THE RENAL ASSOCIATION
founded 1950

Kidney Care UK

BRS
British Renal Society
Multi-professional working

DIH
Improving care for people with diabetes on haemodialysis

Diabetes in Haemodialysis

Improving care for the person with diabetes on haemodialysis

Partners: Renal Association, British Renal Society, Diabetes UK, ABCD and Kidney Care UK

ABCD
Association of British Clinical Diabetologists

DIABETES UK
KNOW DIABETES. FIGHT DIABETES.

Introduction

The number of people with diabetes and kidney disease is increasing in the UK and this is reflected by the increasing number of people on maintenance haemodialysis with diabetes. In some units now in the UK over 40% of the people on dialysis have diabetes.

People with diabetes on haemodialysis often find difficulty in accessing specialist care required for the management of their glycaemic control and complications of their diabetes. This is partly because they are attending dialysis units on a regular basis and may not have time or feel well enough to attend other services. Furthermore, when they do attend in primary care there may be an assumption that their diabetes and its complications is being managed by the specialty renal service or hospital diabetes service but this is not always the case. Therefore, people with diabetes on haemodialysis often receive suboptimal care.

In 2016 guidelines were published by the Joint British Diabetes Societies in conjunction with the Renal Association aimed at defining good quality care for a person with diabetes on haemodialysis. These guidelines have been disseminated widely but there is no evidence that they are being used widely to improve the care of the person with diabetes on dialysis.

The Diabetes Care in Haemodialysis (DiH) group has been established as a multi-professional, multidisciplinary working group to support the implementation of the 2016 guidelines and most importantly improvements in the care for people with diabetes on haemodialysis. There is a core steering group for the audit programme and a wider stakeholder engagement group. The core membership can be seen in **Appendix 1**.

It is recognised how difficult it is for each haemodialysis units to meet all the recommendations within 2016 guidelines and much easier for them work towards achieving a set of standards that encompass the most important elements.

After some consultation five DiH standards have been agreed. To support the implementation of the standards, an audit tool has been developed which defines audit measures that allow units to demonstrate that they meet the standards. A patient/staff questionnaire has also been developed to aid collection of data.

This pack includes:

1) The DiH standards which define care of people with diabetes on maintenance haemodialysis (mHDx) and the associated audit measures based on the 2016 guidelines **(Appendix 2)**
2) An audit data collection tool to support implementation of the standards for staff **(Appendix 3)**
3) A guide on how to complete the data collection tool and caveats/problems to look out for **(Appendix 4)**

APPENDIX 1 – DIH CORE AUDIT STEERING GROUP

Core Team	
Dr Andrew Frankel	Consultant Physician and Nephrologist Imperial College Healthcare NHS Trust
June James	Nurse Consultant in Diabetes University Hospitals of Leicester NHS Trust and Associate Professor University of Leicester
Professor James Burton	Honorary Clinical Professor Renal Medicine and Consultant Nephrologist University Hospitals of Leicester NHS Trust
Dr Rob Gregory	Diabetes Consultant University Hospitals of Leicester NHS Trust
Dr Apexa Kuverji	Specialist Registrar in Nephrology University Hospitals of Leicester NHS Trust
Rachel Berrington	Senior Diabetes Nurse Specialist – University Hospitals of Leicester NHS Trust
Jo Reed	Diabetes Clinical Nurse Specialist - Imperial College Healthcare NHS Trust
Oonagh Gooding	Renal Dietitian – University Hospitals of Leicester NHS Trust
Claire Main	Nephrology and Transplant Directorate University of Wales Trust in Cardiff
Vicky Ashworth	Advanced Nurse Practitioner Liverpool
Coral Wimbury	Haemodialysis Unit Sister – University Hospitals of Leicester NHS Trust
Shila Solanki	Renal Nurse – University Hospitals of Leicester NHS Trust
Deborah Duvall	Representative of Kidney Care UK

