observation of feeding, consider whether any of the following are contributing to faltering growth: • ineffective sucking in infants who are breastfed or ineffective bottle feeding • feeding patterns or routines being used, where the infant is left to sleep for long periods between feeds or required to wait prescriptive lengths of time in between feeds • the feeding environment • feeding aversion • parent/caregiver-infant interactions; • how parents/caregivers respond to the infant's feeding cues • physical disorders affecting feeding.[1] **Solid foods** Undertake a nutritional assessment by reviewing: • mealtime environment and equipment • mealtime structure (frequency, duration) • parental behaviour • timing of solids introduction • food intake (texture, type and quantity) • milk intake (type and quantity) • infant's feeding skills (appropriate for age) • consider signs and symptoms of allergy if suspected • emerging feeding difficulties if relevant • sensory preferences.	Refer to the *Nutrition for Children – 0 to 12 months* guideline.
1c. Physical assessment • Conduct a physical assessment ○ Is the child acutely unwell?	Refer to the *Physical Assessment 0-4 years* guideline.
2. Care planning	
2a. Acute illness When a child presents with weight loss associated with signs and symptoms such as fever, respiratory distress, vomiting, lethargy and/or dehydration take immediate action to keep the child safe. • Any acutely ill child should be urgently referred to a General Practitioner (GP) for same day assessment or Emergency Department (ED) for immediate medical assessment.	

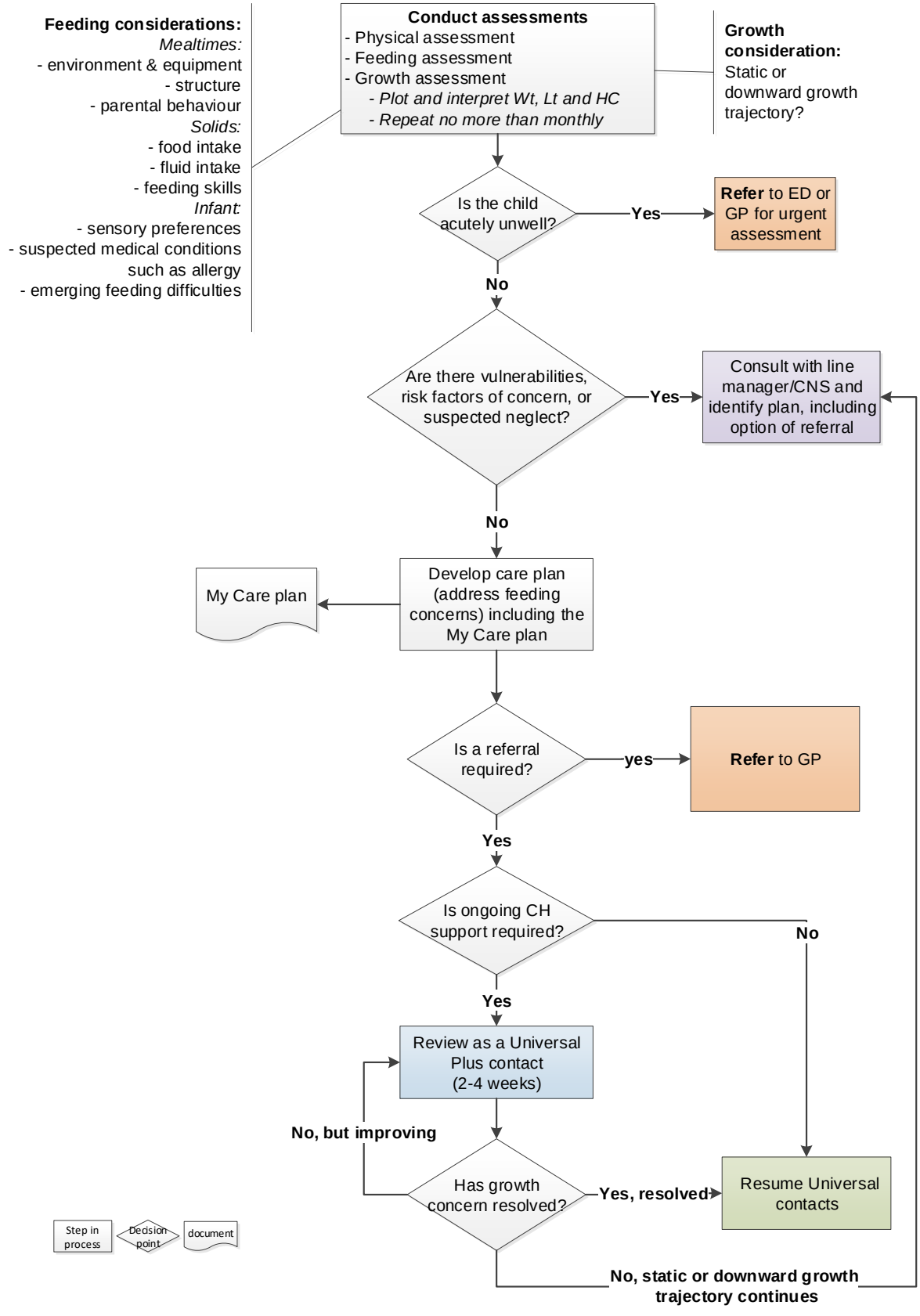
• Provide a completed Clinical Handover/Referral Form (CHS 663) or WACHS Electronic Population Health Clinical Handover Form. • Involve Line Manager and/or Clinical Nurse specialist (CNS) as required. • Obtain parental consent to liaise with GP/ED. • Maintain contact with parents. • Follow-up with parents/caregivers to provide ongoing review and service post-acute phase/discharge.	
2b. Vulnerabilities/risk factors of concern • Enquire about potential vulnerabilities that impact the care of the child as a priority, such as income; family domestic violence; parent/carer mental health; access to transport and food insecurity. • Involve Line Manager and/or Clinical Nurse specialist (CNS) as required. • Consider identifying the family for involvement with ○ Community Health - Partnership service ○ WACHS – Enhanced Child Health Schedule ○ Department for Communities.	• WACHS staff can discuss regional clients with Department for Communities. • Consider completing a Child Protection Concern Referral form. Staff need to explicitly document observations and possible long-term outcomes if action is not taken, plan of action and review dates.
2c. Feeding concerns • Discuss feeding strategies for parent/carer to implement. • If supplementary feeding with infant formula is required: ○ support the mother to maintain her milk volume by expressing and encourage opportunities for the infant to continue breastfeeding ○ advise expressing breastmilk to feed the infant with any available breastmilk before giving any infant formula.	It should be noted that supplementary feeding with infant formula in a infant who is breastfed may help with weight gain, but often results in cessation of breastfeeding which has other negative long term implications.[1] The aim of the feeding plan is to normalise food intake. The feeding plan can include goals relating to: • parents provide, children decide • mealtime environment ○ avoid distractions

