


COMMENTARY

A post COVID-19 ‘Marshall Plan’ for type 2 diabetes

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1 | INTRODUCTION

When the COVID-19 pandemic hit the UK, hospital diabetes clinics ground abruptly to a halt and many diabetologists were effectively conscripted on to front-line emergency care. Their contribution was key to the ability of acute medical services to be rapidly redesigned and continuously adapted during the peak. This was a simple imperative as ‘lockdown’ kicked in, usual outpatient clinical activity ceased and emergency admissions with the new virus surged.

By necessity, any remaining activity in both primary and secondary care diabetes rapidly switched from long-term management (promoting high-quality self-care to control risk factors and prevent complications) to an interim system addressing only problems triggered by acute need (new diagnosis, symptoms, relief of pain, HGV driving license issues). Where face-to-face consultations were deemed necessary, social distancing and use of personal protective equipment (PPE) were suddenly required to protect the health and safety of people with diabetes and health professionals. Where less urgent consultations were required, increasing use was made of telephone calls or cloud-based videotelephony.

Although rates of COVID-19 fell over the summer, the virus has not gone away. As we write in October, local lockdowns are being reinstated and more than 42,000 have died in the UK. Around a third were living with diabetes, the majority type 2 diabetes given its association with key mortality risk factors (age, obesity and ethnicity) and complications (heart disease, kidney disease, stroke).¹ Poorer glycaemic control was also associated with a twofold risk of death.^{2,3}

Mechanisms remain speculative and we do not yet know the long-term impact of the suspension of chronic disease management on the lives of people with diabetes. Many remain ‘locked down’, their voices unheard—and it is too early to interrogate how the pandemic has affected long-term rates of specific complications.

Given the unprecedented scale of loss of life with COVID-19, it seems more important than ever that type 2 diabetes is: prevented where possible; induced into remission when it develops; controlled effectively with pharmacotherapy to prevent complications once it is established; monitored effectively so that complications can be detected and treated promptly; and safely cared for when hospital admission is required.

2 | WHAT CHANGE IS NEEDED?

2.1 | Prevention of type 2 diabetes

As with the rest of society, diabetologists in the era before COVID-19 had become inured to the *status quo* with the interests of the food and hospitality industries always trumping public health messaging. It is now clear that the non-communicable epidemic of overweight and obesity that caused a more than doubling of rates of type 2 diabetes over the last two decades has been compounded by excess deaths due to COVID-19.^{1,2} Now more than ever is the time for expert advocacy for the previously unpalatable societal measures required to improve the diet and lifestyle of

the population. In addition, individually targeted evidence-based health promotion, weight management, behaviour change and psychology services (including as embodied in the recently established national Diabetes Prevention Programmes) need vigorous support from those in the front line. Diabetes specialists should not confine themselves to management of advanced/complex cases in hospitals and clinics, but also accept responsibility for oversight of prevention/remission and ensuring optimal pharmacotherapy of less complex cases in partnership with primary care colleagues (Table 1).

2.2 | Induction of type 2 diabetes remission

It has recently been shown that type 2 diabetes can, in up to half of cases, be reversed in primary care during its early years using a supported low-calorie diet.⁴ This has been shown to be cost-effective but is only implemented in a few areas.⁵ There is a need for pump-priming funding, retraining and flexible deployment of healthcare professionals. In the age of massive government intervention post COVID-19, the mortality suffered by people with type 2 diabetes during the epidemic argues for continuing investment rather than tightening of purse strings. Leadership is required across primary and secondary care: implementing comprehensive diabetes remission services nationwide would not only impact on the health of the nation but also—in time—reduce health services utilisation.

2.3 | Effective treatment to prevent complications

The last 5 years have been an unprecedented time for pharmacological innovation in type 2 diabetes. Two new drug classes (GLP-1 receptor agonists, SGLT2 inhibitors) for the first time reliably reduce weight and prevent heart disease and stroke. However, many individuals with the condition are not prescribed these modern and cost-effective therapies, particularly GLP-1 receptor agonists that require injection.⁶ Important barriers include: expertise in the use of these newer agents residing mainly in secondary care (the majority of people with type 2 diabetes are cared

