

that it is still too early to recommend routine use of Doppler ultrasonography to predict a pregnant woman's risk of developing pre-eclampsia and intrauterine growth restriction.

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**Competing interests:** None declared.

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DOI:10.1503/cmaj.1080051

**Electronic medical records**

We wish to comment on the editorial about electronic medical records.<sup>1</sup> Adoption of electronic health records has been slow in Canada. In some provinces fewer than 30% of medical practices use an electronic health record as their primary record-keeping

tool and many of these practices do not use essential features of the system. Perhaps the design and deployment of these systems could account for this disturbing statistic.

Vendors of electronic record-keeping systems tend to focus on the expedient addition of clinical data. However, the increasing quantity of longitudinal information that includes personal and family histories, detailed notes on clinical encounters, laboratory results and referral material can result in data overload. Thus, the electronic medical record can become a hindrance rather than a support.

The needs of all stakeholders must be carefully considered in the design of electronic medical record-keeping systems. To be relevant and useful to clinicians and their patients (the primary stakeholders), electronic health records need to be used at the point of care. Policy-makers in the health care system are important secondary stakeholders because data from electronic records can be collated for use in managing the health care system.

Software vendors and the provincial bodies responsible for electronic health record certification must understand the impact of the way in which information is presented on the usefulness and usability of electronic records. Rather than being a passive repository of information, the electronic record should be capable of revealing complex trends and patterns. As well, training methods must be adjusted so that health care providers are taught to understand that facts must be added to the health record in the context of continuing care and not only to provide a medicolegal historical record.

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**Competing interests:** None declared.

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DOI:10.1503/cmaj.1080036

**Medical isotope production and nuclear terrorism**

Two recent *CMAJ* news articles gave good insights into last December's medical isotope crisis.<sup>1,2</sup> It was inspiring to read how our colleagues in nuclear medicine coped with the interruption in the isotope supply.

It may not be widely known that the manner in which medical isotopes are produced in Canada is unintentionally exacerbating the problem of nuclear terrorism. Uranium contains 2 isotopes, uranium 238 (U 238) and uranium 235 (U 235). Natural uranium consists of 0.7% U 235 whereas highly enriched uranium consists of more than 20% U 235. Most of the medical isotopes produced at the Chalk River facility are made from weapons-grade highly enriched uranium. Highly enriched uranium is one of the main ingredients in homemade nuclear bombs, and its theft and smuggling cannot reliably be detected.<sup>3</sup>

Canada's MDS Nordion, one of the 4 major international suppliers of medical isotopes, imports about 20 kg of weapons-grade highly enriched uranium from the United States annually to produce its isotopes. In the process of making medical isotopes, about 97% of the bomb-grade material remains unused. These ever-increasing leftovers, sufficient to make several Hiroshima-sized bombs, are deposited in commercial sites that constitute a long-term security risk.

There is another option. The production of medical isotopes can be converted from the use of highly enriched uranium to the use of low-enriched uranium (which cannot be used to make a nuclear bomb) without technical obstacles.<sup>4</sup> This is being done successfully in smaller facilities in Argentina, Indonesia and Australia. For Canadian suppliers, the conversion would entail an initial cost for retooling, but thereafter the production costs would be comparable to those with highly enriched uranium.<sup>5</sup> In the long term, there may actually be savings as the costs of storing weapons-grade highly enriched uranium would be eliminated. As the sole purchasers of medical isotopes, health