	○ equipment ○ sitting at the table • structure ○ frequency ○ supervision • feeding skills ○ texture progression ○ self-feeding ○ spoon feeding ○ appropriate gag reflex ○ use of cup • parental behaviour ○ coercive feeding ○ role modeling • sensory preferences • food intake ○ variety from 5 food groups • fluid consumption ○ water ○ milk intake (breastmilk, infant formula) • plan for suspected allergy if relevant. Refer to *Nutrition for children – birth to 12 months* guideline for more information. Nurse to consider a referral for more complex feeding concerns.
2d. Develop a plan • Develop a 'My Care Plan' (CHS825), in partnership with parent/carer to ensure a shared understanding of concerns and plan. • The 'My Care Plan' will outline strategies for client to implement. ○ Give one copy to client and retain a copy in client record.	The ' My Care Plan' will outline (where relevant): • A summary of the concern • Strategies/plan of the parents/carers to implement • Review appointments • Referral point/s • When to escalate care, if required.

3. Review	
3a. Review Process • Review the client within one to three (1-3) weeks of the initial contact to determine the effectiveness of implemented strategies. • Review is to be conducted as a Universal Plus appointment. • Conduct a holistic assessment and review care plan. • Assess, plot and interpret weight, length/height and head circumference. • Consider actions based on the review outcomes in Step 3b.	Repeat growth measurements *no more than fortnightly.* If clinical judgement supports a review prior to one fortnight, the contact provides an opportunity to: ○ reinforce what the parent is doing well ○ focus on other aspects of assessment including hydration, output, how settled the child is ○ progress towards previously set care plan strategies. • Weighing more often can induce significant anxiety in the parent. • The pattern of the growth trajectory is the most important factor, rather than focusing on the number of grams gained.
3b. Review Outcomes **<u>Improving</u> (growth is tracking upwards)** • Develop a follow-up care plan in partnership with parents and other health professionals involved with the case. • Document all care. • Monitor within 2-4 weeks until consistent gains or an upward trend is established. **<u>Static or downward trajectory continues</u>** • Escalate actions with urgent referral to ED or GP for same day assessment. • Consider other supports available to the family, e.g. enhanced child health services (including ECHS in WACHS and Partnership service in CAHS-CH), Aboriginal Health Workers, Department of Communities, social worker, mental health services and other locally known services. • Document all care. • Discuss the care plan with the Line Manager and/or Clinical Nurse Specialist (CNS). • Maintain contact with parents/caregivers and provide ongoing service if required.	

