National Advisory Panel on Care Home Diabetes

A STRATEGIC DOCUMENT OF DIABETES CARE FOR CARE HOMES

April 2022

Appendix A: Clinical and Management Resources of Information

Representative Bodies for the NAPCHD

DIABETES UK KNOW DIABETES. FIGHT DIABETES.	KING'S College LONDON	The Association for Clinical Biochemistry & Laboratory Medicine Better Science, Better Testing, Better Care
t·r·e·n·d™ DIABETES	directors of adass adult social services	JBDS-IP Joint British Diabetes Societies for inpatient care
O·P·D·N Older People's Diabetes Network	Aston University BIRMINGHAM UK	CARE ENGLAND Representing independent care providers
Qni The Queen's Nursing Institute	hallmark care homes	BDA The Association of UK Dietitians
RCGP Royal College of General Practitioners	ABCD Association of British Clinical Diabetologists	UKCPA CLINICAL PHARMACY ASSOCIATION
DUETdiabetes	DISN UK GROUP SHARING BEST PRACTICE SINCE 2004	fDROP foundation for Diabetes Research in Older People

Contents

Working Group and Advisory Panel Members and Representative Bodies

Name	Organisation
Professor Alan Sinclair (Chair)	King's College, London and Foundation for Diabetes Research in Older People (fDROP)
Bridget Turner, Dr David Jones	Diabetes UK, London
Dr Umesh Dashora	East Sussex Healthcare NHS Trust, JBDS-IP and ABCD
Dr Philip Newland-Jones, Helen O'Neil	University Hospitals Southampton NHS Foundation Trust (PN-J), South Tyneside and Sunderland NHS Foundation Trust (HO'N)and UKCPA
Dr Susannah Rowles	ABCD and Pennine Acute Hospitals NHS Trust
Lynne Reedman	DUET diabetes Ltd
Dr Kath Higgins	University Hospitals of Leicester NHS Trust and JBDS-IP
June James	Trend-UK
Prof Gerry Rayman, MBE	East Suffolk and North Essex NHS Foundation Trust and JBDS-IP
Prof Angus Forbes	King's College, London
Dr Ahmed Abdelhafiz	Rotherham NHS Foundation Trust and OPDN
Professor Martin Green, OBE	Care England
Julie Rayner	Hallmark Care Homes
Ann Middleton	PLWD and DRSG
Carolyn Newbert	PLWD and DRSG
Dr Susan Manley	University of Oxford, University of Birmingham and JBDS-IP
Dr Jason Cheung	Norfolk and Norwich University Hospitals NHS Foundation Trust and JBDS-IP
Gurpreet Kaur	Black Country and West Birmingham CCG and University of Worcester
Dr Daniel Flanagan	University Hospitals Plymouth NHS Trust and JBDS-IP
Philip Ivory	Lay member and person advocate
Erwin Castro	East Sussex Healthcare NHS Trust, JBDS-IP, and DISN
Dr Parijat De	Sandwell & West Birmingham NHS trust/JBDS-IP
Dr Kevin Fernando	Royal College of General Practitioners, RCGP
James Bullion	ADASS – Director, Association of Directors of Adult Social Services
Professor Peter Scanlon	Gloucestershire Hospitals NHS Foundation Trust
Dr Sally Thirkettle	Christie Pathology Partnership, Manchester M20 4BX, and Association for Clinical Biochemistry & Laboratory Medicine
Lara Ellison and Ruth Hammond	British Dietetic Association, Birmingham, UK
Jo-Anne Wilson, MBE	Queen's Nursing Institute (QNI), and Royal British Legion
Dr Sri Bellary	University of Aston and University Hospitals Birmingham NHS Foundation Trust
Laura English	Regulatory Policy Officer, Care Quality Commission (CQC)
Dr David Lipscomb	Sussex Community Foundation NHS trust
Dr Belinda Allan	Hull and East Yorkshire Hospitals NHS Trust and JBDS-IP

Introduction to Appendix A

In this appendix, we provide a series of resources which we hope that care staff will be able to study and adopt for their routine use in managing their residents with diabetes. They can be printed off and adapted for their local use. Senior care staff as well as community-based nursing teams may wish to add additional instructions to ensure that these resources are used to their full advantage.

The following tables and flow charts are referenced in the main strategic document and are reproduced in Appendix A:

Resources 1 (a): 'My resident has DIABETES….' – a flowchart approach to alert care staff when a resident is developing a serious problem

This is a self-explanatory flow chart that all senior care staff within the home should familiarise themselves with, and then instruct less experienced care staff about its contents. It will have particular value in those residents with diabetes who have developed an early acute illness where symptoms are vague, and also when either episodes of hypoglycaemia are occurring, or glucose control is worsening – care staff might be alerted to the fact that something about the resident is not quite right! Close monitoring of capillary blood glucose levels is crucial in these circumstances and more senior advice sought when needed.

Resource 1 (b): Summary of 'Emergency Alerts' for Care Homes for residents living with diabetes

This diagram covers all the important and most frequent 'emergency scenarios' affecting residents living with diabetes. This is meant to assist care staff to recognise situations which demand urgent action such as referral to a GP for a 'same day' visit, or an ambulance call out prior to admission to hospital.

Resource 1 (c): A Guide to Safe and Unsafe Glucose levels - when to seek help?

In this diagram, we provide a quick and easy guide to care staff on what are 'safe' and 'unsafe' glucose levels on random testing in three described situations of a resident with diabetes. When acute illness occurs, it is important that the upper range of safe levels are slightly adjusted down to ensure that a resident is more tightly controlled (using better monitoring) to ensure that this hyperglycaemia does not become uncontrolled by the effects of the illness itself. You will note that when there is any doubt about a resident's condition or whether glucose levels are safe or unsafe, it is necessary to ask for more senior support both inside the care home (e.g senior nurse or manager) and/or community or primary care support.

Resource 1 (a): My Resident has Diabetes, and something is not right… (*This may be alongside illness, infection or steroids, or there may be no obvious cause*.)

Resident's symptoms are:

Feeling weak, faint or dizzy	Confused, aggressive	Sleepier than usual
Shaky, trembling	Hungry	Pale, sweaty, agitated

This resident could be experiencing **HYPOGLYCAEMIA** - a dangerously LOW blood glucose level

IMMEDIATE ACTION: Test blood glucose using blood glucose meter (as per home protocol)

- LO on meter = very, very Low
- If less than 4mmol/L

EMERGENCY ACTION REQUIRED!

GET HYPO BOX

SEE ***Resource 2*** ON HOW TO TREAT

Repeat test to check accuracy. Hypos MUST be treated, even if the resident does not display symptoms.

Resident's symptoms are:

Thirst, dry mouth	Passing urine more often	Blurred vision
Drowsiness, looking dry	Rapid breathing	Nausea, vomiting, abdominal pain

This resident could be experiencing **HYPERGLYCAEMIA** - a dangerously HIGH blood glucose level

IMMEDIATE ACTION: Test blood glucose using blood glucose meter (as per home protocol)

- Over 11 mmol/L on more than one occasion, and feeling unwell
- HI on meter = very High

EMERGENCY ACTION REQUIRED!

If responsive and drinking, try to maintain hydration and call health professional ASAP for guidance. If resident has vomited, or is unresponsive, or has abdominal pain, call 999.

If resident has **TYPE 1** Diabetes, they MUST also be tested for the presence of ketones. ***See Resource 2***

Resident's symptoms are:

Non-specific, generally unwell	Chills and/or fever

This resident could have a **FOOT INFECTION or UTI or other infection**

IMMEDIATE ACTION: Check the feet for redness, swelling, warmth, discharge or smell. If any of these are present

