

## D.2 Key area B

### D.2.1 Risk factors for faltering growth (question B.1)

Item	Details
Area in the scope	Identification of risk factors for faltering growth.
Review question in the scope	What are the risk factors for faltering growth that could inform recognition and management?
Review question for the guideline	What are the risk factors for faltering growth?
Objective	To determine factors that improve recognition and identify management strategies for faltering growth. These may assist in recognition and management.
Population and directness	Infants and preschool children. Excluding infants and children with a pre-existing underlying specific condition that limits energy intake and/or increases the child's energy requirements.
Risk factors / variables under consideration	Factors related to recognition:  <b>Infant or preschool child variables:</b> <ul style="list-style-type: none"> <li>• born preterm</li> </ul>

Item	Details
	<ul style="list-style-type: none"> <li>• family history of faltering growth</li> <li>• intrauterine growth restriction</li> <li>• small for gestational age</li> <li>• developmental and developmental delay</li> </ul> <p><b>Family / social factors:</b></p> <ul style="list-style-type: none"> <li>• maternal mental health, including depression and eating disorders</li> <li>• parental substance misuse, including postnatal smoking</li> <li>• socioeconomic status</li> <li>• parental educational status (particularly maternal)</li> <li>• physical, emotional, sexual abuse and neglect (safeguarding issues)</li> </ul> <p><b>Common to both categories above:</b></p> <ul style="list-style-type: none"> <li>• restricted intake (for example restricted diet)</li> </ul> <p><b>Risk factors related to early weight loss (under 4 weeks):</b></p> <ul style="list-style-type: none"> <li>• breast-feeding</li> <li>• parity</li> <li>• birth complications including caesarean section (neonate only)</li> <li>• mother-child relationship/ attachment</li> </ul>
Confounders	<p>Multivariate analyses of the above risk factors should also adjust for the following confounders:</p> <p>Critical:</p> <ul style="list-style-type: none"> <li>• age</li> <li>• severity of faltering growth</li> <li>• definition (including consideration of birthweight) of faltering growth</li> <li>• treatment</li> <li>• if the evidence is looking at small for gestational age (SGA), then the analysis should adjust for gestation.</li> </ul>
Outcomes	<ul style="list-style-type: none"> <li>• confirmed diagnosis of faltering growth (studies may vary on their criteria for faltering growth, but this is noted as a confounder)</li> <li>• measurements of growth for age (weight, length/height centile, head circumference, mid-arm circumference, BMI z-scores)</li> </ul>
Importance of outcomes	<p>Preliminary classification of the outcomes for decision making:</p> <ul style="list-style-type: none"> <li>• confirmed diagnosis of faltering growth</li> <li>• measurement of growth</li> </ul>
Setting	<p>Studies from the UK or other World Bank high income group countries. Exclude studies in ICU settings.</p>
Stratified, subgroup and adjusted analyses	<ul style="list-style-type: none"> <li>• None specified (subgroups are covered as different risk factors)</li> </ul>
Language	<p>English</p>
Study design	<ul style="list-style-type: none"> <li>• Cohort studies using multivariable analyses at least accounting for age, severity and treatment</li> <li>• Population-based studies (where all infants and children within a geographically defined region are included), ideally prospective cohort studies</li> <li>• Minimum sample size = 100 participants</li> </ul>
Search strategy	<p>Sources to be searched: Medline, Medline In-Process, CCTR, CDSR, DARE, HTA, Embase, CINAHL.</p> <p>Limits (e.g. date, study design): Standard English language and animal</p>

Item	Details
	<p>restrictions to be applied.</p> <p>Supplementary search techniques: No supplementary search techniques will be used.</p> <p>See appendix E for full search strategies.</p>
Review strategy	<p>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.</p> <p>Appraisal of methodological quality: The methodological quality of each study should be assessed using NICE checklists for prognostic studies and the quality of the evidence for an outcome (i.e. across studies for each risk factor) will be summarised on a per study basis.</p> <p>Synthesis of data: If there is sufficient prognostic data available and studies are sufficiently similar then it may be possible to conduct a meta-analysis. Otherwise it may be necessary to report the evidence for each risk factor narratively or to report ranges.</p>
Equalities	<p>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.</p> <p>For this particular topic there are also specific equality considerations with regards to women's mental health postnatally (e.g. postnatal depression).</p>
Notes/additional information	n/a