4. Identification of growth concerns	
Consider identification of growth – static or downward trajectory when: • Client has *at least two* serial growth measurements plotted on a growth chart ○ The pattern of growth is showing a static or downward trajectory • Nurse has indicated growth concerns elsewhere in the electronic health information system. • Nurse has completed a holistic assessment of the client, including a feeding assessment and physical assessment.	*CAHS-CH:* Prior to ticking 'growth faltering' box in CDIS, staff will ensure clients have met the identified criteria (left column) have been met. *WACHS:* When entering a Growth Faltering Clinical Item in CHIS, staff will ensure clients have met the identified criteria (left column) have been met.
5. Referral	
• Where there are concerns with infant growth, referral information will include: • Serial measurements of weight, length and head circumference (including from birth and at discharge from birthing services if available) • Weight loss and/or static weight within a stated timeframe • Copies of growth charts showing trajectory of growth. • Provide a completed Clinical Handover/Referral Form (CHS 663) or WACHS Electronic Population Health Clinical Handover Form. • Where practical, follow up must occur with parents/carers to determine if the referral has been actioned with priority given to those with vulnerability risk factors. • When nurses are unable to establish contact with the client after reasonable attempts, and where there are identified risk factors, nurse will discuss with their Line Manager. This may include consultation with client's GP. • Nurses may work in collaboration with client's GP/Pediatrician to provide optimal care, which may impact the Care Plan.	Where dietetic referral is required for nutrition concerns, in addition to GP referral: • WACHS can refer to dietitian pending regional availability • In CAHS-CH, GP may consider paediatric dietetic providers where appropriate.

Growth concerns: over 12 months flowchart



Process for growth concerns: Over 12 months

Steps	Additional information
1. Conduct assessments	
Holistic assessment will include: • Growth assessment – see Step 1a • Feeding efficiency and nutrition assessment – see step 1b • Physical assessment – see Step 1c	Assessment will assist in determining cause of the growth concern • Acute illness – see Step 2a • Vulnerabilities/risk factors of concern – see step 2b • Feeding concerns – see step 2c
1a. Conduct a growth assessment • Plot weight, length/height and head circumference on WHO 0-2 year growth charts. • Interpret by considering the trajectory • Use the growth chart plots to guide parental discussions.	There is a cause for concern when growth trajectory is static or is tracking downward.
1b. Conduct a feeding assessment • Based on the feeding history and any direct observation of feeding, consider whether any of the following are contributing to faltering growth: ○ mealtime environment, equipment and frequency ○ parental behaviour (including parent/carer-child interactions, and responses to cues) ○ food intake (texture, type and quantity) ○ fluid intake (including breastmilk, cow's milk, juice volumes) ○ infant's feeding skills (appropriate for age) ○ signs and symptoms of allergy if suspected ○ emerging feeding difficulties.	
1c. Physical assessment • Conduct a physical assessment ○ Is the child acutely unwell?	Refer to the *Physical Assessment 0-4 years* guideline for more information.

2. Care planning	
2a. Acute illness – When a child presents with weight loss associated with signs and symptoms such as fever, respiratory distress, vomiting, lethargy and/or dehydration, take immediate action to keep the child safe. • Any acutely ill child should be urgently referred to a General Practitioner (GP) for same day assessment or Emergency Department (ED) for immediate medical assessment. • Provide a completed Clinical Handover/Referral Form (CHS 663) or WACHS Electronic Population Health Clinical Handover Form. • Involve Line Manager and/or Clinical Nurse specialist (CNS) as required. • Obtain parental consent to liaise with GP/ED. • Maintain contact with parents. • Follow-up with parents/caregivers to provide ongoing review and service post-acute phase/discharge.	

