

13th National Conference of the PCDS

The National Conference Centre, Birmingham, 23–24 November 2017

The 13th National Conference of the PCDS, titled *Defending individualised care in diabetes*, brought together primary care clinicians from around the UK to offer guidance on practical pathways through the array of diabetes guidelines, comorbidities and medication. Delegates attended a mixture of plenary lectures, educational pathways and parallel tracks, and were able to choose a personalised programme that best matched their individual needs. In part one of this conference report, Pam Brown shares her learning points from the conference and their application to practice. Part two will be published in the next issue of the Journal.

Patient engagement with Fixing Dad

Anthony and Geoff Whittington

- Families have much more time to help people manage their health than their practice team, so can have more impact.
- Changing language and using phrases that are positive and give hope is vital to help empower people to take responsibility and action.
- People have stopped trying to understand and own their health and have given that responsibility to others (e.g. primary care teams, public health and the Government). They believe they are being managed, so drift and deteriorate.
- Everyone can improve their diabetes using lifestyle change, even if remission doesn't happen. "Fixing" requires stubbornness to find ways to improve.
- Question everything. Do things differently. Be consistent but have a flexible plan.
- Short-term glucose monitoring can be used to gather information about the impact of foods and other lifestyle changes, such as exercise.
- The family-centred Fixing Dad approach to helping manage type 2 diabetes can also be applied to other chronic conditions. Look out for the TV series!

Links to further information

Website: www.fixingdad.com
Fixing Dad book: <http://bit.ly/2BrUTmZ>

The diabetic foot

Scott Cawley, Professional Lead
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- There is significant geographical variation in foot outcomes. Five-year

mortality is up to 80% – worse than colon, prostate or breast cancer.

- 80% of amputations are preceded by ulcers – priority should be to prevent ulceration.
- Nearly three quarters of people having amputations are male; the average duration of diabetes is 15.5 years.
- It does not matter who carries out the foot screening as long as they have been properly trained, carry out examinations consistently and code accurately.
- Only Owen Mumford and Bailey's 10-g monofilaments are recommended. Use for ten patients, then rest overnight; replace every 6 months. The recommendation in England is to test three sites on each foot; in Wales and Scotland, it is five sites. Do not test on callused areas.
- Most inappropriate referrals are due to difficulty finding pulses. Use Doppler – monophasic (abnormal) versus biphasic (normal) pulse waves are easy to detect, if present.
- Significant callus – treat with 10% urea creams designed for diabetic feet. Autonomic neuropathy can impair sweating, which may result in dry skin.
- Need to know and have a good relationship with your podiatrist(s), allowing you to refer early when required, as this improves outcomes.
- Hot swollen foot – assume Charcot foot and refer urgently for non-weight bearing footwear.
- Encourage people to look after their feet and do their own foot checks daily: recommend the Diabetes UK video. Use waiting-room posters. Train family and

friends to help.

- When to refer – see Putting Feet First pathway – keep a copy on the consulting room noticeboard.

Guidelines and resources

- FRAME (Foot Risk Awareness and Management Education) – e-learning resource developed by NHS Scotland: www.diabetesframe.org
- Feel Your Feet – online foot health community: www.feelyourfeet.com
- Diabetes UK Putting Feet First campaign: <https://is.gd/cH14MU>
- Diabetes UK patient information video: www.youtube.com/watch?v=jC9hXPURsQA
- Foot care pathway: <https://is.gd/7oR6fQ>

Preparing for surgery: The pre- and perioperative period

Ketan Dhatariya, Consultant in
Diabetes, Endocrinology and
General Medicine, Norwich

- People with diabetes are less likely to be offered day surgery, more likely to have emergency surgery, longer length of stay and higher rates of readmission within 28 days following surgery.
- High perioperative blood glucose levels are associated with adverse outcomes for most types of surgery.
- Aim to optimise glycaemic control and diabetes complications where possible before elective surgical referrals – aim for HbA_{1c} <69 mmol/mol (8.5%).
- Include recent HbA_{1c}, eGFR, BP, weight/BMI, duration and type of diabetes, details of complications and medication in referral letter.
- Consider referral to specialist diabetes team if HbA_{1c} is >69 mmol/mol (8.5%)

and it may be difficult to optimise this.

- Refer all those with hypoglycaemia unawareness for specialist support at the same time as elective surgical referral, irrespective of HbA_{1c}.
- Optimise other diabetes related comorbidities.
- Provide written advice to people with diabetes undergoing investigative procedures that require fasting.

Apply to practice

Look back at the last three to five surgical referrals of people with diabetes – was all the relevant information in your referral letter and was their HbA_{1c} <69 mmol/mol (8.5%)?

