

Examining Growth Monitoring Practices in Primary Care

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Background

Growth monitoring is the long-standing practice used to identify children who fall outside healthy growth parameters. It has been proposed as a key activity for childhood obesity prevention. Accurate growth monitoring requires specific techniques and equipment, and plotting measurements on a growth chart.

Objective

The objective of this study was to determine if primary care providers follow recommended growth monitoring practices, including measurement techniques, standardized equipment, and use of appropriate growth charts at all health visits.

Methods

Study Design & Population

- Cross-sectional descriptive study
- Members of the Association of Family Health Teams of Ontario (AFHTO) and the Ontario Medical Association (OMA) Paediatrics Group.

Data Collection

- An electronic survey was distributed between December 2016 and February 2017 using SurveyMonkey®.
- Pilot testing of the survey was performed to verify the suitability of the questions for the primary care setting and to health providers with knowledge of growth monitoring.
- The survey assessed the following: measurement equipment, technique, growth chart use, and timing (scheduled and/or unscheduled visits).
- Information about practice setting, type of health professional and respondent demographics was also collected.

Statistical Analysis

- Descriptive statistics were performed.
- Chi-squared and Fisher's exact test were used to determine any statistically significant differences between practice type and professional designation.

Table 1: Survey respondent characteristics

Respondent Characteristics	N=73	%
Sex		
Female	58	81.69
Male	13	18.31
No response	2	
Age Group		
18 to 34	26	35.62
35 to 44	13	17.81
45 to 54	18	24.66
55+	16	21.92
Professional designation		
Physician	26	35.62
Registered Nurse or RPN	8	10.96
Nurse Practitioner	9	12.33
Registered Dietitian	28	38.36
Clinic Staff member	2	2.74
Practice setting		
Family Health Team	52	71.23
Pediatric primary care	9	12.33
Pediatric consultant care	7	9.59
Community Health Centre	3	4.11
Other - Nurse led clinic, pediatric walk-in clinic	2	2.74

Table 2: Reported Current practices for measurement of weight and child dress by age

Infant (<2 years)			Child (≥ 2 years)		
Infant Weight Equipment	N	%	Child Weight Equipment	N	%
Baby scale (digital)	68	93.15	Digital or electronic scale	50	68.49
Beam balance scale	3	4.11	Beam balance scale	21	28.77
No equipment for babies	1	1.37	Other	2	2.74
Other	1	1.37			
Infant Clothing			Child Clothing		
N	%		N	%	
Naked	33	45.83	Light clothes, no shoes	60	83.33
Diaper only	26	36.11	Light clothes, with shoes	1	1.39
Light clothes	2	2.78	Fully clothed, no shoes	8	11.11
Fully clothed, no shoes	2	2.78	Fully clothed, with shoes	1	1.39
Other*	9	12.50	Other	2	2.78

Results

Table 3: Reported current practices for measurement of length and height by child age and professional designation

Age group	Equipment for length/height	Total		Physician		Nurse		RD		p-value
		N	%	N	%	N	%	N	%	
<2 years	Length Board	15	21%	5	19%	2	12%	8	29%	0.12
	Paper pencil	44	60%	13	50%	14	82%	17	61%	
	Other	12	16%	8	31%	1	6%	3	11%	
<2 years, but child can stand	Length Board	5	7%	1	4%	1	6%	3	11%	0.07
	Stadiometer	25	34%	11	42%	4	24%	10	36%	
	Paper pencil	23	32%	5	19%	10	59%	6	21%	
	Tape measure on wall	14	19%	5	19%	0	0%	1	4%	
	Other	6	8%	4	15%	2	12%	8	29%	
≥ 2 years	Stadiometer	47	64%	16	62%	9	53%	21	75%	0.59
	Tape measure on wall	22	30%	8	31%	7	41%	6	21%	
	Other	4	6%	2	8%	1	6%	1	4%	

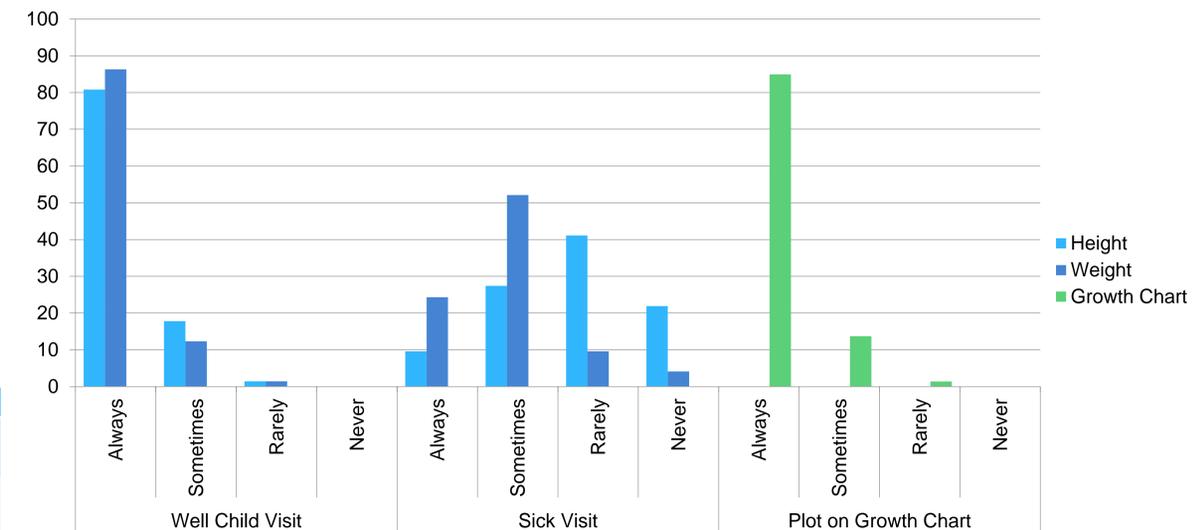


Figure 1: Frequency of height and weight measurements by visit type and plotting measurements on a growth chart

Discussion

- Adherence to recommendations for use of appropriate equipment and technique for measuring infant and child weight was adequate to high, but for measuring infant length was low.
- Growth chart use was high, but measurement at unscheduled visits was low.
- Limitations include the small number of survey respondents, use of a survey rather than direct observation and the possibility that the findings may not be generalizable.
- Growth monitoring can be improved by increasing the use of length boards for children <2 years of age, and measuring and charting growth at both scheduled and unscheduled visits.