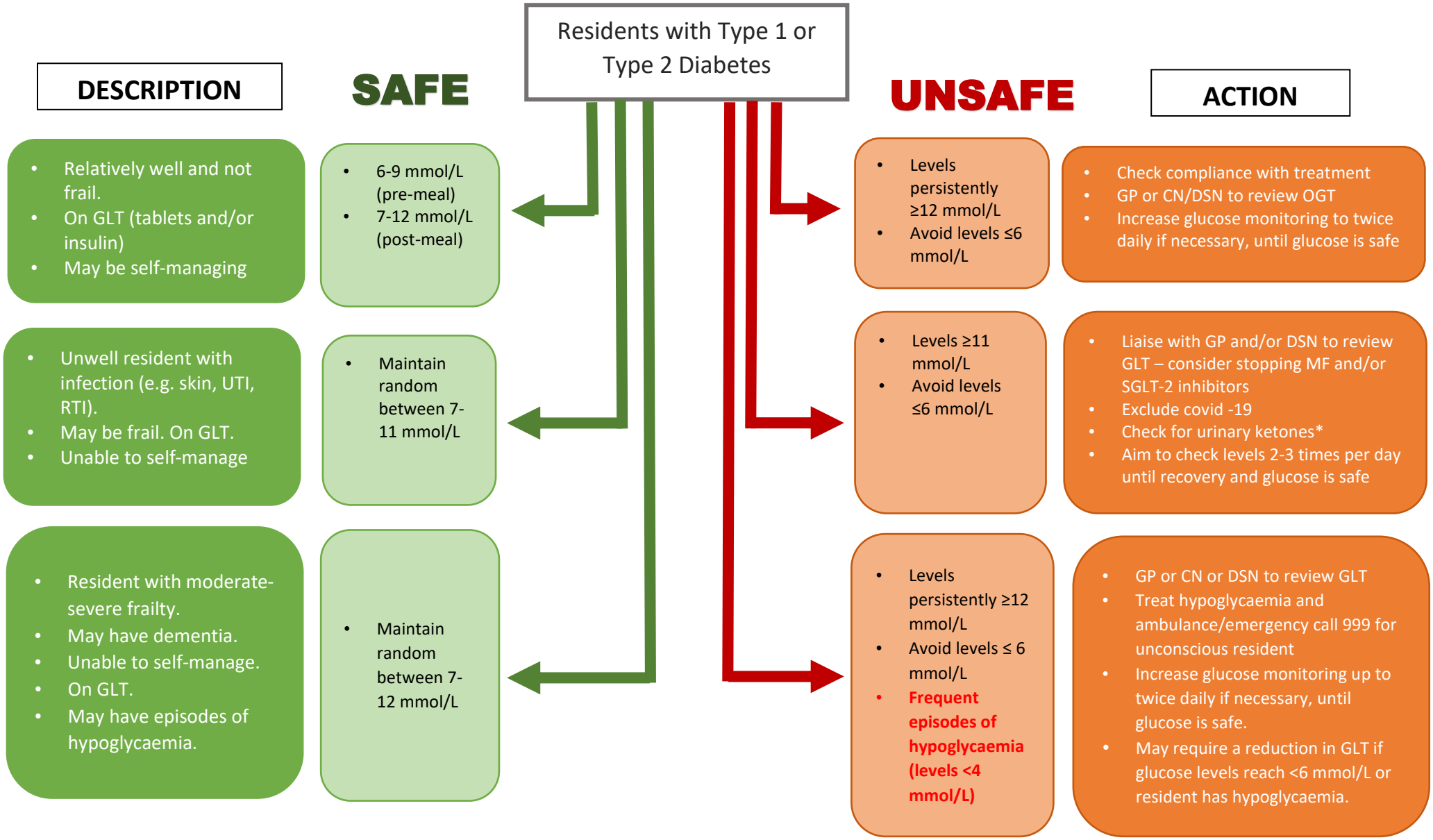
EMERGENCY ACTION REQUIRED!

Seek urgent help from a healthcare professional – antibiotic treatment will be required, and possible emergency hospital admission.

Resource 1 (b): Summary of 'Emergency Alerts' for Care Homes for residents living with diabetes

ALERTS	DESCRIPTIONS	KEY ACTIONS
 **Resident with altered behaviour**	Unusual behaviour, agitation, dizziness: think of hypoglycaemia	Exclude delirium and test cognition using MiniCog or another screen. Test capillary blood glucose (CBG) level – if <4 mmol/l (or recording 'LO' using blood glucose meter), institute treatment protocol (Appendix A, Resources 1 (a) and 2. Seek HCP help as required.
 **Drowsy resident**	Blurred vision, thirsty, abdominal pain, unwell and drowsy	Test CBG level – if more than 11 mmol/l (or 'HI' on blood glucose meter), hyperglycaemia is present. Need to test for urinary ketones to exclude DKA particularly in type 1 diabetes. See Appendix A (Resources 1(a). Exclude infection (RTI.UTI). Seek HCP help as needed.
 **A 'red' foot**	Redness, swelling, warmth, discharge, smell, unwell	Check CBG level. Seek immediate help from a HCP (health care professional) including GP. May require emergency hospital admission.
 **Losing weight and decline in BMI**	Obvious weight loss or malnutrition. Also look for pressure sores.	Check CBG level. Is the resident unwell? Exclude a skin, chest or urinary infection. Liaise with dietitian/HCP
 **Onset of frailty**	Increasing leg weakness. Less mobile. Weight loss.	Exclude infection, dehydration and malnutrition. Assess using Clinical Frailty Scale (CFS). Liaise with HCP for advice. Consider exercises
 **Repeated falls**	Frequent falls. Injuries, limb pain, visual loss, balance problems	Check CBG level. Exclude environmental causes. Look for injury or bone fracture. Is the resident unwell? Liaise with HCP to assess medical and medication. Institute a care home falls prevention protocol.

Resource 1 (c): A Guide to Safe and Unsafe Glucose levels - when to seek help?



GLT: glucose-lowering therapy; UTI: urinary tract infection; RTI: respiratory tract infection; ≥: equal to or greater than; ≤: equal to or less than; GP: general practitioner; CN: community nurse; DSN: diabetes specialist nurse; SGLT-2: Sodium Glucose Transport-2; MF: metformin; * see Appendix A, Resource 1 (a)

Resource 2: Treatment of hypoglycaemia using step by step approach and Ketone testing

Hypoglycaemia is an important consequence of over-treatment of diabetes and can have devastating effects on health, wellbeing and quality of life. All care staff should be alert to the occurrence of hypoglycaemia and its varied presentation of symptoms and after the acute management has settled, every effort by the clinical teams (nursing and medical (GP) should take place to identify the underlying causes. During acute illness in a resident with either type 1 or 2 diabetes, metabolic disruption can take place leading to the production of ketone bodies which can cause
a state of acidity in the blood and these spill over into the urine where they can also be measured. A state of ketosis can be damaging to tissues and be very harmful to a resident with diabetes and by careful observation, ensuring a good state of hydration, and monitoring and treating high blood glucose levels, this can be avoided.

If resident is TOO DROWSY, UNABLE TO SWALLOW, or UNCONSCIOUS then CALL 999 and put resident in RECOVERY POSITION.
If available administer Glucagon 1mg IM injection following guidance if trained to do so. Consider alternative sub-cutaneous glucagon (500 mcg and 1 mg strengths) if licenced and available and if trained to do so.
If resident is deemed able to swallow safely and blood glucose is less than 4mmol/L then follow below:
Collect the HYPO BOX
Step 1. Give 100-140mls of NON-DIET COLA, or LEMONDADE or ORANGE JUICE, or Glucogel 25 grams or Glucojuice 60mls. *Other Hypo treatments options are available with HYPO BOX.*
Step 2. Re-check blood glucose 10-15 mins after treatment.
Step 3. If blood glucose remains at less than 4mmol/L and resident is still able to swallow, then repeat **Step 1.**
Step 4. When resident's blood glucose has risen to above 4mmol/L then give a carbohydrate snack such as a sandwich, toast, biscuit, or their meal if it is due with 30 minutes.
HYPOGLYCAEMIC episodes should be reported to the resident's GP practice to review if medication changes are required. *Causes are often a skipped meal, illness, weight loss, or over-treatment with insulin or a sulphonylurea (e.g. gliclazide).*

Immediate ketone testing for glucose reading Hi on the meter or blood glucose remains ≥11mmol/L on rechecking within 4 hours

KETONE TESTING: if the resident has TYPE 1 Diabetes, they will also have been provided with the means to test for KETONE levels in their body, either through a urine sample or a blood sample.
Tests as per home protocol.
Urine = if greater than ++ requires immediate notification to a health professional.
If a blood ketone meter is available: Result above 0.6mmols/L this is abnormally high level of ketones. Repeat in 2 hours and if increases, immediately notify a health professional, or call 999 if resident has abdominal pain, vomiting or drowsiness.
Result above 1.5mmol/L – risk of life threatening DKA – URGENT call to 999.
RECAP ON WHO TO CONTACT: in the event of a severe hypo (unconscious) or severe hyperglycaemic emergency (ketones bove 1.5mmol/L) or unresponsive, or has vomiting or abdominal pain, call 999. For other events contact the resident's usual GP practice ……
If the resident already has a named Diabetes Practitioner: ……

