, does this oblige a degree of political activism on our part?

Primary care organisations have the potential to facilitate expansion of the general practice sphere into broader environmental concerns. In Australia these organisations are about to enter their third iteration in the form of primary health networks, following on from Divisions of General Practice and Medicare Locals. It is crucial that these organisations engage general practice and, conversely, that GPs involve and represent themselves. General practices and practitioners have enormous amounts of information and experience regarding illness presentations. This information, in a de-identified form, can inform the functioning of primary care organisations and allow for improvements in community outcomes, improvements that ultimately translate into the welfare of individuals.

Biological, psychological and societal exposures all fall within the sphere of general practice. If we are to be serious about prevention and not just limit ourselves to treating consequences, then this obliges some degree of awareness and action within the public health realm. This ability to respond to threats new and old will determine whether we can sustain healthy individuals and societies in the face of a constantly changing environment.

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