APPENDIX 2 – PEOPLE WITH DIABETES ON MAINTENANCE HAEMODIALYSIS (mHDx) – Audit Tool

DiH Care Standards	JDBS Guideline Recomm-endations	Audit Standard	Audit Measure	Exclusion Criteria	Audit Question to be completed by HDx Staff	Audit Question to be completed by person and/or carer
1. All people with diabetes undergoing mHDx should have a documented annual review of their diabetes which includes review of glycaemic control, dietary review and foot and eye screening.	**1.4**	1a. 100% of all people on mHDx with diabetes are under a named Doctor/Nurse to support the delivery of their diabetes care	% of people who have seen a Diabetologist/ General Practitioner /Diabetes Specialist Nurse for the care of their diabetes in the previous 12 months			a) In the last 12 months who have you seen in hospital or at your general practice in order to discuss your diabetes care? This could include a hospital doctor, a nurse in the hospital setting, your general practitioner or a nurse in your general practice. Please indicate who you have seen. (If you have seen no one specifically to discuss your diabetes please indicate accordingly)
	1.4	1b. 100% of all people with diabetes have had a documented annual review of their glycaemic control by a diabetes specialist or diabetes specialist nurse.	% of people who have had a documented annual review of their glycaemic control by a diabetes specialist or diabetes specialist nurse			THIS WILL BE ANSWERED BY ANALYSIS OF THE RESPONSE TO 1 A AND 1B

	5.1	1c. 100% of people with diabetes have had a documented dietary review of their diabetes by a renal dietitian in the last 12 months	% of persons with diabetes who have seen a dietitian at least once in the last 12 months in relation to their diabetes		Documented dietary review which includes diabetes assessment in notes (THIS WILL USE THE RESPONSES OF BOTH THE PATIENTS AND NURSES TO CREATE THE FIGURE)	In the last 12 months, have you seen a dietician who has given you advice about your diabetes and your diet?
	1.1	1d. 100% of all people on mHDx with diabetes should have documented annual eye screening	% of person who have had their eye screening in the last 12 months	Individuals who are registered blind Individuals under specialist eye services		In the last 12 months, have you had an assessment of your eyes where they have taken photographs of the back of your eye or seen an eye specialist for assessment or treatment of diabetic eye disease?

2. All people with diabetes on mHDx should have a clearly defined and personalised method of assessing glycaemic control agreed with and understood by the individual – this should include access to CGM where appropriate.	**2.5**	2. 100% of all people on mHDx with diabetes and on insulin and/or sulphonylureas (SUs) should be undertaking a personalised method of assessing glycaemic control. All people on mHDx with diabetes who are unable to self-monitor CBG should be offered either training or an alternative method.	a) % of people on insulin or SUs who have a documented method (CBG) of assessing their glycaemic control b) % of people who are on Insulin, who are utilising flash glucose monitoring c) % of people who report themselves to be confident/ competent in assessing their blood glucose monitoring and making necessary adjustments	- Individuals who have been offered training but have declined - people not on Insulin and/or Sulphonylureas	a) Is there a documented method of glycaemic monitoring in the care plan b) If the person is on insulin are they using Flash Glucose monitoring (This is a small sensor worn under the skin which will automatically and continuously monitor and store the blood glucose levels. The only product currently available for use in the UK is Freestyle Libre)	a) What is the treatment you use for your diabetes? b) Do you have a pinprick monitor or a flash glucose monitor? (This is a small sensor worn under the skin which will automatically and continuously monitor and store your blood glucose levels) c) Do you feel confident in the method that you use to monitor your blood glucose levels? d) Do you make any adjustments to your medication or dietary intake in response to your blood glucose levels?
3. All people with diabetes and on mHDx with an HbA1C <58 mmol/mol who are on a hypoglycaemic treatment (insulin or sulfonylurea) should have had an intervention to minimise the	**2.1** **2.3**	3a. 100% of all people on mHDx with diabetes have an HbA1c done every 4 months	% of people on mHDx with diabetes who have had an HbA1c performed in the last 4 months that the unit is aware of		a) Has there been an HbA1C undertaken in the last 4 months?	

