D.1.2 Recognition of faltering growth (question A.2)

Item	Details
Area in the scope	Recognition of faltering growth, including defining growth thresholds for concern (including, early weight loss after birth).
Review question in the scope	What are the growth thresholds for enhanced monitoring or intervention for suspected or confirmed faltering growth in infants and preschool children?
Review question for the guideline	In infants under 4 weeks what percentage of weight loss is associated with adverse outcomes?
Objective	To determine the degree and timing of weight loss that should cause concern.
Population and directness	Infants under 4 weeks of age. Exclude infants with complex, severe malnutrition in World Bank low and middle income group countries, and infants and children in intensive care settings.
Prognostic factors and thresholds	• weight loss of greater than 10% at the specified time point (age in days)
Confounders	• mode of delivery (caesarean vs vaginal delivery) • intra uterine growth restriction (IUGR) • small for gestational age (SGA) • ethnicity Prematurity and method of feeding (breast versus other) will be analysed as separate subgroups.
Outcomes	• dehydration (including hypernatremic dehydration) • mortality • subsequent weight change • impaired cognitive development (IQ) • jaundice
Importance of outcomes	Preliminary classification of the outcomes for decision making: • dehydration (including hypernatremic dehydration) • mortality
Setting	Any setting where a child is suspected of having faltering growth in World Bank high income group countries apart from ICU settings.
Stratified, subgroup and adjusted analyses	Stratified analyses: Groups that will be reviewed and analysed separately: Infants who: • were born at term or those born prematurely • method of feeding (breast-feeding vs not breast-feeding) Sub-group analyses, e.g. In the presence of heterogeneity, the following subgroups will be considered for sensitivity analysis: • n/a Important confounders (when comparative observational studies are included

ISBN 978-1-4731-2693-0

Item	Details
	for interventional reviews) – these may be similar to the subgroups above: • n/a
Language	English
Study design	• Prospective population based studies • Minimum of 100 children in the population considered
Search strategy	Sources to be searched: Limits (e.g. date, study design): Supplementary search techniques: No supplementary search techniques were used. See appendix E for full search strategies.
Review strategy	Dual weeding of the literature search results will be performed on 10% of records because this is a prognostic review; Any disagreements will be resolved through discussion and consultation with senior staff where necessary. Appraisal of methodological quality: For prognostic studies a prognostic checklist (e.g. CASP clinical prediction rule checklist) will be used. For each outcome the range of odds ratios associated with 10% weight loss will be reported. Results from multivariate analyses incorporating the stated confounders will be prioritised. Methodological quality will be summarised using modified GRADE. For comparative studies (comparing the use of different thresholds): • The methodological quality of each study should be assessed using quality checklists and the quality of the evidence for an outcome (i.e. across studies) will be assessed using GRADE. Synthesis of data: • Meta-analysis will be conducted where appropriate • Default MIDs will be used: 0.75 and 1.25 for dichotomous outcomes; 0.5 times SD for continuous outcomes to assess imprecision If studies only report p-values, this information will be plotted in GRADE tables without an assessment of imprecision possible to be made.
Equalities	Effective interventions to address should take into consideration parents' and carers' socioeconomic, cultural, religious and ethnic environment, and potential language barriers. Access to appropriate nutrition may also differ across socioeconomic groups. Certain groups may be at greater risk of developing faltering growth, including preterm infants and children, children and infants with intrauterine growth restriction, those with learning-disabled parents or carers, asylum seekers, and looked-after children.
Notes/additional information	n/a

ISBN 978-1-4731-2693-0