

Children's health and the environment. A global perspective

J. Pronczuk-Garbino (ed.)

Geneva: World Health Organisation (2005)

Children are vulnerable to environmental hazards. Relative to body weight, they breathe, drink and eat much more than adults, resulting in greater exposure to toxicants present in air, water or food. Furthermore, children's and especially infants' metabolic pathways are immature so that their ability to metabolize and excrete toxicants is limited compared to adults. Their growth and development is controlled by delicate interacting systems, which are easily disrupted, resulting in permanent and irreversible dysfunction if exposures occur during windows of high susceptibility. Last but not least, because children have more future life years than adults, they have more time to develop chronic diseases triggered by early exposures. Similarly, death or disability in children result in the loss of many more disability-adjusted life years than in adults.

For all these reasons, research into environmental hazards in children should be of high priority. The topic has, however, been relatively neglected over recent years, probably because results neither translate into market shares nor into short-time health-care savings. In 1999 the World Health Organization (WHO) set up a Task Force on Children's Environmental Health which in March 2002 led to the Bangkok statement and the pledge to incorporate children's environmental health into the training for health care providers. In September 2002, the World Summit on Sustainable Development recognised that children, both girls and boys, are the essence of sustainable development and that all nations should work together in the search for healthy and safe lives for children. One of the first actions taken by WHO was to produce a manual for health care practitioners: "Children's health and the environment. A global perspective". The book is aimed at public health specialists and clinicians, in developing and industrialised countries, as an introductory resource for health care professionals who want to increase their knowledge and understanding of environmental health in children.

The book is divided into six sections. Section one, with two chapters, gives a good overview of the reasons why infants and children are highly vulnerable to environmental hazards. Section two describes specific situations where exposure in children occurs: the home, school, the work place, events of extreme stress, and situations of alcohol and drug abuse. Section three, in ten chapters, describes specific environmental threats, including water quality, sanitation and hygiene, food borne hazards, poisonings and envenomings, unintentional injuries, ionizing radiation, noise, global environmental change and endocrine-disrupting chemicals. Section five summarises what actions can be taken at different levels of society to protect children from environmental hazards: in families, local communities, national governments and international organisations. Section six, finally, is an interesting collection of case studies from industrialised and developing countries, describing concrete examples of environmental illnesses with a particular focus on children in developing countries.

The book was edited by Jenny Pronczuk-Garbino from WHO and written by more than 60 people. The first part of the book was authored mainly by experts from WHO (10 authors), the US (14), and Australia (3) with sporadic contributions from Europe (2) and developing countries (6). Case studies mainly came from developing countries (13) and Eastern and Western Europe (8), with fewer contributions from the US (3) and WHO (3). Overall, the book is a valuable introduction to the theme for students and public health actors, giving a comprehensive international account of the proportion of deaths and diseases in children caused by environmental hazards. The case reports are informative and give illustrative descriptions of environmentally induced ill health in children around the world, including the effect of interventions.

The goal to produce a book that will both be useful to public health specialists and clinicians, in developing and industrialized countries, was ambitious, and perhaps overambitious at

places. The book aims to cover everything from exposure routes, signs and symptoms, treatment and prevention to impact at the population level. Because the relative importance of different environmental threats varies hugely between countries, there is a risk that a manual that attempts to cover it all ends up being of limited value in a specific setting. For example, some statements about the importance of exposures apply only to the part of the world where the author comes from (often the US), without discussion of geographic differences.

Also, I felt the texts on signs and symptoms, history taking, diagnosis and treatment, which were largely written by epidemiologists, public health specialists, or toxicologists will be of limited value to frontline clinicians. This is also the case for infectious diseases and intoxications, which constitute the bulk of paediatricians' workload. A more detailed description of the population impact of these conditions in different parts of the world, and the proportion which could be prevented by interventions, might have been more useful. Also, the potential of interventions at the societal or structural level could have been emphasised more strongly. For example, in the context of preventing exposure to tobacco smoke the book repeate-

dly suggests interventions at the individual level, for example counselling parents to quit smoking, while the legislation of cigarette prices, or tobacco-free environments does not receive much attention. The choice of the topics included is necessarily subjective, and one could argue that overnutrition and lack of physical exercise should also have been included as major emerging environmental threats to children. Finally, as expected from a book with many authors, the quality of the texts and references varies from chapter to chapter, and there is some overlap.

Despite some limitations, the book will be very helpful for anyone who wishes to get an overview of the impact the environment has on the health of our children, a valuable teaching resource in many settings, and useful to all of us who advocate the right of children to grow up in healthy environments. "Children's health and the environment. A global perspective" should not be missing from the library of any public health specialist working in public health service, administration or research.

Claudia E. Kuehni
kuehni@ispm.unibe.ch

To access this journal online:
<http://www.birkhauser.ch/IJPH>
