

Response to Reviewer comments

1. This is an important chapter but gaining consensus will be difficult across regions. The executive summary and recommendations clearly state that they are almost all based on level E “evidence” (other than some of the epidemiology and impact of dysglycaemia on assessment performance), and it would be useful to point this out at the beginning.

Response: Thank you for highlighting this important issue. We agree that acknowledgement of this would be helpful and the following statement has been added to the ‘Executive summary and recommendations’

“The following recommendations, reached by consensus, are largely evidenced at ‘expert opinion’ level. They represent the ‘ideal’ or best practice approach, and fully acknowledge that their full implementation may vary geographically according to the availability and access to resources.”

2. The need for an individualized school plan is very appropriate, but then suggesting a solitary cut-off of 10 mmol/l (180mg/dL) appears to go against that concept, especially when it is suggested as a trigger point for additional insulin administration. This is potentially dangerous, if timing of previous insulin administration, exercise and other variables are not taken into account, which in most circumstances is beyond the expectations of staff at school. The references to maintaining BGL within normal limits at all times if possible, while an important goal, appear to come without the acknowledgement that variation outside of "normal limits" is common and caused by a multitude of normal life events.

Response:

Thank you for this comment. We agree that some clarification and acknowledgement of these issues would be helpful.

We have amended the text in this section (page 16)

“Variations in BG levels outside of the ‘normal range’ are a common occurrence in young people with T1D and are the result of many different factors impacting on normal life events. The individualised school DMP should state a threshold for giving a correction bolus for hyperglycaemia and should specify when a check for blood or urine ketones is needed. Where appropriate resources and support are available a threshold blood glucose value of 10 mmol/L (180 mg/dl) is recommended, consistent with the upper limit recommended in the ISPAD Glycemic Control Chapter.”

3. In general it is reasonable to expect school staff to administer prescribed medicines, once they have had training, but not to determine how to adjust them, as these guidelines imply or state directly. Elsewhere the guideline discusses school personnel being able to respond to “symptomatic hyperglycaemia” (page 22, first paragraph), so there appears to be inconsistency in advice. My main concerns centre around the strong messaging re: school staff being involved with insulin adjustment in relation to factoring in diabetes technologies, exercise, nutritional intake and even Insulin ON Board. A caveat such as “dependant on local circumstance, legal requirements” may be appropriate etc.

4. Page 3 “Reasonable adjustments”(to facilitate prescribed medical care) include school personnel support with insulin administration, as well as understanding and knowledge of diabetes technologies (including CGM devices and advanced insulin pump settings). Suggest omit “advanced”

Response:

Thank you for highlighting this. We agree and have amended the text accordingly – omitting the word “advanced”.

5. Page 6 2ndlast line” “ongoing ignorance”, this should be “lack of knowledge” or omit.

Response:

Thank you for highlighting this. We agree and have changed the text accordingly to read:“lack of knowledge”.

6. Page 8 - ‘School personnel responsible for supporting students with T1D ideally also be trained to make insulin dose adjustments at school’

Use of Bolus advisor meter is fine but does not refer to these meters in the document

Response:

Thank you. We have inserted a short sentence acknowledging the utility of this technology – where available:

“Where available bolus calculation can be facilitated using the ‘bolus advisor’ feature commonly found on many commercially available home BG testing meters.”

7. Page 9 –‘pre meal bolus to occur 10-20 minutes before eating’

Potentially dangerous - fine in the care of parents and the home setting but not school

Response:

Thank you for your comment. We do not agree with the reviewers’ sentiment as many schools and their staff are prepared to support the student with diabetes in this way. We acknowledge that optimal timing of the pre-meal bolus may require individual consideration depending on situation / circumstances. We have inserted the following caveat statement to this sentence:

“....the timing of the pre-meal insulin bolus to occur 10-20 minutes before eating (23), although guidance on optimal timing may be required depending on individual circumstances.”

8. Page 13_ “for physical activity lasting less than 60 minutes, additional carbohydrate is only needed if the activity is of high intensity or ...this needs a reference

Response:

Thank you. This is comprehensively covered in the ISPAD Guideline chapter on Exercise & Sport and readers will be sign posted to this.

9. Page 16 – checking for ketones and giving a correction bolus- could be potentially dangerous and in my opinion is not the responsibility of school staff.

Response:

Thank you for this comment. We do not entirely agree with this view. In many countries and in many schools, staff are prepared to check blood ketone levels if it is within the young person’s diabetes management plan and have had appropriate instruction / training to do so.

We have clarified this by adding the following text:

“Where agreed as part of the DMP and where appropriate instruction has been provided, a brief guide on how to react to elevated level of ketones.....”