2b. Vulnerabilities/risk factors of concern
• Enquire about potential vulnerabilities that impact the care of the infant as a priority, such as income; family domestic violence; parent/carer mental health; access to transport and food insecurity.
• Involve Line Manager and/or Clinical Nurse specialist (CNS) as required.
• Consider identifying the family for involvement with:
  ○ Community Health - Partnership service
  ○ WACHS – Enhanced Child Health Schedule
  ○ Department for Communities.
	• WACHS staff can discuss regional clients with Department for Communities.
	• Consider completing a Child Protection Concern Referral form. Staff need to explicitly document observations and possible long-term outcomes if action is not taken, plan of action and review dates.

2c. Feeding concerns • Discuss feeding strategies for parent/carer to implement.	The aim of the feeding plan is to normalise food intake. The feeding plan can include goals relating to: • parents provide, children decide • mealtime environment

	○ avoid distractions ○ equipment ○ family meals at the table • structure ○ frequency (avoid grazing) ○ supervision • parental behaviour ○ role modeling • feeding skills ○ texture progression ○ self-feeding ○ use of cup • sensory preferences ○ food refusal • offer a variety of foods ○ 5 food groups ○ 3 meals, 2 snacks • fluid intake ○ water and cow's milk consumption ○ breastmilk ○ other drinks • plan for suspected allergy if relevant • eating at daycare if relevant. Refer to *Nutrition for children – 1-11 years* for more information. Nurse to consider a referral for more complex feeding concerns.
2d. Develop a plan • Develop a 'My Care Plan' (CHS825), in partnership with parent/carer to ensure a shared understanding of concerns and plan. • The ' My Care Plan' will outline strategies for client to implement. ○ Give one copy to client and retain a copy in client record.	The 'My Care Plan' will outline (where relevant): • A summary of the concern • Strategies/plan of the parents/carers to implement • Review appointments • Referral point/s • When to escalate care, if required.

3. Review	
3a. Review Process • Review the client within two to four (2-4) weeks • Review is to be conducted as a Universal Plus appointment. • Conduct a holistic assessment and review care plan. • Assess, plot and interpret weight, length/height and head circumference. • Review feeding plan and/or care plan, in partnership with parent. • Consider actions based on the review outcomes in Step 3b.	Repeat growth measurements *no more than monthly.* If clinical judgement supports a review prior to one month, the contact provides an opportunity to: ○ reinforce what the parent is doing well ○ focus on other aspects of assessment including hydration, output, how settled the child is. ○ progress towards previously set care plan strategies • Weighing more often can induce significant anxiety in the parent. • The pattern of the growth trajectory is the most important factor, rather than focusing on the number of grams gained.
3b. Review Outcomes **<u>Improving</u>** • Develop a follow-up care plan in partnership with parents and other health professionals involved with the case. • Document all care. • Monitor within 2-4 weeks until consistent gains or an upward trend is established. **<u>Static or downward trajectory continues</u>** • Escalate actions with urgent referral to GP or ED. • Consider other supports available to the family, e.g. enhanced child health services (including ECHS in WACHS and Partnership Service in CAHS-CH) Aboriginal Health Workers, Department of Communities, social worker, mental health services and other locally known services. • Document all care. • Discuss the care plan with the Line Manager and/or Clinical Nurse Specialist	

(CNS). • Maintain contact with parents/caregivers and provide ongoing service if required.	
4. Identification of growth concerns	
Consider identification of growth – static or downward trajectory when: • Client has *at least two* serial growth measurements plotted on a growth chart ○ The pattern of growth is showing a static or downward trajectory • Nurse has indicated growth concerns elsewhere in the electronic health information system. • Nurse has completed a holistic assessment of the client, including a feeding assessment and physical assessment.	*CAHS-CH:* Prior to ticking 'growth faltering' box in CDIS, staff will ensure clients have met the identified criteria (left column) have been met. *WACHS:* When entering a Growth Faltering Clinical Item in CHIS, staff will ensure clients have met the identified criteria (left column) have been met.
5. Referral	

