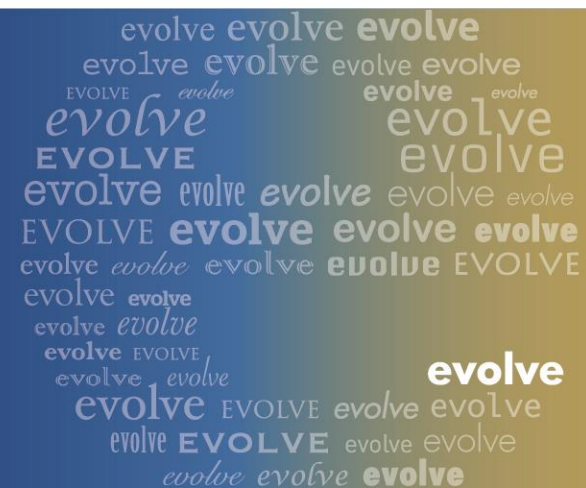




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Development of the APEG Provisional 'Top 5' list

Professor Fergus Cameron



APEG and its participation in EVOLVE



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- Initially, a working group was convened and identified 11 'low value' practices. This list was sent to membership who were asked to rank the items from 1 (most important) to 11 (least important).
- However, response rate was very low. A second attempt to capture members' views was undertaken.
- For this second attempt, short evidence reviews were prepared for each item and these were incorporated into an online survey.

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APEG and its participation in EVOLVE



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- Respondents were asked to assign a score from 1 to 5 for each item on two attributes: whether the underlying recommendation was evidence based and whether the recommendation was of relevance to paediatric endocrinology in Australasia.
- Because of low response rate, APEG worked on further promoting the survey and extended the deadline for responses by a month and a half.
- The resulting top 5 are based on these final survey results (with a response rate of 14%).

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The original 11



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1. Do not recommend vitamin D supplementation for normal individuals with serum vitamin D levels above 50 nmol/L.
2. Do not routinely measure T3 in the context of managing hypothyroidism.
3. Do not rely solely on bone age measurement for assessing growth in young children with short stature under 2 years of age.
4. Do not rely on random measures of circadian hormones (e.g. growth hormone and cortisol) for diagnostic purposes.
5. Do not routinely prescribe aromatase inhibitors to promote growth in children with short stature.
6. Do not routinely measure insulin-like growth factor binding protein 3 (IGFBP-3) for workup and diagnosis of childhood short stature.

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The original 11



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7. Do not test for serum levels of insulin growth factor 1 (IGF1) as an initial screen of short stature for children under 2 years of age.
8. Do not initiate GnRH analogue treatment in children who are not intellectually disabled with a bone age greater than 10 years or in the treatment of short children with early normal timing of puberty in terms of improving height outcomes.
9. Do not undertake ongoing surveillance of optic nerve hypoplasia with normal growth and no other signs of pituitary hormone deficiency.
10. Do not screen for diabetes related complications too early and too frequently in patients under the age of 18 years.
11. Do not rely on the fasting insulin test as a diagnostic tool for overweight/obese children and adolescents.

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1. Do not rely on random measures of circadian hormones (e.g. growth hormone and cortisol) for diagnostic purposes

Numerous hormones such as growth hormone and testosterone are subject to circadian rhythms. Relying on random measures of these hormones is therefore of limited diagnostic utility as their levels may peak and plateau at particular times throughout the day so that unless adjustments are made to these random readings they will not be very informative

2. Do not rely solely on bone age measurement for assessing growth in young children with short stature under 2 years of age

There is a lack of consensus protocol on bone age assessment of younger children and infants, particularly those under the age of 2 years. Skeletal growth and maturation is most rapid in infants and toddlers, so accurate bone age assessment in these children is challenging.

3. Do not routinely measure insulin-like growth factor binding protein 3 (IGFBP-3) for workup and diagnosis of childhood short stature

Insulin-like growth factor binding protein 3 (IGFBP-3) does not significantly contribute to the diagnosis of childhood short stature resulting from growth hormone deficiency (GHD), particularly given its low sensitivity. However, IGFBP-3 testing may have a role along with IGF-1 testing as auxiliary diagnosis indexes for provocative testing

4. Do not routinely prescribe aromatase inhibitors to promote growth in children with short stature

Notwithstanding a recent clinical trial of use of aromatase inhibitors in paediatric patients that proved to be safe and effective , there is still an overall lack of evidence that this treatment can improve final adult height or is sufficiently safe. Risks include mild morphological abnormalities of their vertebrae. More evidence is needed to demonstrate safety and efficacy of aromatase inhibitors before they can be routinely prescribed to promote growth in children with short stature.

5. Do not initiate GnRH analogue treatment in children outside of central precocious puberty, for the target outcome of delaying puberty and improving final adult height

While there is some evidence that the use of GnRH agonists can achieve improvements in height for patients with central precocious puberty, it is also associated with the development of polycystic ovary syndrome (PCOS) in adolescence and the risk of compromises to bone health in female patients. Thus its use outside clinical trials is still not recommended. Given that the treatment duration must also be lengthy for its benefits to be manifested, it is not recommended to augment height in adolescents with short stature and normally timed puberty.