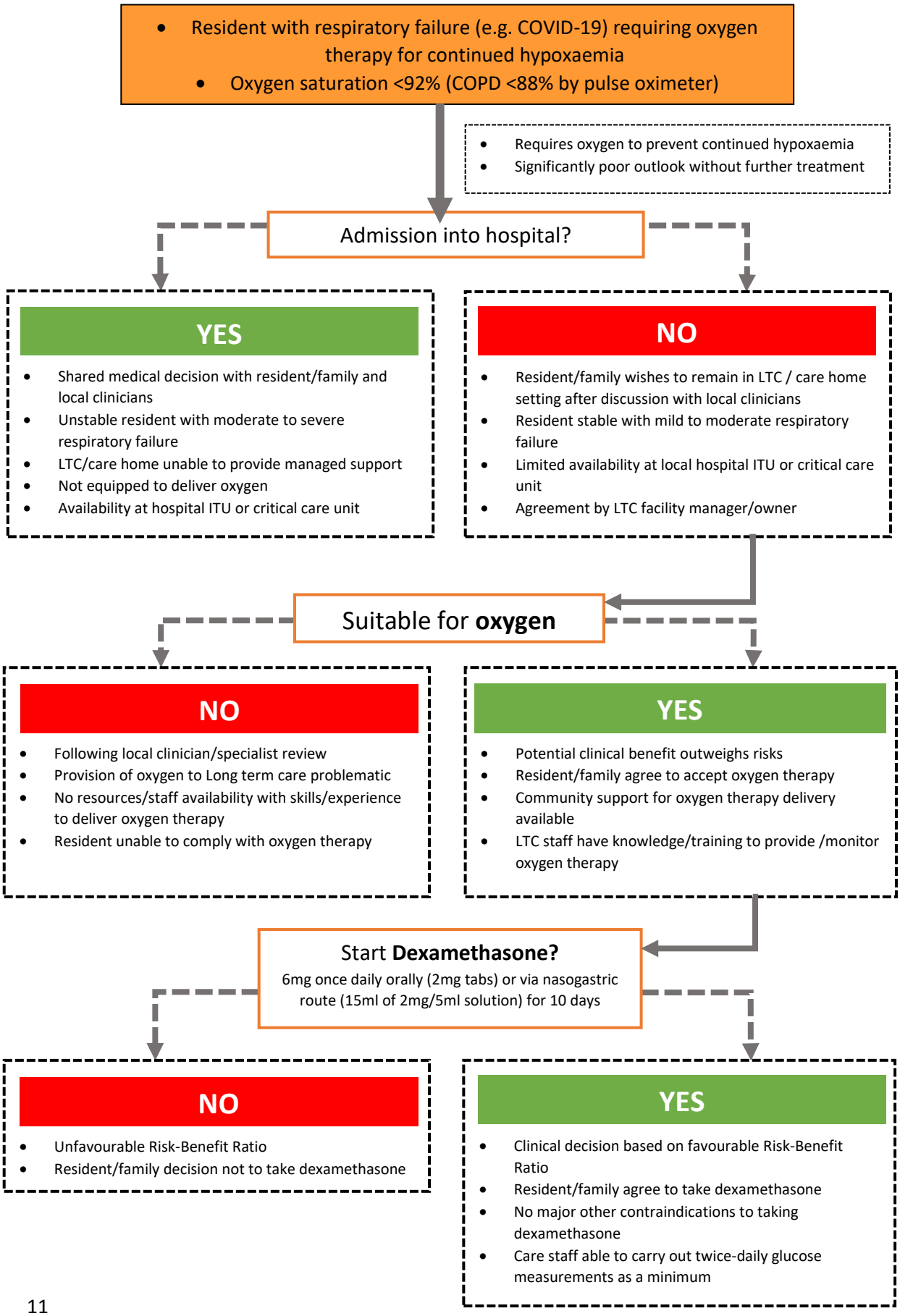
Resource 3: A selection of Covid-19 Clinical Scenarios for care staff and health professionals:

This table of clinical scenarios was taken from a national multidisciplinary group that produced a rapid response guidance document for care homes during the early stages of the covid-19 pandemic in the United Kingdom. The scenarios represent a range of clinical events occurring within a care home population of people with diabetes during a covid outbreak or any other acute infectious illness. Senior care staff should use these as a basis for instructing junior or less experienced care staff about these situations that can develop not only with covid-19 and its variants but also in other infectious disease states that pose a serious risk to residents within their care home. In these latter situations, close liaison with primary care, community nursing teams and public health is essential. The principles of management are generally the same in the presence of any acute illness cause. From: Sinclair A, Dhatariya K, Burr O, Nagi D, Higgins K, Hopkins D, Patel M, Kar P, Gooday C, Howarth D, Abdelhafiz A, Newland-Jones P, O'Neill S. Guidelines for the management of diabetes in care homes during the Covid-19 pandemic. Diabet Med. 2020 Jul;37(7):1090-1093. doi: 10.1111/dme.14317. Epub 2020 Jun 15.

Suggested Initial Actions in different Clinical Scenarios	
Clinical scenario	**Initial Actions required**
Stable non-COVID-19 resident	Continue usual diabetes treatment; maintain close monitoring for COVID-19 symptoms.
COVID-19 positive and stable resident	Continue usual diabetes treatment even if they have reduced appetite, but regular monitoring is required to avoid high (i.e. ≥12 mmol/l) and low blood sugars (i.e. <4 mmol/l).
COVID-19 positive and unwell resident on oral therapy*	Initially, adjust oral hypoglycaemic medications and ensure regular and frequent testing of blood sugar (2-4 hourly$^{\Delta}$): **A** Stop metformin in patients with fever and acute illness to minimise risk of lactic acidosis. **B** Stop SGLT-2 inhibitors** particularly in those with diarrhoea and vomiting due to an increased risk of dehydration and/or DKA **C** Consider adding a different oral hypoglycaemic treatment as necessary (e.g. DPP4-I) **D** Alert your local diabetes nursing team if sugar levels continue to rise and remain above 12 mmol/l, as commencement of insulin may be necessary at some stage
COVID-19 positive and unwell resident on insulin*	**A** Seek local diabetes nursing team support/advice for further management; test blood sugar frequently (e.g. 2-4 hourly$^{\Delta}$) **B** Continue insulin at usual dose, closely monitor blood glucose (every 2-4 hours$^{\Delta}$) and depending on insulin regimen present, adjust insulin up or down initially by 2-4 units or as advised by your local diabetes nursing team, every 6 hours if blood sugar outside target range of 7-12mmol/L.*** $^{\Delta}$
COVID-19 positive and unwell resident, unable to take oral therapy*	**A** Seek local diabetes nursing team support/advice for further management; test blood sugar frequently (e.g. 2-4 hourly$^{\Delta}$) **B** Replace oral therapy by a basal long-acting analogue insulin starting at a daily dose of 0.15 units/kg body weight (e.g 0.15 x 80kg given as 12 units once daily **or** 6 units twice daily). Aim to maintain blood sugar levels within the target range of 7-12 mmol/l.$^{\Delta}$
COVID-19 positive on any therapy but with erratic eating patterns and fluctuating surges of blood glucose*	A Seek local diabetes nursing team support/advice for further management; test blood sugar frequently (e.g. 4-6 hourly) **B** Continue their usual hypoglycaemic therapy **C** Short-acting insulin can be given subcutaneously as required in boluses of up to 6 units or greater depending on local diabetes nursing advice, every 6 hours when blood sugar levels are ≥15mmol/L***

*please liaise with your local community nursing team and/or diabetes specialist nurse for advice to manage the resident; ** for example, canagliflozin, dapagliflozin, empagliflozin, ertogliflozin; ***for more detailed advice, please visit: https://abcd.care/coronavirus; $^{\Delta}$ monitoring frequency and glucose target range dependent on shared decision making, staff resources and health status of resident