10. Page 17/18 – Treatment of severe hypoglycaemia should include safe positioning, contact parents and call an ambulance.

Response:

Thank you. We agree – and the appropriate text is already present in the draft manuscript. See page 17 / 18:

*“The young person should be put into a safe (‘recovery’) position, **nothing** should be administered by mouth, and an emergency telephone call for assistance placed immediately..”*

11. Page 24-25, Psychological adjustments. While all of this is true, it is not unique to the school environment and is something diabetes teams should be identifying. The capacity for schools to be involved in treating psychological issues in children with diabetes in many countries would be very limited – although identification of such problems would be a useful role for schools.

Response:

Thank you for your comment on this. We agree there will be wide geographical and country-to-country variation. Nevertheless, many less-resourced countries are already able to address this issue. School staff spend a great deal of time with children and are very often well positioned to pick up on psychological issues.

12. Page 32 onwards, legal perspectives. This section appears problematic and it is unclear whether it has been written by someone with international legal expertise. Given that legal frameworks vary considerably between individual countries (or even between different states in the same country), it would appear to be an area where ISPAD should take great care in producing a guideline that discusses “complying with law” that is likely to vary considerably between different jurisdictions. This section in general appears at odds with the earlier statement guideline: “Currently, many countries do not have legal or statutory provisions in place that mandate that children with T1D receive prescribed health-care support at school” (which makes much of the rest of this section redundant). Some of the statements in this section are also clearly at odds with the following section relating to resource-limited countries (eg the statement ‘medical treatment and management are not to be dictated by the resources currently available to the school’) and could in fact be used to prevent inclusion of children at school or reduce their participation. A collaborative approach with schools would appear to be more useful. This whole section should be removed.

Response:

Thank you for your comments on this section. We understand that this may be a rather contentious topic to include in these guidelines - which we anticipate will not only be read by healthcare professionals but will also be a source of reference and information for non-healthcare professions such as teachers and other school personnel.

We do not agree with the reviewer’s assertion that this section should be removed from the chapter as many children and families with diabetes rely upon legal protection so that they receive appropriate care within the context of their national system and not at the whim of a local interpretation that may result in inferior care.

This section is deliberately descriptive and is based upon international law, legal expertise and legal guidance that is on the public record. The section does not give legal advice but describes and references the legal obligations that are clinically relevant to young people with T1D. Whilst we make several references to this being applicable “in most Western / well-resourced countries” we also acknowledge the fact that there may be variations in the law between countries.

We believe that this guideline should acknowledge the law as it relates to children with T1D at school, as it not only empowers parents, schools and medical teams, but also clarifies roles and removes uncertainty.

We also believe that this guidance will provide a platform whereby international and nationally representative health-care / diabetes organizations (including ISPAD) could advocate and lobby Governments to comply with the law of that jurisdiction to assist children with T1D. Such advocacy is applicable to both well-resourced and less resourced countries (and rural regions) and would call for (greater) compliance to disability and discrimination law.

We have amended the text in this section to clarify some of these issues. Including specifically re-phrasing “medical treatment and management are not to be dictated by the resources currently available to the school” to now read ‘Some healthcare teams may choose not to

prescribe such treatments, but the child's medical treatment and management should strive for optimal care.'

13. In Sydney we have made a local decision not to teach schools how to test for ketones, and not to administer glucagon admin (not unless overseas /or school camp event). Similarly testing BG before during, and after exercise is unrealistic.

Response:

Thank you for your comment on this. We do not agree with the reviewer. However, we have now added the following to the Executive Summary: 'They represent the 'ideal' or best practice approach, and fully acknowledge that their full implementation may vary geographically both within and between countries according to the availability and access to resources.'

Many schools (in many different countries / settings) are prepared to support the young person with diabetes with these aspects of their self-management and care. Indeed, incorporation of this aspect of support into the DMP – acknowledges that the school – family and health care team have reached agreement and empowers the school staff to assist the child. The DMP also provides a legal basis for the school to proceed on this basis.

14. Page 32 – '*...may also include glucagon administration, continuous glucose monitoring, understanding and intervention (including using predictive arrows) and use of advanced insulin pump settings...*' This is asking too much of school staff and could be potentially dangerous. The inclusion of a caveat such as "dependant on local circumstance, legal requirements" etc. may be helpful as we all know there are always exceptions to the rule. Would be better to omit as this is covered elsewhere.

Response:

Thank you for your comment on this. This section has been revised: "Depending on what is documented by the healthcare team and parents in the child's individual DMP, the prescribed medical needs may include Continuous Glucose Monitoring (CGM) understanding and intervention (including using predictive arrows), and use of advanced insulin pump settings and exercise interventions (16).