Guidelines and resources

- JBDS-IP guideline: <https://is.gd/okhRoh>
- NHS Diabetes guideline: <https://is.gd/dmm7Nv>
- Association of Anaesthetists of Great Britain & Ireland guideline: <https://is.gd/WwzKqC>

Multimorbidity and polypharmacy: A pragmatic approach

Kevin Fernando, GPwSI in Diabetes and Medical Education, North Berwick

- Multimorbidity is the “norm” amongst older people – 65% of the over-65s and 80% of over-85s.
- Quality of life is decreased not only by the “disease burden” but also by the “treatment burden”, including tests, drugs, appointments, depression and psychological distress.
- NICE defines multimorbidity as “two or more long-term conditions, including physical and mental health conditions, symptom complexes such as frailty or chronic pain, substance misuse and sensory impairment”.
- The NICE multimorbidity guideline (NG56) recommends “person-centred care not disease-focused treatment”, putting patient preference at the centre of the decision-making process.
- The multimorbidity approach includes:

- Assess disease and treatment burden.
- Establish the patient’s goals and priorities, and tailor care to these.
- Focus on function, mental health and pain.
- Address polypharmacy and stop highest-risk drugs where possible.
- Patient choice when appropriate.

- Identification and management of frailty will be included in the 2017/18 contract in England, including an annual review and medication review.
- 17% of unplanned admissions in those over 65 were due to adverse drug reactions (Mangin et al, 2012). Adverse drug reactions also responsible for 6.5% of unplanned admissions at all ages; two thirds of these are preventable (Avery et al, 2014).
- Deprescribing in older people and those with multimorbidity is linked with improved quality of life and survival (Gnjidic et al, 2014).
- Sick-day rules recommend temporary stopping of “DAMN” drugs during intercurrent illness and restarting after 24–48 hours of drinking normally.
 - DAMN: Diuretics, ACEIs/ARBs, Metformin, NSAIDs.
 - Consider other antihypertensives, sulfonylureas, SGLT2 inhibitors, trimethoprim and nitrofurantoin.
- The IDF guideline provides a functional classification of older people with diabetes and guidance on appropriate HbA_{1c}, BP and lipid management:
 - Functionally independent
 - Functionally dependent
 - Frail
 - Dementia
 - End-of-life care.

Apply to practice

All practices are already undertaking polypharmacy reviews. Critically evaluate the need for every therapy in the next patient seen who is taking eight or more drugs. How many drugs could be safely stopped and when would review be appropriate?

Guidelines and resources

- NICE multimorbidity guideline (NG56): www.nice.org.uk/guidance/ng56
- NICE key therapeutic topic – multimorbidity and polypharmacy: www.nice.org.uk/advice/ktt18
- NHS Scotland polypharmacy guidance: www.polypharmacy.scot.nhs.uk
- IDF global guideline: <https://is.gd/BXPdFk>

Diagnostic dilemmas in diabetes

Clare Hambling, GP, Norfolk, and Patrick Wainwright, Specialist Registrar, Southampton

- Diagnostic dilemmas are common and easily missed. Some are not as uncommon as we think.
- Consider other types of diabetes when the patient phenotype is atypical; family history may provide clues. Consider specialised tests or referral.
- Latent autoimmune diabetes in adults (LADA or type 1.5 diabetes) diagnosis is difficult.
 - C-peptide levels, or urine C-peptide to creatinine ratio, are useful to distinguish from type 2 diabetes.
 - Test for two autoantibodies to diagnose type 1 diabetes or LADA: a GAD-positive result is associated with an earlier insulin need; an IA-2-positive result usually indicates a more insidious course. Both tests are 100% specific, while GAD has higher sensitivity and persist longer.
- Hereditary haemochromatosis is an autosomal and recessive, affecting 1 in 250 northern Europeans. Symptoms appear in the 4th or 5th decade of life.
 - Use iron studies (serum iron, transferrin saturation) rather than ferritin (which is an acute phase reactant elevated in inflammation); use fasting morning sample, as there is significant diurnal variation.
 - If elevated, need genetic testing
 - homozygous C282Y mutations account for 80% of cases.
 - Treatment with venesection may prevent or improve diabetes but, if present, it acts like type 1 diabetes or

pancreatic failure.