• Where there are concerns with infant growth, referral information will include:
  ○ Serial measurements of weight, length and head circumference (including from birth and at discharge from birthing services if available)
  ○ Weight loss and/or static weight within a stated timeframe
  ○ Copies of growth charts showing trajectory of growth.
• Provide a completed Clinical Handover/Referral Form (CHS 663) or WACHS Electronic Population Health Clinical Handover Form.
• Where practical, follow up must occur with parents/carers to determine if the referral has been actioned with priority given to those with vulnerability risk factors.
• When nurses are unable to establish contact with the client after reasonable attempts, and where there are identified risk factors, nurse will discuss with their Line Manager. This may include consultation with client's GP.
• Nurses may work in collaboration with client's GP/Pediatrician to provide optimal
	Where dietetic referral is required for nutrition concerns, in addition to GP referral:
	• WACHS can refer to dietitian pending regional availability
	• In CAHS-CH, GP may consider paediatric dietetic providers where appropriate.

care, which may impact the Care Plan.	

Documentation

Serial growth measurements must be precisely plotted on the WHO growth charts in the child health record and Personal Health Record (PHR)**.** All relevant assessment findings and management strategies are to be accurately recorded according to local processes. Observations, decisions, plans and actions (including a decision and justification **not to take any action**), must be documented in the child health record and electronic information systems where available.

Nurses maintain accurate, comprehensive and contemporaneous documentation of assessments, planning, decision making and evaluations; according to CAHS-CH and WACHS processes.

Related internal policies, procedures and guidelines
The following documents can be accessed in the Clinical Nursing Manual via the HealthPoint link, Internet link or for WACHS staff in the WACHS Policy link.
Body Mass Index assessment – child health
Body Mass Index assessment – primary school
Breastfeeding and lactation assessment
Clinical handover
Growth - birth to 18 years
Head circumference assessment
Height assessment 2 years and over
Length assessment 0 – 2 years
Neglect
Nutrition for children – birth to 12 months
Nutrition for children – 1 to 11 years
Physical assessment 0 - 4 years
Universal contact guidelines
Weight assessment 0 - 2 years
Weight assessment 2 years and over
The following documents can be accessed in the CAHS-CH Operational Manual
Client identification
Consent for Services
Hand Hygiene
Infection Control manual
The following documents can be accessed in WACHS Policy
WACHS Enhanced Child Health Schedule
The following documents can be accessed in the Department of Health Policy Frameworks
Clinical Governance, Safety and Quality

Related CAHS-CH forms
The following forms can be accessed from the CAHS-Community Health Forms page on HealthPoint
Breastfeeding Assessment Guide
Body Mass Index Girls (CHS430A)
Body Mass Index Boys (CHS430B)
Clinical handover/Referral form (CHS 663)
My Care Plan (CHS825)
Preterm Fenton Growth Charts (external link)
World Health Organization Charts 0 - 6 months (external link)
World Health Organization Growth Charts (CHS800A series)

Related internal resources
Baby's First Foods
How children develop
Toddler tucker

Related external resources
Australian Breastfeeding Association offer a 24 hour telephone counselling helpline
Australian Dietary Guidelines summary
Breastfeeding Centre of WA offers a telephone counselling service or Telehealth consultations for families in WA. Appointments are available for mothers and babies who birthed at KEMH.
Guidelines for Protecting Children 2020
Infant Feeding Guidelines
Royal Children's Hospital –Child growth e-learning resource

Appendix A - Risk factors for growth faltering

Key risk indicators for growth faltering are outlined in Table 1 below. If any of the following risk factors are present, consider conducting weight, length/height and head circumference measurements (until age 2) at every contact.

Table 1: Risk factors for growth faltering[1,2]

Child	Maternal
• congenital disorders	• alcohol and drug abuse
• intrauterine growth restriction (IUGR)	• family domestic violence
• low birth weight (<2500 gms)	• smoking, alcohol, or medication use during pregnancy
• preterm birth[1]	• parental depression and/or anxiety
• neurodevelopmental concerns[1]	• psychiatric illness including attachment disorder
• physical illness	• poor or disorganised parental/child attachment or a lack of emotional nurturing
• anatomical and functioning issues impacting on the capacity to feed	• parental eating disorder
• under nutrition/ lack of appropriate food	• parental intellectual incapacity
• feeding difficulties	• maternal health issues impacting on lactation
• sleep difficulties	
• delayed introduction to solid foods	
• transition to solid foods that are inadequate in quality and quantity	
• signs of abuse or neglect [16,6]	
• allergies	
• chronic loose bowels (malabsorption)	
Risk factors for both • family social isolation, poverty, food insecurity, large number of family members, family conflict • living in remote communities with inadequate access to healthy foods and other factors such as chronic infection and exposure to parasites.[5]	

