LETTERS TO THE EDITOR

On the need for a radon registry

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On the need for a radon registry

Dear Sir

Recent studies of people exposed to radon have confirmed that indoor radon is a serious health hazard (WHO 2005). Radon has been identified as the second leading cause of lung cancer after tobacco smoking. For non-smokers, radon is the primary cause of lung cancer. The lung cancer burden due to indoor radon exposure is the largest burden from environmental radiation.

To effectively reduce radon-induced lung cancer, the World Health Organization and many countries have established a radon control program with strategies for dealing with new and existing constructions. Health Canada has recently announced a new Government Canada Radon Guideline (2007). The new Canada Radon Guideline applies to dwellings including residential homes and public buildings such as schools, hospitals, long-term care residences and correctional facilities. With increased public awareness of radon risk, more and more dwellings will be tested for radon. There is, therefore, an increasing need to have a radon registry of various geographical scales: regional, national or even international.

A radon registry could be a database containing records related to indoor radon exposure. Like the successful example of the Canadian National Dose Registry (Health Canada 2006) which provides occupational dose records of more than 100 000 workers back to the 1940s, a radon registry could contain historical radon records of individual dwellings. With more and more records entered, a radon registry could have following functions:

1. Assist individuals in their effort to control radon exposure by providing historical indoor radon records.
2. Contribute to an ongoing update of radon risk maps and assist governments of different levels in identifying radon-prone areas.
3. Monitor the effectiveness of mitigation measures in existing dwellings.
4. Evaluate the implementation of radon-resistant new constructions.
5. Provide basic information for health research and statistical analyses, and contribute to the scientific knowledge on health risk resulting from environmental radon exposure.
6. Assist future epidemiological studies by providing accurate radon exposure data for individuals living in different dwellings.

With these functions in mind, parameters and attributors of a radon registry can be readily designed. In addition to the basic information (geographic locators and results of radon concentrations), it is essential to record measurement information and building characteristics. Measurement information should include at least detector type and detector location, measurement conditions, dates and durations. In addition to building type (such as single- or multi-family house, school or office building), housing characteristics should also include information such as foundation type, major building materials and ventilation system. It is also worth recording the smoking status of occupants, whether water from a well is used and whether/when radon mitigation is undertaken. Entries in a radon registry should be kept confidential, especially for private residential homes. Protection against misuse or wrongful
disclosure is the key to the success of any information registry. The privacy issues can be dealt with properly as demonstrated by the successful National Dose Registry and National Dosimetry Services in Canada.

All the above functions of a radon registry can serve as effective measures of a local or national radon control programme. The setting-up and maintenance of such a registry are challenging and require long-term commitment from governments at various levels. The WHO International Radon Project and its international team could serve as the coordinator of a global radon database for controlling the largest burden from environmental radiation.

References


Yours sincerely,

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