Summary of NICE Guidelines

<table>
<tr><td>Title</td><td>Diabetes (type 1 and type 2) in children and young people: diagnosis and management</td></tr>
<tr><td>NICE Reference</td><td>NG18</td></tr>
<tr><td>Previous NICE Reference (if applicable)</td><td>This guidance in conjunction with NG17 and NG19 updates and replaces CG15 (originally published July 2004).</td></tr>
<tr><td>Date of Publication</td><td>1st August 2015</td></tr>
<tr><td>Date of Review/Update by NICE</td><td>11th May 2023</td></tr>
<tr><td>Date of Summary by Trainee</td><td>March 2025</td></tr>
<tr><td>Summary of Guidance (Max 250 words)</td><td>This guideline outlines the diagnosis and management of type 1 (T1DM) and type 2 (T2DM) diabetes mellitus in children and young people below the age of 18.

There have been no substantial updates on the initial diagnosis or T1DM that affect the laboratory service since it was last summarised by Leanne Wherrett in 2017 (found at: https://labmed.org.uk/our-resources/science-knowledge-hub/nice-guideline-summaries.html), so these will not be discussed in detail here.

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<tr><th></th><th>T1DM</th><th>T2DM</th></tr>
<tr><td>HbA1c Targets</td><td></td><td>• In cases of abnormal haematology, use plasma glucose trends, total glycated haemoglobin (if abnormal haemoglobins) or fructosamine, rather than HbA1c.</td></tr>
<tr><td>Glucose Monitoring</td><td>• Offer real-time continuous glucose monitoring (rtCGM) to all < 18 years or alternatively intermittently scanned continuous glucose monitoring (isCGM).
• Capillary self-monitoring should be performed at least 5 times/day.</td><td>• Blood glucose trends, alongside HbA1c measurements inform appropriate treatment, with this reviewed every 3 months.
• Offer rtCGM to all < 18 years under certain circumstances.
• Consider rtCGM for those on insulin therapy.
• Offer isCGM in alternative cases.</td></tr>
<tr><td>Other</td><td></td><td>• Additional guidelines published by NICE (NG246), relating to obesity management and implications for T2DM.</td></tr>
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Monitoring</td></tr>
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	• Recommendations for annual monitoring for dyslipidaemia, thyroid function and urine albumin:creatinine ratio for T1/T2DM has not changed. • Blood glucose and HbA1c targets and their frequency of monitoring for T1/T2DM has remained the same. **DKA Management** • Potassium chloride should be included in all fluids given to children unless their serum potassium is ≥ 5.5mmol/L. • Plasma glucose and serum sodium levels should be monitored throughout DKA treatment.
Impact on Lab (See below)	☐ **Moderate**: This NICE guideline has information that is of relevance to our pathology service and may require review of our current service provision.
Lab professionals to be made aware *Please select/highlight appropriate choices*	**Laboratory Manager** **Chemical Pathologist** **Clinical Scientist** **Biomedical Scientist**
Please detail the impact of this guideline (Max 150 words)	• NG18 provides recommendations for HbA1c targets, glucose monitoring, annual monitoring for disease prevention, and the implementation of therapies depending on blood glucose targets for children and young people with T1DM or T2DM, with updates exclusive to T2DM. • Laboratories should be aware of the intervals and targets for the monitoring of blood glucose and HbA1c, or alternatives (e.g., fructosamine) in cases of abnormal haematology. • HbA1c and glucose targets inform the appropriate therapies given to those with T2DM and these should be regularly monitored. • Management of DKA treatment has relevance for the duty biochemist, for instance the inclusion of potassium chloride in all fluids unless serum potassium is ≥ 5.5mmol/L. • Appropriate monitoring of sodium throughout DKA treatment may also impact laboratory provision of POCT and laboratory glucose measurement.

Impact on Lab

- ☐ **None**: This NICE guideline has no impact on the provision of laboratory services
- ☐ **Moderate**: This NICE guideline has information that is of relevance to our pathology service and may require review of our current service provision.
- ☐ **Important:** This NICE guideline is of direct relevance to our pathology service and will have a direct impact on one or more of the services that we currently offer.

Written by: Jacob Betts

Reviewed by: Jinny Jeffery

Date: 25th March 2025