Ashford and St. Peter's Hospitals
NHS Foundation Trust

Paediatric Diabetes Department

Guidelines for the Newly Diagnosed Child or Young Person with Diabetes

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Guideline History		
Date	**Comments**	**Approved By**
8th Nov 2010	New Guideline - Dr Tim Marr Locum Associate Consultant in Paediatrics. Presented to Paediatric Clinical Guidelines Forum	Ratified by Dr Zoritch on behalf of Children's Services Clinical Governance Committee
October 2021	Review of whole document with changes	Paediatric Guideline Group

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Guidelines for the Newly Diagnosed Child or Young Person with Diabetes

Introduction

To provide standardised, evidence-based management of children and young people newly diagnosed with diabetes mellitus.

Definition

- Fasting plasma glucose ≥ 7.0 mmol/L

or

- Random glucose > 11.1 mmol/L

Presenting Symptoms

Most children or young people will present with the classic triad of:

- ✓ Polyuria
- ✓ Polydipsia
- ✓ Weight loss

Other common symptoms can also include:

- ✓ Secondary enuresis
- ✓ Thrush
- ✓ Lethargy
- ✓ Recurrent infections
- ✓ Abdominal pain and vomiting

Referrals

All patients should be seen on the same day and as soon as possible in A&E. There is no need for fasting bloods to be done.

Who to Contact – within office hours (excluding Bank & Public Holidays)

- Inform Paediatric SpR/Paediatric A&E consultant who must see patient
- Inform the on-call/attending consultant
- As soon as possible, inform the Paediatric Diabetes team.
- All new patients will need to be seen by a member of the Paediatric Diabetes team on the next working day.
- Paediatric Diabetes Specialist Nurses can be contacted within office hours on ext 3314 or 6690.
- The Diabetes Consultants can be contacted within office hours via the Diabetes secretaries on ext 2722 or 2546.

Who to Contact – outside office hours

Access out of hours is available via the General Paediatric Team through Paediatric A&E or by contacting the switchboard for the on-call General Paediatric Registrar on 01932 872000.

If the Registrar is unable to answer your query or unable to give appropriate advice from the Guidelines, they are to discuss the problem with the General Paediatric Consultant on-call.

If the query remains unresolved, under the instruction of the General Paediatric Consultant, the query should be escalated to the on-call Paediatric Diabetes Consultant who can be accessed via the switchboard 01932 872000.

If you give advice to a patient/family or see a patient in A&E and discharge overnight please inform diabetes team by Email: asp-tr.generalpaeddiabetes@nhs.net

Initial investigations

- Record weight and height and plot on growth chart
- Capillary blood glucose level
- Blood ketones
- Venous bloods for:
    - Blood gas
    - Glucose
    - FBC
    - U&E
    - TFT (if TFTs are abnormal repeat in 2-3 months with TPO antibodies)
    - HbA1c
    - Coeliac screen and IgA*
    - Islet cell and GAD antibodies
- Consider infection screen if patient is febrile

Please use the Paediatric New Diabetic Order Set on Cerner

Please ensure that a separate sample is taken for immunology for Coeliac Screen and Antibodies

If the child is acidotic (pH < 7.3) then follow ICP for Diabetic Ketoacidosis (DKA)

When to consider other types of Diabetes

- A strong family history of diabetes
- Patient is obese at presentation
- Evidence of insulin resistance (for example, acanthosis nigricans)
- Associated features such as eye disease, deafness or another systemic illness or syndrome

Please see the Guideline for Newly Diagnosed Child Type 2 for further information and discuss these patients with the Diabetes Team before starting insulin.

Insulin

Basal bolus or multiple daily injections (MDI) is the regimen of choice for all children at diagnosis.

Measure blood glucose level pre-meals, 2 hours post meals/snack, pre-bed and 0200.

Prescribing Insulin

Please prescribe Tresiba ON and Novorapid for meals, PRN for snacks and corrections on cerner.

Basal Bolus/MDI

Prescribe NovoRapid pre-meals and Tresiba as the background insulin.

The starting dose of Insulin should be 0.6units/kg/day

⅓ of the total dose is to be given as Tresiba and the remaining ⅔ divided between the three main meals. Initially it is easier to make the meal doses the same.

Tresiba should be prescribed and given prior to transfer to the ward regardless of the time. The timing of the dose can be changed later by the Diabetes team

Presentation before evening meal:

Please contact member of diabetes team for individualised plan.

Presentation following evening meal

If the child is well with no ketones or blood glucose level < 20 mmol/L with ketones then only administer the Tresiba pre-bed. Continue to monitor blood glucose levels as per protocol above.

If the child is well with ketones and blood glucose level > 20 mmol/L, give Tresiba plus 1 (one) unit NovoRapid if child < 5 years and 2 (two) units NovoRapid if child > 5 years.

Check blood glucose level 2 hours after NovoRapid dose. If blood glucose level improves then continue to monitor blood glucose levels as per protocol. If no improvement in levels then discuss with Consultant.

General Information:

- Insulin is administered via a pen device. Supplies are kept on Ash Ward.
- Half unit pens – Novo Echo Plus for Tresiba and Novorapid (make sure they are different colours so as not to give the wrong insulin)
- 4mm needles are used for all children and young people and changed after each injection.
- **Finger prick lancets are to be changed immediately after use.**
- As soon as possible, the child and parents/carers should monitor the blood glucose levels under supervision of the nursing staff.
- With support, children and parents/carers are encouraged to take early responsibility for their own injections.
- Blood ketones should be checked with all capillary blood glucose checks until they are negative.
- Again, the child and parents should be responsible for these checks once they are competent.
- Prepared information packs and blood glucose meters are available. Supplies are kept on Ash Ward. These will be provided by the diabetes nursing team.