risk of hypoglycaemia.	**3.1**	3b. No people on insulin therapy or sulphonylureas should have HbA1c <58 mmol/mol (<7.5%)	% of people on mHDx with diabetes who have HbA1c <58 mmol/mol (7.5%) and are on Insulin/ sulphonylureas	Individuals with HbA1c <58mmol/mol (<7.5%) but are not on Insulin or Sulphonylureas	b) If the person is on insulin or a sulphonylurea, and HbA1C <58 mmol/mol (7.5%) – Has action been taken to assess for or reduce the risk of hypoglycaemia?	
	5.15	3c. 100% of all people on mHDx and on insulin and/or sulphonylureas have CBG measured immediately before and after HD	% of people on Insulin/ sulphonylureas with recorded Pre- & Post-HD CBG	Individuals who are not on Insulin or Sulphonylureas	c) If the person is on insulin or sulphonylureas, are pre and post HD CBG measurements undertaken?	
4. All people with diabetes and on mHDx with an HbA1C >80 mmol/mol should have had access to advice from the diabetes specialist team in order to facilitate improvement in glycaemic control.	**3.1** **3.2**	4. 100% of those people on mHDx with diabetes and an HbA1C >80 mmol/mol must have had access to Diabetes team in the preceding 4 months	% of people with HbA1C >80mmol/mol (>9.5%) who have had a diabetes care review in the preceding 4 months	Individuals with HbA1c < 80mmol/mol (<9.5%)	If the person has had an HbA1C of >80 in the last 4 months, has the person been known to have had a diabetes review?	

5. All units should ensure that there is a clearly defined and easy to access rapid escalation pathway for individuals with active foot complications.	**6.5**	5a. 100% of people with diabetes receive regular weekly visual inspection of both feet on mHDx Unit	% of people with diabetes who receive foot inspections on the HD unit once weekly	- For people with bilateral leg amputations – check stump	Has the person had a visual inspection of their feet in the last 2 weeks at the dialysis unit? *(Shoes and socks off, just looking at both feet for ischaemia/ulceration etc.)*	
	6.6	5b. All people with diabetes have had documented Foot risk assessment annually	% of people with a documented foot risk assessment in the last year	-Individuals under the care of Podiatry services -Individuals under the care of diabetes foot team -For people with bilateral leg amputations – check stump	Is the result of a foot risk assessment undertaken in the last 12 months available in the care plan?	
	6.6	5c. All units have a rapid referral pathway for those with high risk of diabetic foot disease	Each unit should have an agreed process for referrals for individuals with high risk foot complications. Where this occurs, they should demonstrate that the person is seen in a podiatry service within an appropriate time frame. [YES / NO]			

The process for the delivery of these standards will vary from site to site depending on service configurations however responsibility for meeting these standards will ultimately lie with the service commissioners whilst the responsibility for recording achievement of standards rests with the mHDx unit service leads.

APPROVAL AND DEVELOPMENT OF THIS DOCUMENT			
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Reviewed by:	Diabetes Care in Haemodialysis Working Group		
Approved by:	Dr Andrew Frankel	**Date Approved:**	27.1.2020
REVIEW RECORD			
Date:	**Reviewed by:**	**Description of Changes (if any):**	
27.01.2020	DiH working group	Minor changes to wording of questions. Addition of question d) in Standard 2.	
19.02.2020	DiH working group	Minor changes to wording of questions.	

Improving care for people with diabetes on haemodialysis

APPENDIX 3

PATIENT QUESTIONNAIRE DATE COMPLETED

To help us provide care, that meets your needs, please complete this survey and return it to your dialysis nurse.