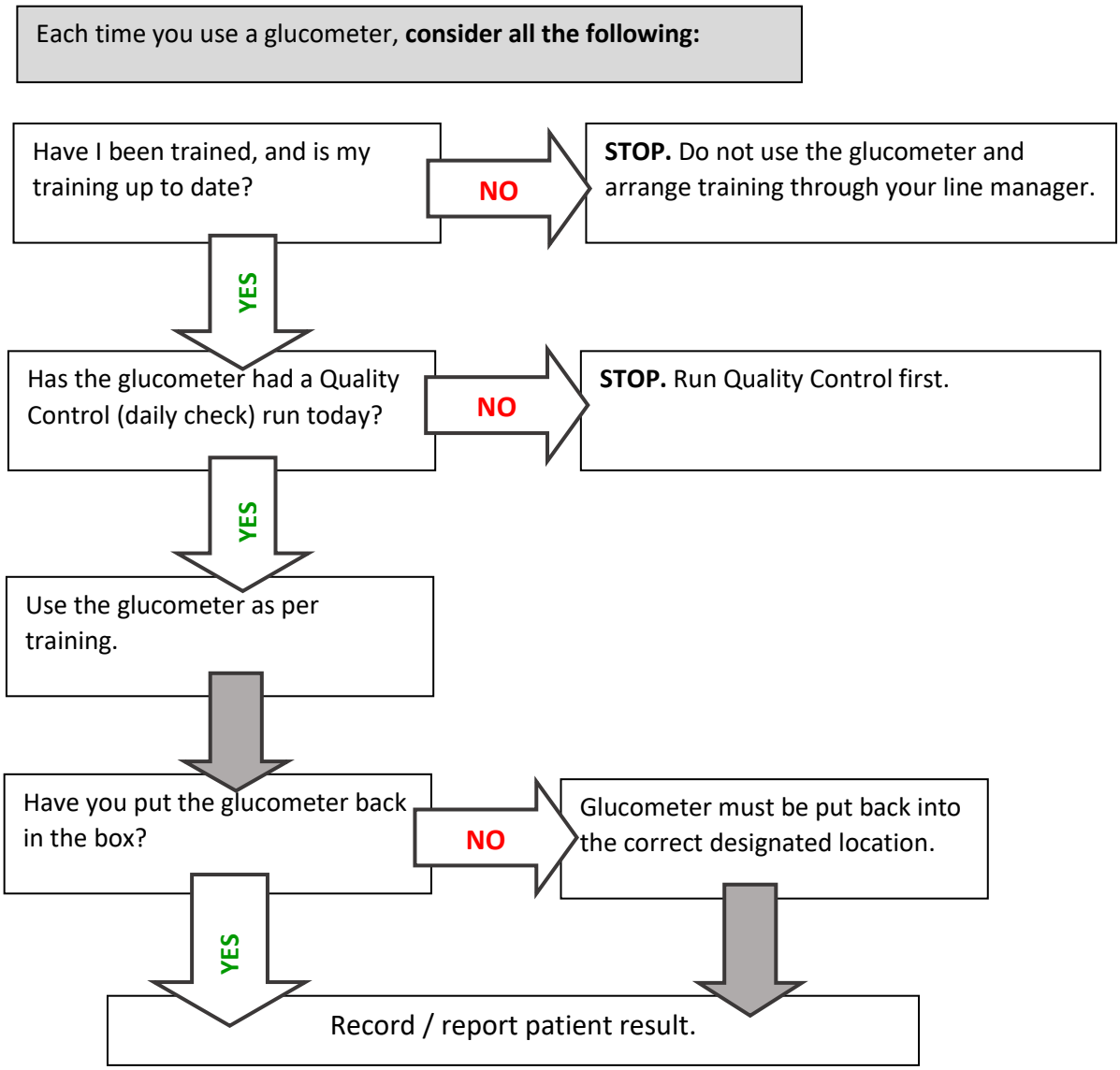
Resource 4: A Dexamethasone-Oxygen delivery algorithm for Care Homes for hypoxaemic respiratory illness



The above algorithm of treatment was prepared as a joint initiative between the European Diabetes Working Party for Older People (EDWPOP) and the European Geriatric Medical Society (EuGMS) at a time when care homes within Europe were facing increasing cases of hypoxaemic covid-19-linked respiratory infections. With the right support and training package, many British care homes can reasonably expect to manage a large part of these algorithms and not only offer acute care to those not wishing to be admitted to hospital, but also may in fact prevent hospital admissions in other cases. Close liaison with primary care, community nursing teams, and local respiratory nurse and consultant specialists should be aimed for. Taken from: Sinclair AJ, Maggi S, Abdelhafiz AH, et al. Dexamethasone and oxygen therapy in care home residents with diabetes: a management guide and algorithm for treatment. A rapid response action statement from the European Diabetes Working Party for Older People (EDWPOP) and European Geriatric Medicine Society (EuGMS). Aging Clin Exp Res. 2021 Apr;33(4):895-900

Resource 5: Ensuring the quality of Capillary Blood Glucose (CBG) testing in a Care Home

This is an important quality of care issue in the management of residents with diabetes and each care home must accept responsibility for ensuring that the glucometer is working accurately and efficiently and that all required checks and steps are adhered to. Each care home should ensure that several members of care staff receive appropriate instruction in CBG testing and compliance activity. This should not be a procedure that only nurses undertake.



Resource 6: N**APCHD hospital admission criteria for residents with diabetes**

A key objective of managing older residents with diabetes is to anticipate that acute illness is a common occurrence and that preventative care can be instituted in each care home as part of a robust diabetes care policy. However, there remains many scenarios that can create an urgent need for hospital admission. The following admission criteria are considered by the diabetes multidisciplinary team to reflect the range of principal clinical scenarios that require admission into hospital for care home residents with diabetes:

1. **Unexplained and potentially reversible new symptom, sign or investigation result that cannot be addressed and resolved within the setting of skills available at the care home. This might be**

    - **a new onset or persistent cough, difficulty in breathing, blood in sputum, wheeze chest pain, increasing ankle swelling**
    - **unexplained abdominal pain, unusual diarrhoea or constipation associated with pain, urinary symptoms, unexplained confusion, delirium**
    - **unexplained abnormal speech, visual problem, swallowing difficulty, hearing impairment, problems in walking, loss of sensations anywhere in the body, paralysis, fever**
    - **new abnormal ECG, new abnormal blood tests, new abnormality on chest-Xray**

    If there is a possibility of acute myocardial infarction MI, stroke or acute foot problem with ulcer and spreading cellulitis the admission may have to be urgent.

2. **Assess the above in the context of any advance care planning and guidance from the hospital and the wishes of the person in the care home**
3. **Persistently/ recurrent higher or lower CBG readings outside the care plan or individualised glucose targets agreed for the person in the care home**
4. **Symptoms suggestive of diabetic ketoacidosis (pain abdomen, vomiting, drowsiness etc). Generally, these people will have high CBG levels but in some cases particularly if the person is taking SGLT-2 inhibitors, the glucose level can be normal**
5. **Symptoms suggestive of recurrent hypoglycaemia (sweating, palpitation, confusion, unusual behaviour in any way with confirmed low blood glucose) that do not respond to treatment and out-patient plan and support**

Resource 7: Foot risk assessment tools

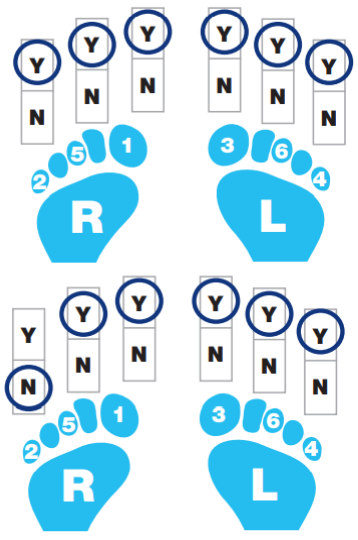
Diabetes foot disease is a leading cause of hospital admission in residents with diabetes and can precede amputation of part or the whole of lower limb. This is a costly and deadly outcome that has to be avoided by careful inspection, monitoring and examination by the resident (where possible) and by both care staff and community-based nursing teams. The loss of sensation in one or both feet is one of the key factors underpinning these poor outcomes and hence the importance of regular screening for sensory loss.

(a). The 'Touch the toes test' (TTT) is a Diabetes UK-recommended foot assessment tool that is quick and easy to administer, and designed to assess foot sensation. It can be performed by care staff in care homes with little training needed. In residents with other sensory deficits such as severe visual loss, hearing loss, or dementia, its clinical utility will be lessened. Taken from: Touch-the-toes-test.0812.pdf (diabetes.org.uk)

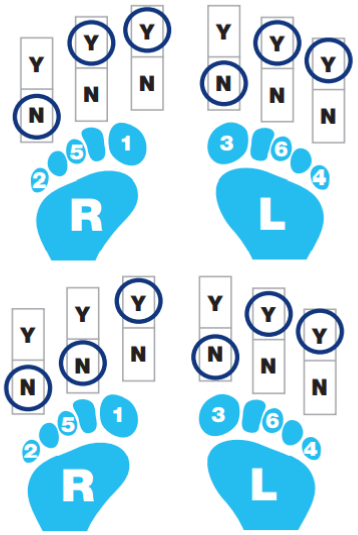
Key instructions for care staff

- Remove socks and shoes and ask the person/resident to rest their feet laying on the their bed
- Remind them which is their RIGHT and LEFT leg, pointing this out by firmly touching each leg, saying "this is your right" when the right leg is touched and "this is your left side" when the left is touched
- Ask each resident to close their eyes and keep them closed until the end of the test
- Using the index finger, touch the tips of toes following the sequence from 1 to 6
- The touch must be ***light as a feather***, and very brief (1–2 seconds): **DO NOT** press, prod or poke
- **Remember**: If the touch has not been felt do not press harder, and DO NOT try again. You can only touch each toe ONCE; if not felt this must be recorded by circling 'N' on the diagram below. There is no second chance
- If the person/resident correctly says right or left, circle 'Y' on the diagram – shown below
- Sensation is normal if a resident can feel the touch on 5 or 6 toes
- Sensation is impaired if the resident cannot feel two or more toes being touched – at risk feet: seek advice from diabetes specialist podiatrist, foot protection team (if available), or the diabetes foot clinic depending on the severity:

