FNIHB- OR Nursing Policy and Procedure

Section:	**Nursing Practice**	Policy Number:	**II - 29**
Subject:	**Monitoring Growth in Pediatric Population**	Issued: Revised:	**March 31, 2015**
Distribution:	**All Nursing Facilities**		

1. POLICY:

1.1 All pediatric health records shall contain a FNIHB-OR approved growth chart. All growth measurements for infants, children and adolescents are to be documented on this growth chart.

1.2 Serial growth measurements of length (birth to 2-3 years) or standing height (≥ 2 years), weight and head circumference (birth to 2 years) should occur at every scheduled well-baby and well-child or adolescent health visit.
If the infant, child or adolescent has not attended the recommended well-child visits, then full growth measurements must be taken when they present for acute illness visits.

1.3 In addition to the routine serial growth measurements stated in 1.2 of this policy, all children shall be weighed at each acute illness visit and plotted on the appropriate growth chart. Children less than two (2) years of age are to be weighed without clothes and a diaper on.

2. PRINCIPLES:

2.1 Current weight measurements are critical for calculating accurate drug dosages in the pediatric population.

2.2 The Canadian Pediatric Society recommends monitoring growth at least once a year and at each acute clinic visit. These measures help to confirm a child's healthy growth and development, or identify early a potential nutritional or health program.

2.3 Growth is one of the signs of General Health. In most children, serial weight-for-length, BMI, length/height, and weight measurements follow consistently along a percentile curve. Growth pattern over time is more important than one single measurement (Dietitians of Canada, et. Al, 2014).

2.4 BMI correlates with body fat; pediatric BMI has been linked to future obesity and adverse health outcomes. BMI-for-age should be used to assess weight relative to height for all children two years and older.

2.5 It is expected that appropriate, calibrated equipment be available for weighing and measuring children of all ages. The equipment must be maintained in good and accurate working order.

3. DEFINITIONS:

BMI (Body Mass Index): Defined as weight in kilograms divided by height in meters squared

Growth Monitoring: Includes serial measurements of weight, length or height for all children, head circumference for infants and toddlers, and interpretation of those measurements relative to the growth of a large sample population of children on a selected growth chart (Dietitians of Canada, et al., 2010).

Nurse: Refers to Registered Nurses, Nurse Practitioners, and Registered Practical Nurses.

4. PROCEDURE:

4.1 Generally, the weighing and measuring of children is the responsibility of the nurse or physician; however, this task can be delegated to an unregulated care provider in the clinic. It is expected that the care provider receives appropriate training as part of the delegation process, as outlined in the *FNIHB-OR Policy*: *Unregulated Care Providers*.

4.2 For complete details on accurate measuring techniques, the nurse is expected to review the procedure outlined in the Dietitians of Canada and Canadian Paediatric Society (2014) document *"A Health Professional's Guide for Using the WHO Growth Charts for Canada"* found at http://www.dietitians.ca/Downloadable-Content/Public/DC_HealthProGrowthGuideE.aspx

4.3 Weight will be recorded in kilograms (kg). Height, length and head circumference will be recorded in centimetres (cm).

4.4 The measurements are to be documented in the progress notes (or Rourke Record) and plotted on the gender / age appropriate growth chart.

Note: For infants born prematurely before 37 weeks gestation, correction for gestational age is recommended until 24 to 36 months of age.

4.5 The current growth measurements are to be evaluated against the previously recorded results to assist with detecting possible error in measurement and for trending changes.

4.5.1 Interpretation of plotted measurements should consider their centile rank, the relationship of weight, length/height, and BMI to each other, recommended cut-off values, parental heights (for stature measurements), and the trend relative to the previous centile ranks to identify major shifts in growth patterns.

4.5.2 If the growth is outside of expected parameters or there is an unexpected shift in growth, the nurse must verify age calculation, measurements and plotting, and if necessary, rea-measure and re-plot.

4.5.3 If any growth disturbance is confirmed, the client is to be assessed for associated symptoms, co-morbidities, abnormal physical examination findings, delays in development (as outlined in the FNIHB CPG for Nurses in Primary Care – Pediatric and Adolescent Care). Once fully assessed by the nurse, the physician should be consulted for advice and follow up appointment(s) booked within the well-child program or chronic disease program. Consider referral to relevant community programs and/or other health professionals, as available.