- Do not use HbA_{1c} for monitoring, as results will be inappropriately low. Fructose can be used, but there are issues with standardisation.
- Consider pancreatic cancer in those aged >60 years with a new diagnosis, sudden erratic diabetes control, gastro-intestinal symptoms not improving with treatment, or new-onset mechanical back pain.
- Ultrasound scan is often normal, so use CT or MRI. Testing for CA19-9 lacks specificity and the level is often normal early in the disease. Do not use in primary care.
- Pancreatic exocrine insufficiency (PEI) occurs in 50% of those with type 1 diabetes and 32% with type 2 diabetes.
- Investigate to exclude alternative causes. Assess electrolyte disturbances or deficiencies; stool sample; bloods, including trace elements; TTG for coeliac disease; and faecal calprotectin.
- Faecal elastase of formed stool (not liquid) can be helpful if PEI is moderate or severe.

Apply to practice

Do we have a high index of suspicion if diabetes control suddenly becomes erratic? Do we ask people to fast and have morning blood tests for iron studies?

Diet

Pam Dyson, Research Dietitian, Oxford

- There is insufficient evidence to support which diet is best in diabetes, but there is robust evidence that dietary interventions are effective for:
 - Improving glycaemic control (reduction of HbA_{1c} by 3–11 mmol/mol (0.3–1.0%; Evert et al [2014]).
 - Weight management (losses of 3–5% [Franz et al, 2015]).
 - Reducing cardiovascular risk.
- UK evidence-based guidelines (e.g. Diabetes UK) recommend “healthy eating”:
 - Regular meals, watch portion sizes, count carbs, cut fat, get five a day, cut

back on salt, dish up the fish, eat more beans and reduce sugar.

- For cardiovascular disease (CVD) protection: increase nuts, fish, fruit, vegetables and wholegrains; replace saturated fat with unsaturated fat; and decrease/avoid sugar-sweetened beverages.
- Evidence supports the replacement of saturated fat by unsaturated fat to reduce CVD and mortality.
- If replacing saturated fat with carbohydrates, they should be wholegrain (refined carbohydrates are associated with increased risk).
- Evidence for impact of low- or high-fat diets is insufficient.
- Type 1 diabetes: Structured education for carb counting and insulin adjustment is important.
- Type 2 diabetes: Encourage 5–10% weight loss. There is evidence for the efficacy of very-low-energy diets (VLEDs) and the Mediterranean diet, but no evidence for commercial groups, 5:2 diet or other specific diets.
- Mediterranean-style diets improve glycaemic control and reduce CVD risk.
- Low-carbohydrate diets may improve HbA_{1c} and weight loss (Ajala, 2013), but are not sustainable.
- Ask people what diet they would like to follow and support them in their choice.
- Behavioural strategies, including regular weighing and support, are important.
- Some studies provide evidence of the remission of type 2 diabetes:
 - Lim et al: Small trial of 600 kcal/day with some vegetables for 8 weeks demonstrated 70% remission at 3-month follow up.
 - Counterbalance: 30 people on VLED for 8 weeks demonstrated 40% remission at 6 months.
 - DiRECT (Diabetes Remission Clinical Trial): At 1 year, 68% of participants on an 8-week VLED in primary care achieved remission.
- Structured education is recommended for everyone with diabetes in order to

help people make decisions about diet and lifestyle.

Guidelines and resources

- Diabetes UK and BDA policy statement on dietary fat consumption in the management of type 2 diabetes: <http://bit.ly/2BbzSh1>
- NHS Choices – healthy eating: <http://bit.ly/2ARERQ7>
- The Counterbalance study – Reverse your diabetes: <http://bit.ly/2yTVGYG>

Neuropathic pain

Dinesh Selvarajah, Senior Lecturer, University of Sheffield

- Diabetic peripheral neuropathy is characterised by sensory neuropathy initially stocking distribution and later involving hands in a glove distribution. Motor deficit is less common.
- The severity of symptoms often does not match nerve damage. Small and large fibres are involved. Small fibre involvement causes burning and allodynia, with severe contact sensitivity. Nocturnal exacerbation of neuropathy symptoms is common.
- Foot ulceration is a major risk factor for mortality, with 10% mortality within 1 year of a foot ulcer.
- Risk factors for neuropathy include hypertension, smoking and poor glycaemic control, but it can occur even with non-diabetic hyperglycaemia.
- Exclude other aetiology (such as alcohol in excess, neurotoxic drugs, B12 deficiency, myeloma, malnutrition or HIV), especially if there are no other microvascular complications.
- Other neuropathies include proximal motor neuropathy, acute mononeuropathy, entrapment neuropathies and lumbosacral radiculoplexus neuropathy causing hip and thigh pain.
- Remember Charcot neuroarthropathy (bounding pulses and warm swollen foot in anyone with diabetes) needs urgent assessment and the foot must not bear weight.
- Treatment-induced neuropathy (up to 10% of painful neuropathy) can be

caused by sudden, rapid diabetes control (>22 mmol/mol [2%] drop in HbA_{1c}). It is an acute small-fibre neuropathy and may be autonomic.