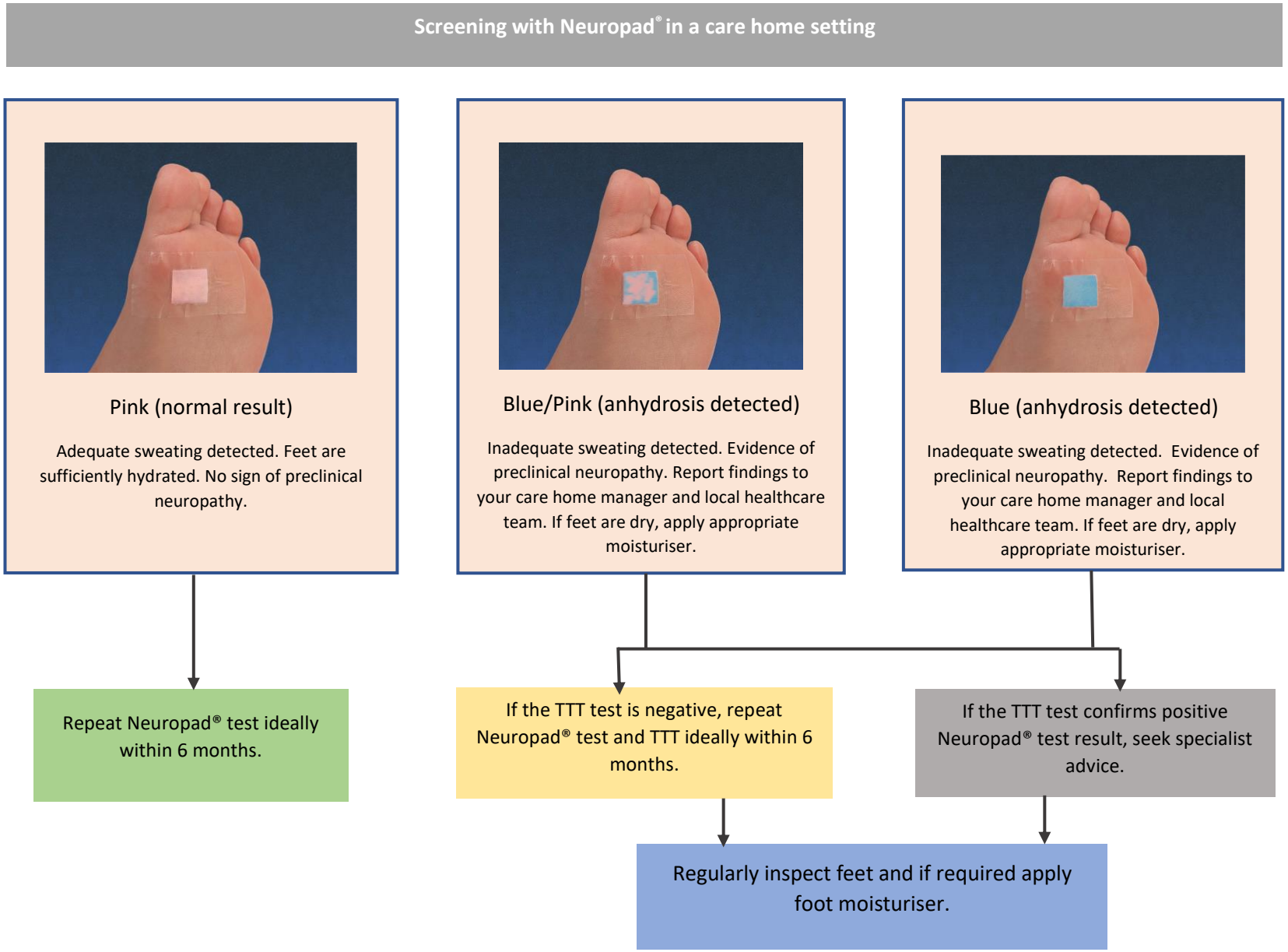
Normal Sensation



Impaired Sensation



(b). Detection of Pre-Clinical Peripheral Neuropathy – the Neuropad device



The Neuropad device is an easy to administer non-invasive and painless test requiring little training and education by care home staff and does not on rely on subjective reporting. Although suitable for all residents with diabetes, it can also be used in residents who may not be able to provide a verbal response on direct clinical examination such as those who have communication problems including dementia, severe frailty and other sensory disorders, and who may have difficulties attending foot clinics.

The Neuropad test detect sweat gland (sudomotor) dysfunction which may be an early indication of damage to unmyelinated C fibres in peripheral nerve fibres (pre-clinical neuropathy) and alerts the clinician to 'at-risk' feet. A positive Neuropad test result, which should be reported to a clinician, should trigger other peripheral neuropathy assessment tests such as the 10g monofilament test or the 'Touch the toes' test to confirm findings.

Key instructions for care staff:

- **The test takes only 10 minutes to complete – leaving the stick-on pad in place for 15 minutes can increase the accuracy of the results**
- **The Neuropad test is for external use only and the pad is applied to the sole of the foot only (similar to a sticking plaster) for 10 minutes and any colour change noted after this time – do not apply to areas of broken or wet skin or infection or inflammation, or callus formation**
- **The pad is blue initially but will change to the colour pink after 10 minutes if sweat gland function is normal implying no early signs of pre-clinical neuropathy are present – see chart above**
- **If no colour change is noted (pad remains blue) or a colour change is only partial (see chart above), this implies a degree of sudomotor dysfunction is present. This implies that there is evidence of at least preclinical neuropathy and this test result should be reported to your manager or other member of senior care staff**

References

Ioanna Zografou1 , Fotios Iliadis2†, Christos Sambanis1 and Triantafyllos Didangelos2,* Validation of Neuropad in the Assessment of Peripheral Diabetic Neuropathy in Patients with Diabetes Mellitus Versus the Michigan Neuropathy Screening Instrument, 10g Monofilament Application and Biothesiometer Measurement. Current Vascular Pharmacology, 2020, 18, 517-522

Georgios S. Panagoulias 1†, Ioanna Eleftheriadou1†, Nikolaos Papanas 2 , Christos Manes 3 , Zdravko Kamenov 4 , Dragan Tesic5 , Stavros Bousboulas 6 , Anastasios Tentolouris 1 , Edward B. Jude7 and Nikolaos Tentolouris 1 *. Dryness of Foot Skin Assessed by the Visual Indicator Test and Risk of Diabetic Foot Ulceration: A Prospective Observational Study. ORIGINAL RESEARCH article: Front. Endocrinol., 08 September 2020.Frontiers | Dryness of Foot Skin Assessed by the Visual Indicator Test and Risk of Diabetic Foot Ulceration: A Prospective Observational Study | Endocrinology (frontiersin.org)

Raúl Fernández-Torres , María Ruiz-Muñoz *, Alberto J. Pérez-Panero,, Jerónimo García-Romero and Manuel Gónzalez-Sánchez. Instruments of Choice for Assessment and Monitoring Diabetic Foot: A Systematic Review.
Clin. Med. 2020, 9, 602

Resource 8– NAPCHD Care Home Diabetes Audit Form

The following audit form should be used as a template or each care home to adapt to their local circumstances. All care staff involved in caring for residents with diabetes should be given instructions by senior staff to undertake regular audit. The timing and frequency should be determined from the care home diabetes care policy and be based on numbers of residents with diabetes, availability of trained staff, and the priority to enhance the quality of diabetes care delivered.

The 2013/4 IDOP-ABCD National Diabetes Care Home Audit[1] revealed evidence of inadequate training and education of care staff within UK care homes in relation to basic diabetes care of residents. As a consequence, a number of important gaps and shortfalls in diabetes care were identified.

This audit form (tool) has been developed based on the findings of the above national audit and also from the audit tool used by the Aylesbury Vale CCG and the Chiltern CCG care in previous work and developed by Jacqui Kent and Gill Dunn.[2] It also incorporates best practice as is indicated in the NAPCHD Metrics document (see Resource 10) [3]

Instructions for use: this audit activity should be part of a rolling programme of audit that your care home are likely to be involved with. Whilst any member of the care home team can be responsible for undertaking the completion of this form, it is best practice to consult with a senior member of care staff if you have not carried out such an audit before. Otherwise, the questions are relatively straightforward.