Patient to complete					
Diabetes Care	**Hospital Diabetic Specialist**	**GP**	**Hospital Diabetes Specialist Nurse**	**Nurse at General Practice**	**No-one**
a) In the last 12 months who have you seen in hospital or at your general practice in order to discuss your diabetes care? *This could include a hospital doctor, a nurse in the hospital setting, your general practitioner or a nurse in your general practice.* If you have seen no one specifically to discuss your diabetes please indicate by ticking the final column *Please tick appropriate box*					
Dietitian Input	**Yes**		**No**		
In the last 12 months, have you seen a dietician who has given you advice about your **diabetes** and your **diet**?					
Eye Screening	**Yes**		**No**		
In the last 12 months, have you had an assessment of your eyes where they have taken photographs of the back of your eye or seen an eye specialist for the assessment or treatment of diabetic eye disease?					
Diabetes Monitoring					
a) What is the treatment that you use for your diabetes? *Please circle all that apply*	**Insulin**		**Linagliptin** **Sitagliptin** **Gliclazide** **Glipizide**	**Diet-Controlled**	**Other (please specify)**
	Pinprick Glucose Monitor		**Flash Glucose Monitor**	**No Monitoring**	
b) What method do you use to monitor your blood glucose control at home? *(Flash glucose monitor is a small sensor worn under the skin which will automatically and continuously monitor and store your blood glucose levels)* *Please tick appropriate box*					

	Yes	No	N/A (if not monitoring)
c) Do you feel confident in the method that you use to monitor your blood glucose levels? *Please tick appropriate box*			
d) Do you make any adjustments to your medication or dietary intake in response to your blood glucose? *Please tick appropriate box*			
Haemodialysis staff to complete			
HbA1c	**Yes**	**No**	**N/A**
Has there been an HbA1C blood test undertaken in the last 4 months? (if yes, please specify the value and date)	Date:		----------
If the person is on insulin or a sulphonylurea, and HbA1C <58 mmol/mol (7.5%) – Has action been taken to assess for or reduce the risk of hypoglycaemia? *(examples of sulphonylureas include: Gliclazide, Glipizide, Glimepiride, Tolbutamide)*			
	Yes	**No**	**N/A**
If the person is on insulin or a sulphonylurea (see previous question), are pre- and post-haemodialysis CBG measurements undertaken?			
If the person has had an HbA1C of >80 in the last 4 months, has the person been known to have had a diabetes review?			
Foot Care	**Yes**	**No**	**N/A**
Has the person had a visual inspection of their feet in the last 2 weeks **at the dialysis unit**? *(Shoes and socks off, just looking at both feet for ischaemia/ulceration etc.)*			----------
Is the result of a foot risk assessment undertaken in the last 12 months available in the care plan? *(Not applicable if currently under the care of Podiatry for Diabetic foot care or Diabetic Foot Team)*			
Additional Comments:			

APPENDIX 4 – Guide to using the Audit Tool

The audit tool shows the agreed standards of care for people with diabetes on haemodialysis. The standards have been linked to audit measures that will enable units to establish whether the standards are being met. The patient & staff questionnaire will enable data collection to answer the audit question.

1. We suggest that **all** people with diabetes on MHDx completes the patient component of the questionnaire
2. We suggest that the named dialysis nurse responsible for each individual with diabetes, completes the staff component of the questionnaire as fully as possible
3. The data on the questionnaires should then be collated and total compliance to each of the audit standards calculated as a percentage. It may be useful to use Microsoft Excel spreadsheet to do this.

The last audit measure (5c – rapid referral pathway for those with high risk of diabetic foot disease) is posed to the unit as a whole, and should be answered with a Yes or No.

Caveats/Considerations

In order to get the most accurate information, it is important to fill in as much of the form as possible. If you are not sure about an answer, reasonable attempts should be made to find out e.g. calling GP to get date of last diabetes review, looking up HbA1c blood test result on computer system, etc.

It is acceptable for patients to give more than one answer for Questions 1a and 2a.

If the person is on insulin or a sulphonylurea, and their HbA1C <58 mmol/mol (7.5%) (Question 3b) then you should consult the hypoglycaemia risk pathways at your trust/unit or escalate to the local diabetes team.

It is important for **consistent** monitoring of CBG pre- & post-dialysis, therefore if more than 2 occasions are missed in a 2 week period (6 dialysis sessions – 12 CBG monitoring opportunities), then this should be interpreted as not meeting the standard.

Ideally foot inspections should occur once weekly at the dialysis units. The audit question specifies a 2 week period, as a way of considering factors such as the timing of audit and missed dialysis sessions.