

Report of Health Effects of the Chernobyl Accident

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The past two decades has witnessed dramatic changes in public health governance and international cooperation on Chernobyl Nuclear Power Plant Accident. This year, in 2006, many events and programs have been held in relation to the 20th anniversary of the Chernobyl Disaster (<http://www.chernobyl.info/index.php>) including two major international conferences, in Minsk and Gomel, Belarus (April 19-20) and in Kiev, Ukraine (April 24-26). The final report of Chernobyl Forum has been released (http://www.who.int/ionizing_radiation/chernobyl/en/index.html) under the mutual agreement among the UN organizations (UNDP, IAEA and WHO) and three affected countries (Belarus, Russia and Ukraine). Childhood thyroid cancer caused by radioactive iodine fallout is one of the main health impacts of the accident (http://www.hotthyroidology.com/editorial_158.html). The special symposium of "Chernobyl 20 Years beyond" held by the Japanese-German Center Berlin (JDZB) is another important opportunity to discuss further scientific evidence and novel therapy for radiation-exposed victims of Chernobyl accident by established scientists and contributors selected by Nagasaki University 21st Century Center of Excellence Program, "International Consortium for Medical Care of Hibakusha and Radiation Life Sciences (<http://www-sdc.med.nagasaki-u.ac.jp/coe/index.html>)."

Apart from the dramatic increase in thyroid cancer incidence among those exposed at a young age, there is no clearly demonstrated increase in the incidence of solid cancers or leukemia due to radiation in the most affected populations. There was, however, an increase in psychological problems compounded by insufficient communications about radiation effects and by the social disruption and economic depression that followed the break-up of the Soviet Union. Although Chernobyl-related health effects are divided into two categories; radiation-induced and non-radiation-related, common people generally do not distinguish between those and do not follow such discrimination; it is also quite difficult to let them realize risk perception and management on Chernobyl.

The task of the WHO is, therefore, not only to analyse and clarify the global burden of Chernobyl-related illness but also to promote well-being of the local residents who suffered from low level radiation exposure from fallouts one by one during a long period of time. That is why an integration of different working areas of Public

Health and Medicine is essentially needed to improve and promote total health care system around Chernobyl. Based on appropriate assistance for policy-making, it is necessary to set up a financially secured mechanism of risk management for the general public around Chernobyl even 20 years after the accident. It is recommended that each country makes every effort to supply people honestly with an accurate information, not only on how to live safely in regions with low level radio-contamination, but also how to implement a healthy lifestyle and create new livelihoods; this is clearly a reassuring message from the international societies to Chernobyl. Secondly, during the rehabilitation period, measures should be taken to avoid any myths and misperceptions of an overemphasized threat of radiation among the residents of affected areas. At the same time, based on the sole experience and knowledge of the Atomic Bomb survivors in Hiroshima and Nagasaki, long-term health monitoring, early disease detection and appropriate treatment are indubitably needed, being beneficial for already identified target and high risk groups. However, systems and services are often inefficient or inadequate in delivering what is indeed needed on the site. Fading memories and slender financial supports from abroad have bred further difficulties in the maintenance of such long-term health monitoring at different levels including personal, domestic and national ones.

What is really needed around Chernobyl after 20 years elapsed? The WHO has promoted scientific research on Chernobyl to offer a solution of public concern and supported an ever-lasting effort to clarify the cause-and-disease relationship. There currently are two kinds of models, the Chernobyl Telemedicine project and the Chernobyl Tissue Bank (CTB) (<http://www.chernobyltissuebank.com/>) performed in a close collaboration with Ministries of Health of Belarus, Russia and Ukraine. Aimed at the improvement of local medical care system, Telemedicine has given an impulse to both patient care and development of long-term follow-up mechanism in Belarus. The CTB is a multilateral international project with funding provided by three parties (the European Commission, the National Cancer Institute of the US and Sasakawa Memorial Health Foundation) which was initiated to support the three countries, Belarus, Ukraine and Russia. There are still problems to be solved and goals to be achieved, and Nagasaki University was deeply committed to these Chernobyl research projects from the very beginning.

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The WHO can contribute to a new challenge in Chernobyl, probably the most difficult part, which is the uncertainty of complex effects of environmental factors on human health including mental health. WHO can work together with multiple partners to reduce the gap

between scientific and public knowledge, and to help the communities to achieve an optimal level of physical, mental and social status and well-being.