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Appendix B: Growth patterns – case studies

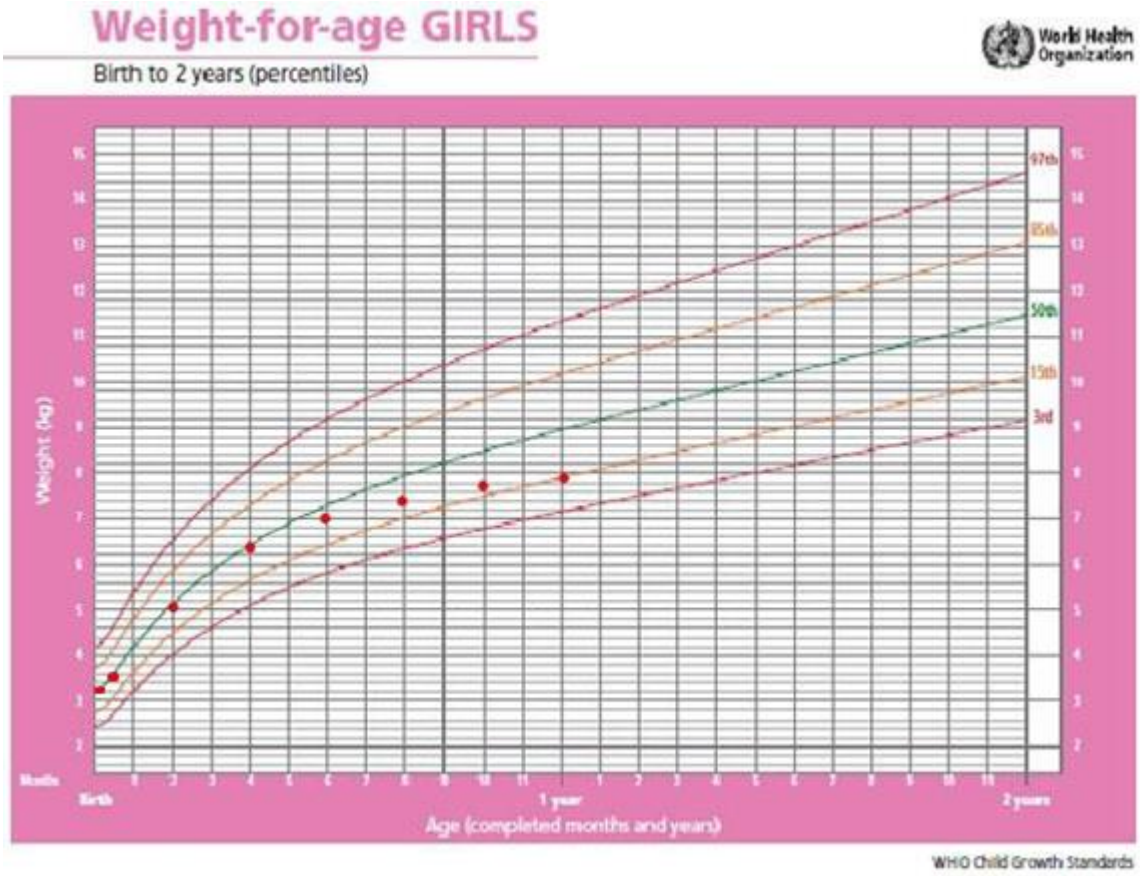
The graphs outlined below show examples of typical patterns of suboptimal weight trajectory, which may be encountered within child health practice. All of these patterns indicate a need for additional monitoring, consideration of a combination of growth assessment measures [21] and assessment of overall health, wellbeing, and developmental progress. Clinical judgment, including knowledge of the child's history will assist in determination of plan of action.[18]

Case study 1.

The example below shows appropriate weight tracking until around 6 months, then a decreasing trajectory to the 15th percentile over a period of 8 months. Common contributing factors to this trend may include factors related to transition to solids, malabsorption, or low health literacy of the parent/carer.