2. Supporting References

1) Definition and diagnosis of diabetes mellitus and intermediate hyperglycemia, WHO 2006

2) Diabetes (type 1 and 2) in children and young people: diagnosis and management, NICE NG18, August 2015, Last updated: 16 December 2020

   https://www.nice.org.uk/guidance/ng18

3) NPSA Rapid Response Report, Safer administration of insulin, 16 June 2010. NPSA/2010/RRR013

3. Supporting relevant trust guidelines

Paediatric Diabetes Escalation Policy

4. Guideline Governance

a. Scope

This guideline is relevant to all staff caring for all children from 0-18 years old across the emergency department, inpatient ward and outpatient department.

b. Purpose

i. This guidelines aims to facilitate a common approach to the management of children. At times deviation from the guideline may be necessary, this should be documented and is the responsibility of the attending consultant.

ii. This guideline is subject to regular review to ensure ongoing evidence based practice.

c. Duties and Responsibilities

All healthcare professionals responsible for the care of all children 0-18years should be aware of practice according to this guideline.

d. Approval and Ratification

This guideline will be approved and ratified by the Paediatric Guidelines Group.

e. Dissemination and Implementation

i. This guideline will be uploaded to the trust intranet 'Paediatric Guidelines' page and thus available for common use.
ii. This guideline will be shared as part of ongoing education within the Paediatric Department for both medical and nursing staff.
iii. All members of staff are invited to attend and give comments on the guideline as part of the ratification process.

f. Review and Revision Arrangements

a. This policy will be reviewed on a 3 yearly basis by the appropriate persons.
b. If new information comes to light prior to the review date, an earlier review will be prompted.
c. Amendments to the document shall be clearly marked on the document control sheet and the updated version uploaded to the intranet. Minor amendments will be ratified through the Paediatric Guidelines Group. A minor amendment would consist of no major change in process, and includes but is not limited to, amendments to documents within the appendices.

g. Equality Impact Assessment

Background • Who was involved in the Equality Impact Assessment
Author and the supervising consultants.
Methodology • A brief account of how the likely effects of the policy was assessed (to include race and ethnic origin, disability, gender, culture, religion or belief, sexual orientation, age) • The data sources and any other information used • The consultation that was carried out (who, why and how?)
All groups of staff and patients were taken into consideration and there is no bias towards or against any particular group.
Key Findings • Describe the results of the assessment • Identify if there is adverse or a potentially adverse impacts for any equalities groups
There is no evidence of discrimination.
Conclusion • Provide a summary of the overall conclusions
There is no evidence of discrimination.
Recommendations • State recommended changes to the proposed policy as a result of the impact assessment • Where it has not been possible to amend the policy, provide the detail of any actions that have been identified • Describe the plans for reviewing the assessment
This guideline is appropriate for use.

h. Document Checklist

To be completed (electronically) and attached to any document which guides practice when submitted to the appropriate committee for approval or ratification.

Title of the document: Guidelines for the Newly Diagnosed Child or Young Person with Diabetes Mellitus

Policy (document) Author: Dr Tim Marr, Locum Associate Consultant in Paediatrics

Executive Director: N/A

		Yes/No/ Unsure/NA	Comments
1.	**Title**		
	Is the title clear and unambiguous?	**Yes**	
	Is it clear whether the document is a guideline, policy, protocol or standard?	**Yes**	
2.	**Scope/Purpose**		
	Is the target population clear and unambiguous?	**Yes**	
	Is the purpose of the document clear?	**Yes**	
	Are the intended outcomes described?	**Yes**	
	Are the statements clear and unambiguous?	**Yes**	
3.	**Development Process**		
	Is there evidence of engagement with stakeholders and users?	**Yes**	**Ratified by Dr Zoritch on behalf of Children's Services Clinical Governance Committee on 08/11/2010**
	Who was engaged in a review of the document (list committees/ individuals)?	**Yes**	**Children's Services Clinical Governance Committee**
	Has the policy template been followed (i.e. is the format correct)?	**Yes**	
4.	**Evidence Base**		

		Yes/No/ Unsure/NA	Comments
	Is the type of evidence to support the document identified explicitly?	**Yes**	
	Are local/organisational supporting documents referenced?	**Yes**	
5.	**Approval**		
	Does the document identify which committee/group will approve/ratify it?	**Yes**	
	If appropriate, have the joint human resources/staff side committee (or equivalent) approved the document?	**N/A**	
6.	**Dissemination and Implementation**		
	Is there an outline/plan to identify how this will be done?	**Yes**	
	Does the plan include the necessary training/support to ensure compliance?	**Yes**	
7.	**Process for Monitoring Compliance**		
	Are there measurable standards or KPIs to support monitoring compliance of the document?	**Yes**	
8.	**Review Date**		
	Is the review date identified and is this acceptable?	**Yes**	
9.	**Overall Responsibility for the Document**		
	Is it clear who will be responsible for coordinating the dissemination, implementation and review of the documentation?	**Yes**	**Clinical Lead, Paediatric Diabetes Service**

		Yes/No/ Unsure/NA	**Comments**
10.	**Equality Impact Assessment (EIA)**		
	Has a suitable EIA been completed?	**Yes**	

Committee Approval (Paediatric Guidelines Group)			
If the committee is happy to approve this document, please complete the section below, date it and return it to the Policy (document) Owner			
Name of Chair	**Dr Claire Mitchell**	**Date**	**01/12/2021**
Ratification by Management Executive (if appropriate)			
If the Management Executive is happy to ratify this document, please complete the date of ratification below and advise the Policy (document) Owner			
Date: n/a			