Novelty statement

- In the UK alone, around 14,000 people with diabetes died in the first 4 months of the COVID-19 pandemic (one third of all deaths).
- Strong evidence exists for preventing type 2 diabetes, inducing remission, providing comprehensive systems for treatment and monitoring, and caring safely for those requiring hospital admission.
- Implementing existing evidence in these domains is now higher priority than ever.
- The COVID-19 experience demonstrated that NHS services in the UK can be rapidly redesigned when there is a strong collective will.
- Changes made in the wake of COVID-19 could create more dynamic and flexible care systems better meeting the needs of people with type 2 diabetes in the UK and beyond.

for in primary care); downward pressure on cost; and inadequate coordination between primary and secondary care. Although there are examples of good practice, including diabetes-focused locally enhanced services, many individuals only receive input from secondary care once they have had the condition for many years and/or have developed complications (e.g. renal, foot). If a more dynamic two-way relationship could be created and sustained between primary and secondary care, more people with type 2 diabetes could have the benefit of early definitive review of treatment options with shared inter-professional learning of the best available evidence and important contextual factors. A structured ‘care plan’ could be developed in partnership with people with diabetes and implemented flexibly across settings, harnessing and supporting individual capacity to self-manage (and including initiation of non-insulin injectable agents in primary care where appropriate).

Barriers to the adoption of this approach have included a perception that each sector is already working to capacity and that any change might lead to over-burdening of one or the other. The urgency of improving control to prevent complications given the level of diabetes morbidity and mortality during COVID-19 should now be a key and urgent driver for joint working. In addition, increased confidence with virtual conferencing (and its wider supported availability within the NHS) is a potential catalyst for better day-to-day inter-professional communication between primary and secondary care. Greater use of telephone and video consultations not only facilitates appropriately ‘distanced’ consultations but also helps reach individuals who might otherwise not have attended.

TABLE 1 Key opportunities to transform type 2 diabetes care post COVID-19

Prevention of type 2 diabetes
Induction of type 2 diabetes remission
Effective treatment to prevent complications
Effective monitoring to detect and treat complications
Safe care during hospital admission

2.4 | Effective monitoring to detect and treat complications

Care of type 2 diabetes necessarily involves regular ‘annual review’ check-ups (including blood pressure and weight measurement, HbA1c and cholesterol measurement, retinal screening, foot screening, albuminuria screening) and access to services (including dietary advice, podiatry, immunisation, smoking cessation). For some years now, centralised photography-based retinal screening has been delivered in most UK areas on a population-wide basis with onward referral to ophthalmology where required. Despite initial fears that ophthalmology services would be overwhelmed, this ultimately led to more appropriate referrals and improved outcomes, even at a time of a rapid increase in cases.⁷ This innovation is an exemplar of the benefits of effective coordination between primary and secondary care. However, accessing the other required annual diabetes ‘check-ups’ has remained haphazard and therefore confusing for people with diabetes. Many, particularly those who are socio economically disadvantaged, do not receive all items at the recommended intervals, while there are also instances of duplication.

The concept of a ‘one-stop shop’ that builds on the retinal screening model to encompass blood pressure and weight measurement, foot screening, and blood and urine sampling is therefore attractive.⁸ Piloted in some areas, it has been found popular with users and efficient with their time. ‘Hubs’ can be embedded in the community to allow easy access and promote social distancing. Many aspects can be delivered by healthcare assistants following targeted competency-based training. If delivered widely on a population basis, the one-stop shop delivers the ‘process’ aspects of care while leaving space for key and timely shared management decisions in consultations. When underpinned by clear pathways for onward referral of screen-detected problems (e.g. foot ulcers, decline in renal function), the model provides a solid infrastructure for closer collaborative working between primary and secondary care to meet the needs of people with diabetes at every stage on their journey.

Prior to COVID-19, the prospect of enhanced service quality and an improved patient experience likely to result from the one-stop shop did not seem sufficient for its widespread adoption. Missed screening check-up items would be added opportunistically at consultations, leading to reduced efficiency and a conflict between care quality and punctuality. There was a sense that the model would be perhaps be adopted at some point in the future when further evidence of cost-effectiveness was required. However, retinal and foot screening services have been severely disrupted during the COVID-19 pandemic. The response must be to accelerate rather than delay implementation of the ‘one-stop’ model as it provides the opportunity to space out appointments throughout the week at a hub in a convenient location for

people with diabetes, reducing the high level of footfall seen in pre-lockdown diabetes clinics while achieving adequate social distancing.