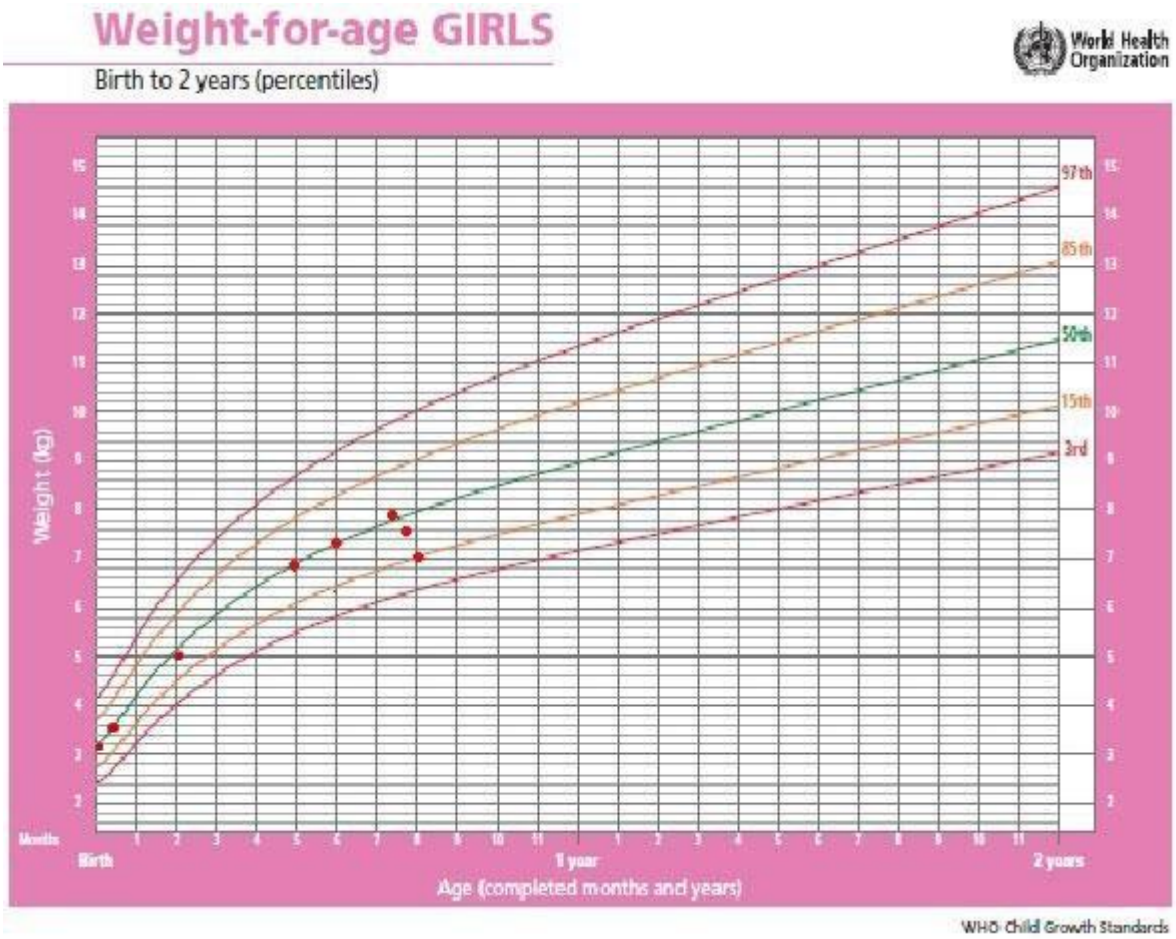
Current guidelines recommend that after the growth assessment at 6 months, this client's growth would have been reviewed 1- 3 weeks later at a Universal Plus appointment. As growth continued to plateau, a care plan was developed in partnership with the parent, which outlined strategies for the parent to implement at home in relation to solids introduction. A discussion of the care plan with the line manager would then take place.

Poor feeding would be considered as a possible cause for the concern. However, it is important to investigate underlying causes, hence referral to a GP for further investigation is recommended. (Attempting to modify infant's feeding to improve growth without investigating the underlying cause is not recommended).



Case study 2.

The example below shows weight tracking along the 50th percentile from birth, and then a rapid decrease in weight trajectory to the 15th percentile after 7 months of age, over a rapid period of 2 weeks. Common contributing factors to this trend may include illness, neglect or factors related to transition to solids.