Guidance to performance: based on the Aylesbury and Chiltern model, we have set a score schedule which will provide an indication to how well your care home is meeting satisfactory targets in diabetes care for your residents. An audit at least annually is desirable.

- If the score is less than 50%, please inform your care home manager since it is likely that the policy of diabetes care within the care home will require urgent review.
- If the score is 50-70%, your care home should continue to improve the quality of diabetes care delivered but focus on areas where the gaps in care are most noticeable as a result of this audit.
- A core above 70% is a satisfactory score but improvements in the level of diabetes care should continue to be an important priority.

References

1 IDOP-ABCD Initiative: England-wide Care Home Diabetes Audit. Institute of Diabetes for Older People, Executive Summary, Spring 2014. Available at: Care_Home_Diabetes_Audit.pdf (diabetologists-abcd.org.uk)

2 Aylesbury Vale Clinical Commissioning Group. Good Practice Guideline for Residents with Diabetes in Care Homes. July 2017. Available at: Diabetes-Care-Standards-Guidance.pdf (buckinghamshireccg.nhs.uk)

3 Resource 10. NAPCHD = Appendix A

NAPCHD Care Home Diabetes Audit Form

Section 1: Operational policy			
1a	Does your care home have a written Diabetes Policy?	Yes	No
1b	Does your care home routinely screen new residents for diabetes?	Yes	No
1c	Does your care home have a named diabetes lead?	Yes	No
1d	Do all your residents with diabetes have a regular comprehensive review of their medical needs by their GP Practice?	Yes	No
1e	Is your Manager and/or senior care staff aware of any national or local guidance on managing residents with diabetes?	Yes	No
1f	Does your home have a 'Sharps' (safety handling and disposal of lancets and needles) Policy in place?	Yes	No
1g	Do all your residents with diabetes receive an annual influenza vaccination?	Yes	No
1h	Have all your eligible residents with diabetes received a pneumococcal vaccination?	Yes	No
1i	Have all your eligible residents with diabetes received full Covid -19 vaccination?	Yes	No

Section 2: Admission assessments - are any of the following carried out routinely?			
2a	As assessment of frailty?	Yes	No

2b	An assessment of cognition?	Yes	No
2c	As assessment of mood?	Yes	No
2d	As assessment of skin integrity using a validated tool such as a Waterlow Score?	Yes	No

Section 3: Nutrition			
3a	Do all residents with diabetes have nutritional screening on admission to your home?	Yes	No
3b	Are you familiar with the MUST tool?	Yes	No
3c	Is dietary advice available to each resident with diabetes and/or their family?	Yes	No

Section 4: Individualised care plans			
4a	Do all your residents with diabetes have a written (personalised) care plan?	Yes	No
4b	Are all care plans agreed with both your Manager (or senior staff member) and the resident and/or their family?	Yes	No
4c	Do your care plans encourage self-medication where this is feasible?	Yes	No

Section 5: Foot care			
5a	Do all your residents with diabetes have a foot care plan?	Yes	No
5b	Does your care home keep a daily record of foot inspections for residents with diabetes?	Yes	No
5c	Does your care home routinely use a foot risk calculation assessment for residents with diabetes?	Yes	No
5d	Is podiatry advice for residents with diabetes routinely available?	Yes	No

Section 6: Staff training and education			
6a	Are you or your Manager aware of any local or national courses of education/training in diabetes suitable for care staff?	Yes	No
6b	Has at least one member of your care staff attended a course on diabetes care in the last 12 months?	Yes	No

Section 7: Hypoglycaemia			
7a	Do you have a written policy for managing hypoglycaemia?	Yes	No
7b	Do you routinely assess residents with diabetes for the risk of hypoglycaemia?	Yes	No
7c	Do you have a fully-stocked, up-to-date 'hypo' box?	Yes	No
7d*	Have any of your residents with diabetes required an ambulance call-out or admission to hospital in the last 6 months?	Yes	No

*Score 1 for response 'No'

Section 8: Blood glucose monitoring and quality control			
8a	Are care home staff allowed to test for capillary blood glucose levels?	YES	No
8b	Are care home staff allowed to test for urine or blood ketones?	YES	No
8c	Do all care staff regularly (at least annually) receiving training in the use and care of blood glucose meters?	Yes	No

8d	Are blood glucose meters key quality controlled tested in line with the manufacturer's instructions?	Yes	No
8e	Is there a policy or guidance in your care home about how care staff should act in relation to blood glucose reading and the resident's care plan?	Yes	No

Section 9: Insulin storage and administration			
9a	Is your care home reliant on the community nursing team to administer insulin?	Yes	No
9b	Do you keep unopened insulin bottles, pens, cartridges, and vials in a temperature-controlled fridge where the temperature is regularly recorded and documented?	Yes	No
9c	Is the date of opening of each insulin bottle or other insulin devices recorded?	Yes	No
9d	Do you use a system of at least two members of care home staff to check each resident's name and prescription chart before administering insulin?	Yes	No
9e	Do you rotate the site of insulin injections in line with best practice?	Yes	No

Section 10: Blood biochemistry			
10a	Does your care home receive regular (at least annual) copies of both eGFR and HbA1c results for residents with diabetes' from their GPs?	Yes	No
10b	Does your care home have a documented result of the eGFR for each resident with diabetes in the last 12 months?	Yes	No
10c	Does your care home have a documented result of HbA1c for each resident with diabetes in the last 12 months?	Yes	No

Section 11: Weekly reviews (home rounds) by GP or Community Nurse team of 'priority' at-risk residents			
11a	Does your care home engage in weekly ('home') rounds with a GP or community nurse of 'priority' residents with diabetes?	Yes	No

Scoring the Diabetes Audit		
Section No.	**Section Title**	**Yes score = 1 point (except item 7d)**
1	Operational Policy	_/9
2	Admission Assessments	_/4
3	Nutrition	_/3
4	Individualised Care Plans	_/3
5	Foot Care	_/4
6	Staff Training and Education	_/2
7	Hypoglycaemia	_/4
8	Blood Glucose monitoring and Quality Control	_/5
9	Insulin storage and administration	_/5
10	Blood Biochemistry	_/3
11	Weekly Home Rounds	_/1
TOTAL SCORE		**__/43**

Percentage Score for Audit Activity = **Date of Audit** **- - / - - / - -**

Resource 9 - Resident's Passport and Shared Care Record

A detailed 'resident's passport was included in the 2010 Diabetes UK national guidance on care home diabetes [1] and has been used as a basis for developing individualised records for residents at many care homes. Apart from some required minor updating, it remains as valid today as a decade ago but as you will see later, a specific diabetes passport of this nature may not be required. Please note that units of measurement in relation to HbA1c, eGFR, albumin-creatinine ratios, BP, and lipids would need defining in any local document arising from this template document. The relevant pages are shown below (taken directly from the guidance and shown as Appendix 4):

Appendix 4:

Resident's diabetes passport

Care plan & annual review summary

Note: A copy of this document should go with me to any hospital appointments, or if I am admitted to hospital.

Key information relating to my diabetes care		**Date**	/ /
Name		Date of birth	
Address		Tel no	
The person at my care home who makes sure that my diabetes is reviewed is			
Name		Tel no	
The GP from my surgery responsible for my diabetes care is			
Name		Tel no	
The nurse from my surgery responsible for my diabetes care is			
Name		Tel no	
My hospital consultant for diabetes is			
Name		Tel no	
My DSN at the hospital is			
Name		Tel no	
Other consultants I see and their specialities are			
Name(s)		Speciality/ies	

Important dates		**Date**	/ /
My next scheduled reviews will be	Day	Date	Time
Diabetes blood test			
Diabetes review			
Hospital appointment			
Hospital appointment with (name & title)			
Other			

My diabetes targets/goals			Date / /
My diet			
The goals for my personal diet are			
The community dietitian who can be contacted about my diet is			
Name		Tel no	
My feet			
The goals for my footcare are			
The podiatrist who can be contacted about my diet is			
Name		Tel no	
My diabetes targets			
Target weight	kg	HbA1c	%
BMI target		Cholesterol	mmol/l
BP target	mmHg		
eGFR		**Fingerprick blood glucose level**	
Creatine	umol/l	Before meals	mmol/l
Albumin/creatine ratio		2hrs after meals	mmol/l

Review of my diabetes treatment and health			Date / /
Name of reviewer		Title/role	
Date			
Allergies		None ☐	
My medications. These should be reviewed each time I see my GP or a DSN			
For blood pressure			
For cholesterol			
For diabetes			
Other medication			
Aspirin	Contraindicated?	☐ Yes	☐ No
Medication changes made today		None ☐	
Episodes of hypoglycaemia			
My medication was reviewed with myself and a carer?		☐ Yes	☐ No
My eyes			
I had digital retinal screening on		Result	
I went to the hospital eye clinic on		Outcome	