- Individualise therapy by providing foot-care education, help with coping strategies and psychological therapies as well as pain management. It affects quality of life and engagement with friends, family and work:
 - NICE guideline gives a choice of three agents – single or in combination.
 - Review early and up-titrate.
 - Refer if pain score >7 on the visual analogue scale, lifestyle is being limited, the condition is deteriorating (e.g. involvement of hands), or there is an unusual presentation or motor involvement.

Diabetes Shorts: Diabetes remission

Eugene Hughes, GP, Isle of Wight

- Remission can be achieved with drugs, lifestyle changes and weight loss (e.g. very-low-calorie diets, as in Roy Taylor's work), after bariatric surgery.
- According to ADA consensus statement:
 - Partial remission: HbA_{1c} <48 mmol/mol (6.5%) or FPG 5.6–6.9 mmol/L.
 - Complete remission: HbA_{1c} <42 mmol/mol (6.0%) or FPG <5.6 mmol/L.
 - Achieved without drugs or other interventions, maintained for 1 year.
- UK guidance by McCombie et al (2017) recommends two test results below diagnostic threshold at least 2 months apart to confirm remission, repeated annually:
 - HbA_{1c} <48 mmol/mol (6.5%).
 - FPG <7 mmol/L.
- Code accurately and consistently:
 - 21263 or 212H – “Diabetes resolved”: diabetes misdiagnosed or secondary to e.g. steroids now stopped.
 - C10P – “Diabetes in remission”: due to weight loss or bariatric surgery.
- Code C10P ensures people remain flagged for annual reviews and retinal screening and stay on the QOF register,

but are considered diabetes-free for insurance, driving or employment.

- Remission rates after bariatric surgery of up to 80% have been recorded and vary between different procedures.
- Remission is not the same as cure – ongoing annual HbA_{1c} monitoring is appropriate.

Apply to practice

Search for those coded for type 2 diabetes with an HbA_{1c} <42 or <48 mmol/mol who are not on any therapy. If this is the first test below the threshold, repeat after 2–3 months. Code if they remain below the diagnostic threshold.

Guidelines and resources

- Beating type 2 diabetes into remission: <http://doi.org/10.1136/bmj.j4030>
- How do we define cure of diabetes? (ADA consensus statement): <http://doi.org/10.2337/dc09-9036>
- Determinants of diabetes remission and glycemic control after bariatric surgery: <http://doi.org/10.2337/dc15-0575>

Sick-day guidance

Nicola Milne, Practice Nurse,
Manchester

- Sick-day guidance aims to reduce risk of acute kidney injury, DKA, hyperglycaemic hyperosmolar state (HHS) and hypoglycaemia during acute intercurrent illness.
- Coughs, colds and fevers can be treated with basic medicines, but people should inform their pharmacist that they have diabetes.
- Check that all people with diabetes understand what to do if they become ill and how to manage their diabetes; provide leaflets and website links.
- During illness, encourage increased sugar-free fluid intake (half to one glass every hour). If not able to eat, consider meal replacement options containing around 10 g of carbohydrate:
 - Milk, milky drinks (Complan, drinking chocolate, Ovaltine, Horlicks) or soup 200 mL, large scoop ice cream, 150–200 mL non-

diet lemonade, or 100 mL non-diet cola, fruit juice or Lucozade.

- Ensure people know which drugs to stop during acute illness. Provide a card or information prescription.
 - ACEIs, ARBs, NSAIDs, diuretics, metformin, SGLT2 inhibitors.
- Ensure people restart medications that have been stopped 24–48 hours after they are able to eat and drink normally.
- People on insulin MUST NOT STOP this, as insulin requirements may increase despite reduced appetite or food intake. This can be difficult for people to understand.
- Monitor capillary blood glucose more frequently during illness – up to every 2 hours if type 1 diabetes and ketones are elevated.
- Ensure those with type 1 diabetes understand when to monitor ketones, have the meter and test strips to do this, and can interpret the results, including when to contact their healthcare professional (>1.6 mmol/L).
- Avoid strenuous exercise.

Apply to practice

Do we discuss sick-day rules and document this at each consultation, particularly in those on insulin, SUs and SGLT2 inhibitors? Do all people on insulin with type 1 diabetes have access to ketone testing meters and strips?

Guidelines and resources

- Think Kidneys resources for primary care: <http://bit.ly/1TNQNqe>
- How to keep your kidneys safe leaflet for printing: <http://bit.ly/2oEK0t0>

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