Note: it can be normal for children to change one to two percentile curves during the first two to three years of life and again in puberty. The 50th percentile, or "average" is not the goal for each child, as most children have the genetic potential to be taller or shorter, and heavier or lighter, than average.

4.6 Table 1 outlines the cut-offs recommended as guidance for further assessment, referral, or intervention but not as diagnostic criterion for classifying children:

Table 1: Recommended Limits for further Investigation

Recommended Cut-Off Criteria Using the WHO Growth Charts				
Growth Status	**Indicator**		**Percentile**	
		Birth to 2 Years	**2-5 Years****	**5-19 Years****
Underweight	Weight-for-Age	< 3rd	< 3rd	< 3rd
Severe Underweight		< 0.1st	< 0.1st	< 0.1st*
Stunting	Height / Length for-Age	< 3rd	< 3rd	< 3rd
Severe Stunting		<0.1st	< 0.1st	< 0.1st
Wasting	Weight-for-Length	< 3rd		
Severe Wasting		< 0.1st		
Risk of Overweight		>85th		
Overweight		> 97th		
Obesity		> 99.9th		
Head Circumference (growing slowly or rapidly)	Head Circumference	< 3rd or > 97th		
Wasting	BMI-for-Age		< 3rd	< 3rd
Severe Wasting			< 0.1st	< 0.1st
Risk of Overweight			> 85th	
Overweight			> 97th	> 85th
Obesity			> 99.9th	> 97th
Severe Obesity				> 99.9th

(Dietitians of Canada, et. al, 2010)

***** Weight-for-age not recommended after age 10 years; use BMI-for-age instead
** More conservative cut-off criteria are used for young children because of growth, lack of data on functional significance of upper cut-offs, and to avoid the risk of putting young children on diets.

4.7 Provide health teaching about any potential actions the child/parents can take to correct abnormalities in their rate of weight gain and/or linear growth. Suggestive counselling

points with the child and family are included in Appendix A.

5. RELATED POLICIES:

Appendix A: Standard Discussion Points for Counselling with the Child and Family

FNIHB. Clinical Practice Guidelines for Nurses in Primary Care – Pediatric and Adolescent Care.

FNIHB-OR Policy II-27: Ill Children
WHO Growth Standards and Growth References 2007

A Health Profession's Guide for Using Growth Charts

6. REFERENCES:

Alberta Health Services (2011). Growth Assessment and Counselling Summary Sheet.

Dietitians of Canada, Canadian Pediatric Society, The College of Family Physicians of Canada, Community Health Nurses of Canada (2010). Promoting Optimal Monitoring of Child Growth in Canada: Using the new WHO growth charts.

Dietitians of Canada and Canadian Paediatric Society (2014). A Health Professional's Guide for using the WHO Growth Charts for Canada.

Dietitians of Canada (2014). WHO Growth Chart Assessment and Counselling – Key messages and actions.

FNIHB. Clinical Practice Guidelines for Nurses in Primary Care – Pediatric and Adolescent Care.

Approved by:		**Effective Date:**
		March 31, 2015
Director of Nursing, Ontario Region	**Date:**	
Regional Executive, Ontario Region	**Date**	

Appendix A: Standard Discussion Points for Counseling the Child and Family

COUNSELLING: STANDARD DISCUSSION POINTS	
0-2 YEARS	**2-19 YEARS**
▪ Breastfeeding pattern and technique ▪ Formula feeding – pattern; technique; preparation; etc. ▪ Age – appropriate milk, beverages and introduction to solid foods	▪ Intake of foods high in fat, sugar or salt ▪ Body image issues ▪ Disordered eating pattern ▪ Eating well with Canada's Food Guide
▪ Child's overall health ▪ Presence or recent history of acute illness ▪ Presence of chronic illness or special health care needs ▪ Stress or change in child's life ▪ Family growth patterns ▪ Family meal patterns ▪ Sleep pattern	▪ Feeding relationship ▪ Family physical activity routines ▪ Food and activity routines in child care or school ▪ Screen time ▪ Amount of juices and/or sweetened beverages ▪ Food security concerns: availability and access to healthy foods

CORE GROWTH MESSAGES
▪ Measurements are health screening tools. ▪ Growth is one of the signs of general health. ▪ Growth patterns are assessed for the individual. ▪ Growth may reflect family growth patterns. ▪ Growth pattern over time is more important than one single measurement.