

## Use of growth charts

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SE Lawrence, EA Cummings, C Rodd

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The U.S. Centers for Disease Control and Prevention (CDC) developed growth charts in 2000 that predominated growth monitoring in children in Canada and elsewhere until 2010, when new growth charts were released by the World Health Organization (WHO). The WHO growth charts were widely recommended for use in Canada by the Public Health Agency of Canada and several health organizations, including the Canadian Paediatric Society (CPS).<sup>1</sup> A one-time survey was conducted to assess the availability, utilization and satisfaction with growth charts in clinical practice in Canada.

The survey was sent to 2,544 paediatricians and 280 family physicians with a stated interest in paediatrics. The response rate was 24%, including 64% general paediatricians, 35% paediatric subspecialists and 1% family physicians. Of these respondents, 68% preferred the WHO charts for infants and almost half (49%) the WHO charts for children and youth 2 to 19 years of age.

Regarding the use of the WHO charts, nearly half of respondents (49.7%) reported significant concerns with their inability to assess weight except as a function of BMI beyond age 10 years of age. Although many recognized the importance of monitoring BMI, particularly from a public health standpoint, they indicated that clinicians need to be able to track weight changes for individual patients, particularly in the context of acute and chronic illnesses.

The second most common concern was the change in percentiles presented in the WHO charts. Almost a quarter (24%) of respondents felt that there were too few percentile lines between the 3rd and 97th percentiles for infants, while 19% had similar reservations about the child and youth measures. They reported greater difficulty in identifying when patients are "crossing centiles". The addition of extreme percentiles (0.1 and 99.9), shading on charts and unavailability with electronic health record provider were other concerns mentioned by 10% to 13% of respondents. Interestingly, only 31% of those who preferred the WHO charts had completed the educational modules developed by the CPS and Dietitians of Canada.

In summary, there is support for the use of the WHO data for monitoring the growth of Canadian infants, but only half of respondents prefer the WHO charts for older children. Design concerns were also raised. Evaluating clinical tools such as growth charts is important for ensuring they meet the needs of front-line practitioners. Concerns should be addressed through education, especially because rates of module completion were low. These survey results also lend support to the development of alternative growth charts that use the WHO data and methodology but address design and other concerns. Ideally, these would be stand-alone charts requiring minimal specific education to use for practitioners already familiar with existing growth charts.

### Reference

1. Dietitians of Canada; Canadian Paediatric Society, Nutrition and Gastroenterology Committee; College of Family Physicians of Canada; Community Health Nurses of Canada. Promoting optimal monitoring of child growth in Canada: Using the new World Health Organization growth charts. [www.cps.ca/en/documents/position/child-growth-charts](http://www.cps.ca/en/documents/position/child-growth-charts).

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### Principal investigator

Sarah E. Lawrence, MD, Chief, Division of Endocrinology, Children's Hospital of Eastern Ontario, Room 5109A, 401 Smyth Rd, Ottawa ON K1H 8L1; tel.: 613-737-7600, ext. 2434; fax: 613-738-4236; [slawrence@cheo.on.ca](mailto:slawrence@cheo.on.ca)