2.5 | Safe care during hospital admission

Approximately 20% of hospital inpatients have type 2 diabetes.^{9,10} In most cases, acute admission is required either for a complication (e.g. myocardial infarction, stroke, foot ulcer), a co-morbidity (e.g. acute kidney injury, respiratory or urinary tract infection, cellulitis) or an apparently unrelated reason (e.g. surgery). Severe metabolic decompensation (hyperosmolar hyperglycaemia) is comparatively uncommon. Diabetologists in most hospitals are a bedrock of acute medicine, but as systems are not in place for them to focus their expertise on those who most need it, most inpatient diabetes care is delivered by non-diabetologists. At a time when glycaemic control is more crucial and complex than ever (due to fasting, decreased appetite, intravenous infusions, use of steroids to treat COVID-19), responsibility for its control is too often given to healthcare workers who lack confidence, experience, skill and knowledge (including novel therapies). This may lead to prolonged admissions, development of metabolic decompensation (severe hypo- or hyperglycaemia), delayed wound healing and even the development of foot or heel ulcers.

These long-running issues could be addressed by reorganising the contribution of diabetologists to acute medicine in a ‘consulting’ model, collaborating with a team of specialist nurses and backed up by technology (e.g. remote continuous glucose monitoring, daily interrogation of networked glucose meters). Examples of good practice and pilot projects exist,¹¹ but have not been widely adopted, often due to a historical reliance on diabetologists to look after ‘general medical’ problems in people who do not have diabetes; in the case of technology, governance barriers are often cited.

3 | A NOTE OF CAUTION

While there are attractions to making radical change, there are also risks. There is current enthusiasm that inertia, demoralisation, inflexibility and funding gaps may be easier to overcome as services respond to the ‘new normal’ of the COVID-19 era. However, checks and balances designed to mitigate unintended and potentially harmful consequences of change within the NHS must operate. These include patient and public involvement, professional representation, and health and safety. Obtaining buy-in of stakeholders is key in a system not well-suited to ‘top-down’ change.

Primary care clinicians will require the security of having a named secondary care consultant for their practice, while

secondary care consultants will require time in their job plans to develop a meaningful interaction with primary care colleagues. Both will need the confidence that no one with diabetes is ‘slipping through the net’: in Scotland and some UK regions, this could rapidly be achieved with smarter use of existing comprehensive electronic disease registries. If it is proposed that care of a significant number of individuals is moved from one healthcare domain to another without agreement with professional representatives, there will be resistance and incomplete implementation.

Although it is more difficult than ever at the present time to capture the views of people with diabetes, redesigned systems require engagement of a full spectrum of views in order to be fit for purpose. For example, it may seem entirely appropriate for a multidisciplinary team to decide that a person with diabetes who has been having regular consultations with a hospital consultant for 10 years can now be seen by a diabetes nurse in primary care. However, if seen as a ‘downgrading’, this change may lead to decreased concordance with medications and therapeutic goals or even loss of trust in health services.

Those people with type 2 diabetes who already struggle with self-care and engagement with services are likely also to be those who struggle with use of technology for consultations and sharing of monitoring data. Loss of face-to-face contact may lead to demotivation and further disengagement. Adoption of a personalised and structured care-planning approach between primary and secondary care must take account of individual ability to engage and self-care if it is to contribute to reducing rather than exacerbating existing inequalities in health.¹²

4 | EFFECTING CHANGE

While donning and doffing PPE during harrowing emergency medicine shifts in COVID wards, diabetologists have of course ruminated on the well-being of the silent body of people with diabetes isolated at home and unable to access clinics. At the same time, they have realised that ‘after the lockdown’ diabetes services cannot simply resume as if nothing has happened, if only because of the likely long-term need for social distancing and a potential requirement for ‘shielding’ for a proportion of individuals with additional comorbidities.

The experience of working together within rapidly created services evolving on a daily basis during the COVID-19 pandemic has created a shared professional will and a collective hope and realisation that changes to services made in the wake of the virus could go further than mere adaptation. By this way of thinking, the crisis presents an opportunity to drive the reform necessary to ensure that future diabetes services are shaped to deliver what is really

required: a generational opportunity to ‘reboot’ services in a more radical way than would have been possible in normal times.

Given the need for reciprocal understanding and communication at a time of great stress in the NHS, an evolutionary rather than revolutionary approach seems appropriate, but the first steps need to be taken now.

CONFLICT OF INTEREST

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PATIENT AND PUBLIC INVOLVEMENT STATEMENT

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