

## Editorial

## Challenges of Delivering Diabetes Care During the Covid 19 Pandemic

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### Introduction

The COVID-19 pandemic, which continues to impact the world, has changed the practice of medicine forever. My twenty year experience, as a consultant physician and diabetologist had included other pandemics, such as H1N1 in 2009, but I was not prepared for how COVID-19 would impact on my clinical work.

My diabetic patients need to 'shield' and the cancellation of 'routine clinical work' saw a shift to online and telephone clinics rather than face to face. I serve an area with huge health inequality, socio-economic deprivation, and limited access to digital technology. It was soon apparent that my patients could not use the 'attend anywhere' video consultation software<sup>1</sup> and I would have to rely on telephone consultations. Non-verbal communication skills were immediately severed, and it was not possible to perform important demographic measurements including blood pressure, weight, ophthalmoscopy, and diabetic foot examination. The limitations of video consultations are multifactorial<sup>2</sup> and lead to suboptimal chronic disease management as telephone consultations are a poor substitute when one cannot see the individual.

There were, however, unexpected benefits for our patients with Type 1 Diabetes (T1DM) who were using advanced technologies such as insulin pumps and interstitial glucose monitoring. These technologies enable remote sharing of detailed information about glycaemic control and insulin doses. Our diabetes nursing team embraced this technology to help our highly motivated T1DM patients using these technologies improve their diabetes control without the need for face to face

consultation. The use of remote consultations with real time downloads of pump and sensor data will continue for this group of patients with an annual face to face consultation.

Type 2 Diabetes (T2DM) patients, who form the majority of the diabetic community, fared less well during the pandemic. The majority of our T2DM community had other co-morbidities or very high BMI which put them in the 'shielding' group<sup>3</sup> and imposed immediate loss of social interaction, confinement to their homes and limitations to their physical activities. My initial telephone consultations with T2DM patients focused around reassuring them and advising them to obtain COVID-19 vaccinations when offered. As time progressed, it was clear that these patients were struggling psychologically and were experiencing depression and anxiety which negatively impacted their diabetes control. The community screening programme for diabetes eye and feet complications, that functioned well prior to COVID-19, was put on hold due to fear of 'social distancing' and putting patients at risk. Our diabetes service took the decision to abandon telephone consultations and encourage face to face appointments by Spring 2021. Our outpatient clinics are slowly getting back to normal, and patients are regaining confidence in attending appointments. The impact of 'lockdown' on diabetes management will be long lasting and we need to consider the psychological impact on this on our patients before criticising their HbA1C results. As health-care professionals we have carried on working, albeit under increased stresses, whereas our patients have been subject to experiences and restrictions which cannot begin to understand. We need to emphasise

their achievements in avoiding progression of diabetes complications and hospital admissions to enable them to look to the future

My other role as an acute physician on the 'COVID-19 frontline' revealed the challenges of inpatient diabetes management during the pandemic. We were inundated with new protocols for managing COVID-19, scoring systems to identify which patients would benefit from new therapies and were forced to consider how to ration oxygen therapies to those most likely to survive. It soon became clear that COVID-19 infection in people with or without previously recognised diabetes had increased risk of hyperglycaemic emergencies with ketones. The National Inpatient Diabetes COVID-19 Response Group was rapidly established to draw up protocols to help improve glycaemic control<sup>4</sup>.

Our hospital was a major recruiter for the Randomised Evaluation of COVID-19 Therapies (RECOVERY Trial)<sup>5</sup> which investigated the role of a wide range of treatments to improve outcomes including high dose of the glucocorticoid dexamethasone. The total daily dose of 6mg is equivalent to 40mg prednisolone which has a negative effect on glycaemic control. The benefits dexamethasone to reduce mortality in people with COVID-19 were quickly recognised<sup>6</sup> but, like other diabetologists, I had concerns about the impact of this on our diabetes patients and those with previously undiagnosed diabetes. The triple insult of high dose glucocorticoid therapy induced hyperglycaemia, COVID-19 induced insulin resistance and COVID-19 related impaired insulin production<sup>7</sup> required development of new protocols to reduce the risk of severe hyperglycaemia in known and previously unknown diabetes patients. The workload of our inpatient diabetes team significantly increased as a result of dexamethasone-induced hyperglycaemia but we rose to the challenge.

Throughout the pandemic we have adhered to national guidance to optimise glycaemic control which recommend that T2DM discontinue SGLT2 inhibitors if they develop COVID-19 due to the risk of ketoacidosis with SGLT2 inhibitors. The DARE-19 study<sup>9</sup> aimed to reduce organ dysfunction and death in COVID-19 through the use of dapagliflozin. DARE-19 did not show any impact on organ dysfunction or death but was 'well tolerated' and the rates of ketoacidosis were low. The use of empagliflozin in the RECOVERY trial is yet to be

evaluated.

The last eighteen months have been challenging, made clinicians question established protocols and quickly adapt to changing situations. People with diabetes will require our support and understanding as they emerge to the 'new normal' in the post COVID-19 world. As clinicians we will need to help them navigate this journey as they regain confidence and control of their diabetes.

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