

6 times higher than the rate reported by Ward and colleagues.

Children and young adults are at high risk for vitamin D deficiency even in sunny regions.<sup>1-3</sup> We agree with Danielle Grenier that, in addition to heightened efforts by individual health care providers, more rigorous national surveillance is needed to ensure adequate vitamin D intake by pregnant and lactating women and to improve the health and well-being of children and youth.<sup>4</sup>

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## [The authors respond:]

We are pleased that our national data<sup>1</sup> have spurred an interest in defining the vitamin D status of children and adolescents in other countries. We agree with Lippi and colleagues that focused efforts and national surveillance should be undertaken on a global scale to ensure adequate vitamin D intake among women and children.

An important distinction between our methodologies to characterize the

extent of the problem and those used by Lippi and colleagues is that we sought to prospectively determine the incidence of the most advanced form of vitamin D deficiency: vitamin D-deficiency rickets. In contrast, Lippi and colleagues retrospectively reported the incidence of biochemical vitamin D deficiency, in the absence of describing whether clinical manifestations of low vitamin D levels were present in the identified cases or whether the vitamin D deficiency might have been related to liver or renal pathology. In our prospective study, all patients for whom the information was available manifested at least 1 clinical sign of rickets, such as seizures, hypocalcemia, skeletal deformities and failure to thrive. Subsequently, a diagnosis of vitamin D-deficiency rickets was sought by the reporting pediatricians, with radiographic evidence of rickets documented in 93% (87/94) of the cases for whom radiographs were available. Our prospective study documented the incidence of rickets in Canada, which inevitably is lower than the incidence of vitamin D deficiency without rickets.

In Canada, screening for vitamin D deficiency by measuring 25-hydroxyvitamin D levels has led to large numbers of children being identified with low concentrations. Roth and colleagues reported that 5.9% (4/68) of children presenting to an Edmonton, Alberta, emergency department who were screened for vitamin D status were vitamin D deficient (defined as a serum concentration of 25-hydroxyvitamin D less than 25 nmol/L).<sup>2</sup> The Edmonton data on vitamin D deficiency identified through biochemical screening are similar to the numbers reported by Lippi and colleagues.

Emerging data on the role of vitamin D in health and disease, even beyond skeletal biology, and the fact that infants, children and pregnant and lactating women have been identified as being at risk for vitamin D deficiency (whether clinically silent or not) point to the importance of heightened attention to the problem in these groups and

the need for international policies to prevent the development and progression of what appears to be a widespread public health problem.

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## Correction

A recent *CMAJ* article<sup>1</sup> referred to the following website [www.agreecollaboration.org](http://www.agreecollaboration.org), which is no longer being updated. The appropriate website for readers to consult is [www.agreetrust.org](http://www.agreetrust.org). Similarly, the footnote to Table 2 should read "Details about each question and more specific explanations are available in the AGREE instrument ([www.agreetrust.org](http://www.agreetrust.org))."

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