For patients on insulin				Date / /
The person to contact for advice about my insulin, and before making changes to my treatment				
Name		Iel no		
Type of insulin		Dose and frequency		
Device used		Injection site		
Who gives insulin?		Any hypos?		
Preferred actions		Advice after this review		
Immunisations				
I had a pneumonia jab (pneumovax)	☐ No	☐ Yes	Date	
I had my yearly flu jab	☐ No	☐ Yes	Date	
Smoking	☐ No	☐ Yes		
Cessation advice given?	☐ No	☐ Yes	☐ N/A	

Physical activity				Date / /
Walking ability				
Walking unaided ☐	Use of walking aid ☐	Chair bound ☐	Bed bound ☐	
Balance				
Sitting, standing and turning without assistance ☐	Prevent a fall ☐			
Bathing and dressing				
Require assistance of one carer only for bathing ☐	Dress unaided ☐			
Meals and nutrition				
Eat without assistance ☐	Require some assistance ☐	Cannot feed self ☐		
MUST score				
My wellbeing: things that would improve my health and wellbeing.				
Activity	Comment			
Hobbies Leisure activities Family visits				

My measurements			Date / /
Assessment of my memory	Score: _____ Use of Mini-Cog? Yes ☐ No ☐ Other _____		
Assessment of my mood	Score: _____ Use of depression screening? Yes ☐ No ☐ Other _____		
My weight today	kg	**BMI (body mass index)**	
Blood pressure today			
My eyes	Left	Right	
Visual acuity			Test done wearing glasses? Yes ☐ No ☐
Retinal screening			Tick if not undertaken ☐
Issues with my eyes			
My feet	Left	Right	Notes
Pulses			
DP			
PT			
Capillary circulation			
Monofilament/10			
Tuning fork			
Condition of skin			
Altered sensations			
Issues with my feet?			
My lab tests			
HbA1c (measures control)	%	Creatinine (kidney function)	
Lipid screen		eGFR	
Albumin – creatinine ratio			

Forward planning			Date / /
Need for insulin?	☐ Yes ☐ No	Outpatient review?	☐ Yes ☐ No
Assessment for rehabilitation?	☐ Yes ☐ No	End of life care?	☐ Yes ☐ No
Other needs?			

For more information about diabetes contact		
NHS Direct: 0845 4647	**Diabetes UK Careline: 0845 120 2960**	
Internet resources		
www.diabetes.org.uk	**www.patient.co.uk**	**www.instituteofdiabetes.org**

The National Advisory Panel feel it is more prudent to confirm those key areas from the passport above for a resident with diabetes that should be included as a minimum data set (MDS) in newly developed community-based shared care records as part of the EHCH initiative.[2] References to these national and generic shared health care records are mentioned in tasks 5 and 10 in this Strategic document. The multidisciplinary team involved in providing advice to care staff should have regular meetings (by agreement) with each care home and review the need to update and revise the key information on diabetes care relating to each resident, and how this information can be optimally deployed in the day to day management of the resident.

The areas that should form part of a generic care record suitable for sharing between care agencies are summarised in Box 1 below:

Box 1: Areas for Inclusion in the Shared Care Record

Section	Description of Area for inclusion in Shared Care Record
Care and Follow-up	Name of Consultant or Diabetes Specialist Nurse/Team Name of GP and Address of Surgery
Diabetes treatment	Dietary plan, oral glucose lowering therapies, GLP-1 receptor agonists, insulin
Glycaemic targets	HbA1c target ranges, pre-meal and post-meal glucose levels, fasting glucose levels
Diabetes complications	Presence of diabetic retinopathy and level of visual acuity; renal impairment, peripheral neuropathy, diabetes foot disease, history of cardiovascular and cerebrovascular disease; main follow up contacts
Additional complications	Frailty, disability, cognitive impairment including dementia, mood disturbance, malnutrition
Risk factors for hypoglycaemia	Advanced age, variable or poor dietary intake, polypharmacy, renal impairment, insulin or sulphonylurea treatment, frailty, dementia
Hospital admissions in previous 12 months	Dates, likely cause of admission, length of stay, changes in treatment plan at discharge, follow-up arrangements
Clinical and Laboratory tests in previous 12 months	MUST score, eFI or Clinical Frailty Scale (CFS) or FRAIL scale, MiniCog or MoCA score, Mood assessment score, HbA1c, albumin-creatinine ratio, eGFR, lipid profile, weight and BMI

References

1. Diabetes UK. 2010. Good Clinical Practice Guidelines For Care Home Residents With Diabetes: http://www.diabetes.org.uk/Documents/About%20Us/Our%20views/Care%20recs/Care-homes-0110.pdf

2. The framework for Enhanced Health in Care Homes 2020/21 - Version 2, 31st March 2020. Community Services & Ageing Well Team. Available at: the-framework-for-enhanced-health-in-care-homes-v2-0.pdf (england.nhs.uk)

Resource 10: Diabetes Metrics for Care Homes - Guidance for Care Home Managers, Local Authorities, and Inspectors of Care Homes

Introduction

This Guidance is a shortened but focused summary of what key provisions are necessary to ensure that a care home is able to provide minimal and basic diabetes care. It is meant to complement the diabetes audit process and originates from internal Care Quality Commission (CQC) guidance for Inspectors of Care Homes. It was designed as collaborative work led by the JBDS-IP (coordinated by Professor Alan Sinclair) and the CQC. It also provides the background to why residents with diabetes living in UK care homes are a disadvantaged, vulnerable and highly-dependant group of individuals, many of whom are already in the terminal phases of their lives.

This Guidance also provides a series of diabetes-specific metrics which should assist care home managers, local authorities, and inspectors of care homes to ensure that each provider is meeting the varied needs of residents with diabetes and has a support framework that is safe, and protects the dignity and rights of all residents with diabetes.

Diabetes Mellitus is the commonest metabolic problem in our ageing society affecting up to one in four residents of care homes, irrespective of whether they are residential care homes or nursing homes. They are vulnerable to chest and urine infections, are often frail, and have high rates of admission into hospital when their health deteriorates.

Clinical research in care homes has revealed evidence of sub-optimal diabetes care with a lack of access to specialist diabetes services including retinopathy screening, foot care services, and diabetes treatment reviews. A recent national care home diabetes audit has demonstrated a lack of screening for diabetes at the time of admission to a care home and a care home workforce with little knowledge of basic diabetes care practices.

There appears to be an urgent need for workable and relevant diabetes education and training programmes for care home staff, and evidence of leadership within care homes to promote a responsible policy for managing residents with diabetes.

You should read this Guidance alongside: (1) National Guidance for Diabetes in Care Homes: Care Homes Report JCJO8 FRONT.qxd (diabetes.org.uk)

(2) International Diabetes Federation (IDF) guidance on managing type 2 diabetes in older people: Guidelines (idf.org)

(3) England-wide Care Home Diabetes Audit: http://diabetesfrail.org/wp-content/uploads/2014/10/England-wide-Care-Home-Diabetes-Audit.pdf

Key points

- Diabetes is a highly-prevalent metabolic and vascular disorder which affects 25% of residents of UK care homes.
- Data from the First National Care Home Diabetes Audit demonstrates a lack of knowledge of diabetes amongst care home staff, a lack of diabetes screening policies, and a high proportion of residents in each care home who are at risk of diabetes foot disease.

- Research and audit demonstrate a lack of structured, integrated, and effective diabetes care within UK care homes which is likely to increase the vulnerability of residents with this condition.
- National Guidance for enhancing diabetes care in UK care homes is available (including the NAPCHD Strategic document) and provides advice and recommendations that can be easily implemented.
- The presence of a diabetes protocol or policy in UK care homes is a first step to enhancing the quality of service provided.
- Key metrics are now available as indicators of service provision for care home managers, local authorities, and inspectors of UK care homes.

