

LETTER

A roadmap to recovery: ABCD recommendations on risk stratification of adult patients with diabetes in the post-COVID-19 era

A third of the over 40,000 deaths in the United Kingdom attributed to the first wave of the COVID-19 pandemic occurred in people with diabetes.¹ However, the focus on emergency response to COVID-19 in the first few months has had a major knock-on impact on the delivery of routine clinical care for diabetes. Key challenges as we enter the second wave of the pandemic include a backlog of appointments, delays in accessing care such as structured education, and initiating insulin, GLP-1 or diabetes technology.² We anticipate ongoing pressures through increased commitments to general medicine, reductions in clinic capacities due to social distancing and reorganisation of clinic spaces. Many services have already adapted by moving much of their activity to the virtual space.³

In the coming months, it is unlikely that we can return to normal, and so we feel it will be essential to identify patients at greatest risk and prioritise their care. These recommendations from the Association of British Clinical Diabetologists (ABCD) made together with representation from Diabetes UK and the Primary Care Diabetes Network, propose a multi-factorial risk stratification to help prioritise patients with diabetes into Urgent, Priority and Routine groups, based on key, easily available markers (Table 1).

Review **URGENTLY** (within 3 months).

- HbA1c > 10% (86 mmol/mol).
- Uncontrolled hypertension (BP > 160/100).
- Complete Hypoglycaemia unawareness (Gold score 7 if available) or reported Severe hypoglycaemia in the last 12 months.
- Diabetes-related admission DKA, HHS or unstable cardiac or cerebrovascular disease) in the last 12 months.
- People recently discharged from hospital with changes in treatment.
- eGFR < 30 ml/min or rapid decline in renal function (>15 ml/min/year).
- Active diabetic foot disease.

Other factors include severe mental health illness, learning difficulties, frailty or those planning pregnancy. These patients should be offered virtual or face-to-face appointments

within 3 months and may need between 3 and 6 contacts in the next 12 months.

Review as a **PRIORITY** (within 6 months).

- HbA1c 8.5–10% (70–86 mmol/mol).
- Suboptimal blood pressure (140–160/90 mm/Hg) or lipids (total cholesterol > 5 mmol/l).
- Impaired awareness of hypoglycaemia (Gold score 4–6 if available⁴), or frequent hypoglycaemia (>5 episodes/week or >20% time below 4 mmol/L).
- HbA1c < 6.5% (48 mmol/mol) on insulin or sulphonylureas, with other comorbidities or cognitive impairment.
- eGFR 45–30 ml/min, progressive albuminuria (ACR >30).
- Young patients (<40 years old) with early complications.
- No diabetes review for over 18 months.

These people should be seen (virtually or face-to-face) within 6 months and may need 2–3 contacts over the next 12 months.

Those with none of the above risk factors are in the '**ROUTINE**' category and should be informed that they may not be seen till the summer of 2021. They should be signposted to educational resources commissioned by CCGs and the new NHSE educational websites⁵ and given guidance on what to do if any of their parameters change. Care providers need to allocate resource to 'rapid-support' clinics to review those whose situation changes suddenly.

When using these recommendations, clinicians should take a holistic view including co-morbidities, ethnicity and socio-economic deprivation, as well as the number of factors that fall within different categories when deciding an individual's risk category. It is important to recognise that often those with associated mental health, learning, social or personality conditions may be the least likely to engage with services⁶ and services should be proactive in trying to reach them.

Primary care and specialist teams need to work together to identify those in 'URGENT' and 'PRIORITY' groups. Shared databases will help identify patients at risk, minimise duplication and provide joined up care between specialists and primary care teams. Where not available, specialist

TABLE 1 Proposed model for risk stratification of patients

	RED (any of the below)	AMBER (any of the below)	GREEN
Recommended review date	Within 3 months Likely to need 4–6 contacts/year	Within 6 months Likely to need 3–4 contacts/year	Yearly Inform patients in this category that they are unlikely to be seen for 6–9 months. Provide clear advice on where and how to contact the team for emergency support if things change
Metabolic control Alternative measures BP	HbA1c > 10%, (86 mmol/mol) <30% time in range BP > 160/100	8.5–10% (70–86 mmol/mol) 30–50% time in range BP 140–160/100 on suboptimal medication	<8.5% (<70 mmol/mol) >50% time in range BP < 140/80
Hypoglycaemia risk	Complete loss of awareness (e.g. Gold score 7) SH needing 3rd party assistance in last 12 months	Impaired awareness of hypoglycaemia (Gold score 4–6 if available) Frequent hypoglycaemia (>5 episodes/week or >20% time below 4 mmol/l)	Normal awareness of hypoglycaemia
Renal function	Known CKD level 4 or more (eGFR <30 ml/min) Known to diabetes renal service (optimise care and avoid duplication) Rapidly declining renal function (eGFR reduction >15 ml/min/year)	eGFR 45–30 ml/min or progressive albuminuria ACR >30	
Risk of admission	Admission in the last 12 months with <ul style="list-style-type: none"> • Unstable glucose (DKA, HHS or hypoglycaemia) • Unstable Cardiovascular ds • Recent Cerebrovascular ds 	Those with frailty/cognitive impairment needing additional support from their diabetes teams.	
Diabetes foot status	Known active diabetes foot disease	Known high-risk foot ds not known to podiatry services	No known diabetes foot ds
Other factors	Planning pregnancy in the next 6 months Consider those with severe learning difficulties, severe mental health issues, frailty, post-transplant diabetes	Young patient (with known early complications) Newly diagnosed type 1 diabetes Patients with no diabetes review in the last 18 months	

services may run searches from hospital admissions and laboratories to identify those with raised HbA1c and recent admissions. Primary Care, CCG or STP level approaches may include searches of primary care databases. For those with type 1 diabetes, searches of glucose data stored in the cloud can identify those with low time in range or high time below range.⁷

We also need to reshape the use of our human and physical resources, moving away from a system of 3–6 month routine appointments to a system that is responsive to individual needs. We want to ensure the *right* person sees the *right*

clinician at the *right* time in the *right* environment. Individual needs and preferences should determine which professional the person sees and how often, and whether appointments are physical or virtual. We are already seeing wider use of virtual consultations and learning how to do these better. We may need to merge roles so that whoever sees the person with diabetes (specialist, primary care physician doctor, nurse and dietician) collects and shares all the relevant information to minimise duplication. Some teams are piloting one stop shops to complete annual review and care processes in a single visit.

The use of technology, integrated care models and virtual consultations to support people living with diabetes in the least disruptive way will be a valuable legacy of the COVID-19 pandemic.

DECLARATION OF INTERESTS AND FUNDING

PC has received personal fees from Novo Nordisk, Lilly, Sanofi, Abbott UK, Dexcom, Medtronic, Insulet, Novartis. EGW has received personal fees from Abbott Diabetes Care, Dexcom, Eli Lilly, Insulet, Medtronic, Novo Nordisk, Sanofi Aventis.

AUTHORS' CONTRIBUTIONS

DN, PC, PW and EW conceived the paper. KO, DP, LM, GR and CH provided the input and reviewed the manuscript. GA and RP were patient representatives from Diabetes UK who provided valuable input to the discussion and reviewed the manuscript. PC and DN wrote the drafts.

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How to cite this article: Choudhary P, Wilmot EG, Owen K, et al. A roadmap to recovery: ABCD recommendations on risk stratification of adult patients with diabetes in the post-COVID-19 era. *Diabet Med.* 2021;38:e14462. <https://doi.org/10.1111/dme.14462>