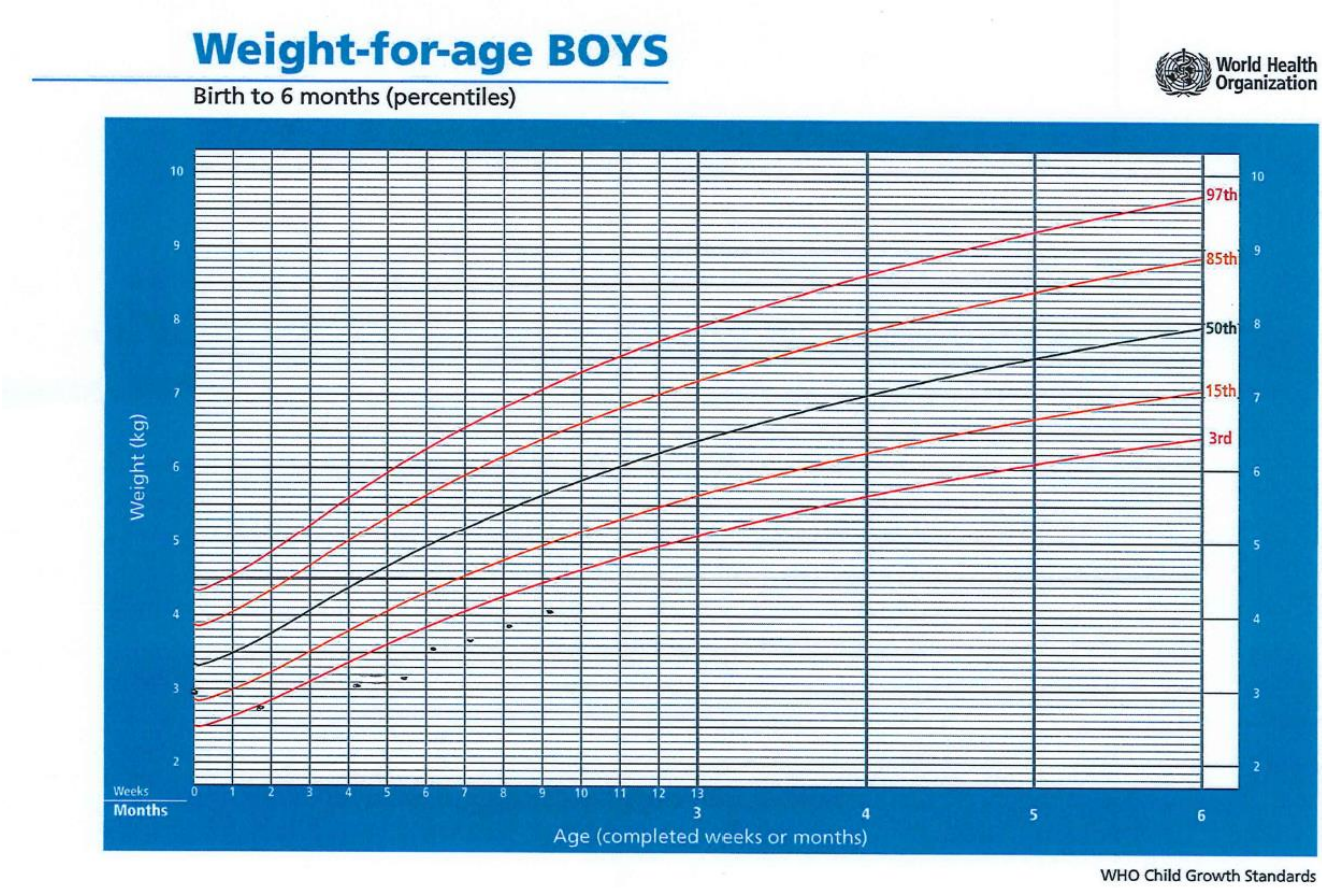
Case study 3.

The following example shows a male infant who lost significant weight in the first fortnight. A holistic assessment revealed:

- Although not pictured here, the length for age and head circumference followed similar trajectories.
- The infant's mother was short in stature.

At the Universal 0-14 day contact, the nurse had concerns about this infant and completed a *Breastfeeding Assessment Guide*. The client's mother was given feeding strategies to implement, which were relevant to the concerns identified in the breastfeeding assessment. The nurse decided a Universal Plus appointment was warranted to follow up on progress towards strategies and re-check growth. The nurse continued to review this client weekly until growth was tracking upwards.

Despite being below the third centile, holistic assessments continued to show this infant was healthy and no further action was required.



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