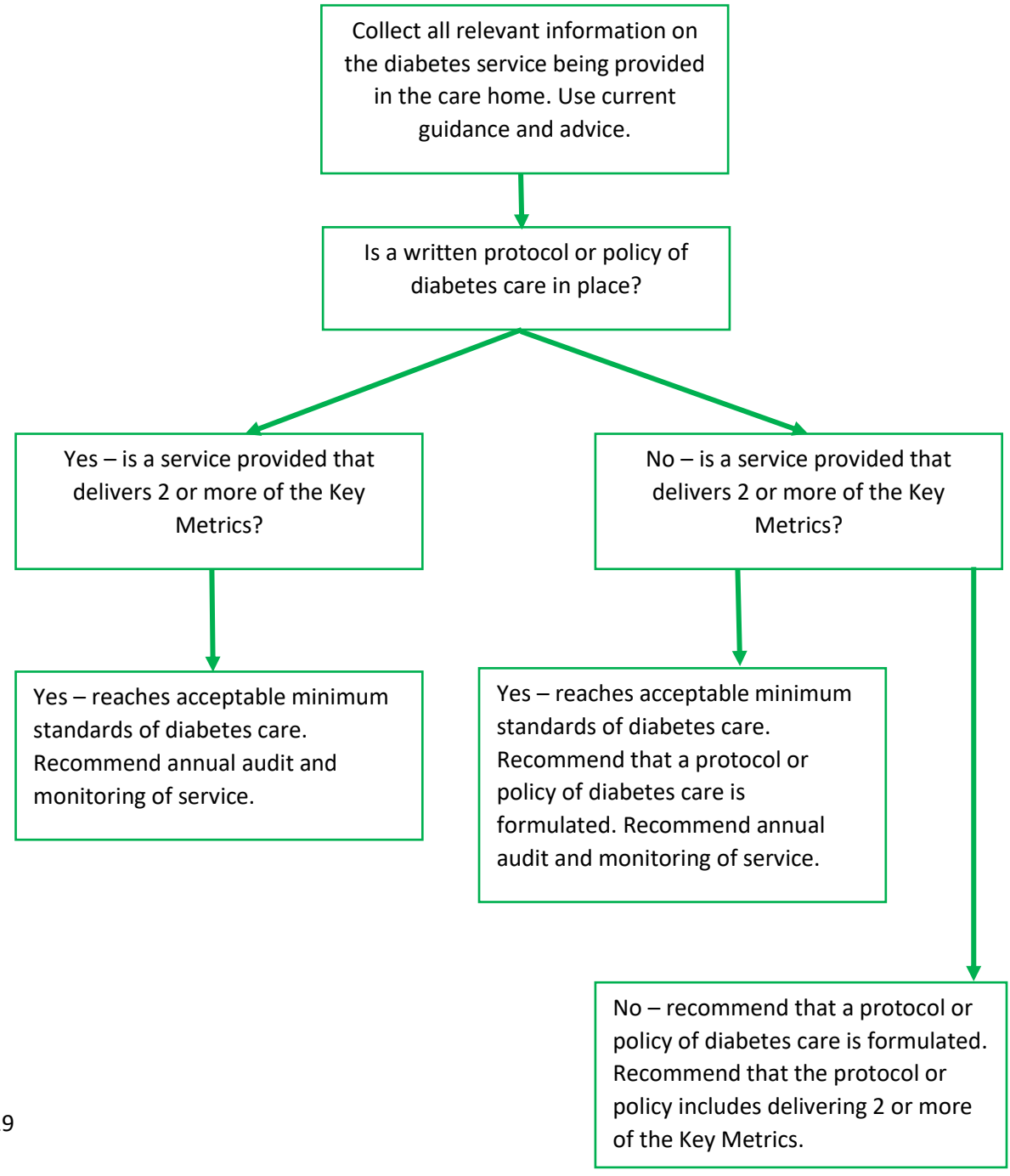
Guidance

1. Is diabetes a particular problem in a care home?	Yes it is – diabetes has been shown to affect 25% of residents in standard care homes (residential and nursing) and has a prevalence of 15% or more in mental health care facilities. A large proportion of residents have evidence of frailty, vascular complications such as visual loss and diabetes foot disease, and many are in an *end of life* situation.
2. Are there national standards for managing diabetes in care homes?	Yes – in 2010, a multi-disciplinary task force of Diabetes UK produced national guidance. This reviewed the evidence base for treatment decisions in care homes, produced a resident 'passport' for recording important information about care received, and also provided a 'template policy of diabetes care' for all care homes to adapt for local use. Two international diabetes guidelines have since provided recommendations for managing residents with diabetes living in a care home. This document is now part of the 2022 National guidance on care home diabetes via the NAPCHD.
3. Has the diabetes care of residents in UK care homes ever been audited?	Yes – in 2013, IDOP (the former Institute of Diabetes for Older People) and ABCD (Association of British Clinical Diabetologists) undertook a collaborative national audit of diabetes care in care homes and received responses from more than 2,000 care homes (**see Further Information below**). This audit demonstrated a lack of diabetes screening policies, a lack of basic diabetes knowledge amongst care home staff, and inadequate provision of training and education for staff within care homes.
4. What are the *major clinical problems* identified by audit, research and guideline development work?	The key clinical problems are high levels of medical co-morbidity, susceptibility to infection and diabetic foot disease, and unnecessary high rates of admission to hospital because of poor diabetes control and avoidable episodes of hypoglycaemia.
5. What are the main gaps in *diabetes care processes* identified by audit, research and guideline development work?	The gaps in diabetes care involving UK care homes can be identified as a prevailing high level of unstructured and often fragmented diabetes care, a major lack of diabetes screening policies at the time of admission to a care home, little evidence of implementing diabetes care protocols, poor diabetes

	specialist access for residents, minimal evidence of effective annual review, and minimal routine GP diabetes care input.
6. Do residents with diabetes have different characteristics depending on whether they live in a standard residential home or nursing home?	Current information suggests that residents in all types of care homes, including those in mental health care facilities, have a similar high prevalence of diabetes, ranging from 15-25%. These residents are highly susceptible to frequent infection, hypoglycaemia due to their medication, and unnecessary emergency admission to hospital. Residents with diabetes living in nursing homes are generally more disabled and dependent, and require 24-hour nursing availability.
7. **What is the current process for providing diabetes care to residents with diabetes**?	Diabetes care (as part of a wider medical care provision) is usually provided by a single primary care practice, although any resident theoretically can ask for their own GP (that is, their GP before admission to a care home) to be responsible for their usual medical care. GPs provide emergency care or 'reactive' medical care to residents when asked by care home staff, but there is little evidence of routine weekly diabetes care being provided. Community-based teams such as those that contain a DSN (Diabetes Specialist Nurse) or dietician, can be accessed by some care homes to provide advice and support for care home staff. Podiatry access is often available but not necessarily for diabetes-specific foot care. Access to specialist diabetes care (a consultant in diabetes or nurse-consultant in diabetes) is often rarely available.
8. What are the elements of quality diabetes care in a care home that a provider should offer?	A provider should offer a diabetes care service that meets the minimal criteria for diabetes care standards in care homes as provided in the NAPCHD main strategic document of diabetes care. This requires evidence of implementing a diabetes protocol or policy and satisfactorily demonstrating two or more of the key metrics outlined in Section 9 below. This will display evidence of a care home workforce offering basic diabetes care that can be monitored or audited.
9. What are the key metrics that provide evidence of satisfactory diabetes care provision?	There are four key elements that can form the basis of ***Inspection Metrics*** for diabetes care in care homes. 1. **Evidence that a care home has a diabetes screening policy at admission to a care home that is easily implemented and audited.** *This is likely to lead to a reduced number of GP call-outs for undiagnosed diabetes and associated complications, reduced hospital admissions for undiagnosed diabetes.* 2. **The availability within each care home of a fully-stocked and maintained hypoglycaemia** kit. *This should lead to reduced ambulance call-outs for hypoglycaemic episodes and reduced hospital emergency admissions for hypoglycaemia.* 3. **Evidence that a care home has a risk-calculation/stratification tool for diabetes foot disease**. *Use of this tool by trained staff should reduce costs associated with unnecessary amputation due to earlier intervention.* 4. **Provision of local effective diabetes education and training programmes for care home staff**. *This should*

	lead to a reduced number of GP call-outs for diabetes-related management issues and reduce hospital admissions for hypoglycaemia, infections, and other common medical problems in residents with diabetes.
10. What information is available for providers wishing to set up an improved care service for residents with diabetes?	In Further Information below, we list important website information and key references for this Guidance. The information ranges from national to international clinical guidance, access to results of the First England-Wide Diabetes National Care Home Audit, and references for the major sited research articles and reviews in this area.

Flow chart: assessing basic service provision



Further Information

NAPCHD guidance – Main Strategic document, Executive Summary, appendices A and B: available at: http://fdrop.net

National Guidance for Diabetes in Care Homes: Care Homes Report JCJO8 FRONT.qxd (diabetes.org.uk)

International Diabetes Federation (IDF) guidance on managing type 2 diabetes in older people: available at: Guidelines (idf.org)

England-wide Care Home Diabetes Audit: http://diabetesfrail.org/wp-content/uploads/2014/10/England-wide-Care-Home-Diabetes-Audit.pdf

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