Health inequalities and technology

Well, here we are, approaching July already and on the eve of the 2021 ADA virtual conference. We sadly are not quite out of full restrictions as yet; nevertheless, with over 60% of adults now being fully vaccinated, optimism is in the air. On the work front, there has been a noticeable increase in referrals to diabetes services. This is, I am sure, a reflection of the impact of the prolonged restrictions and reduction in routine services. The referrals coming through are increasingly complex in nature and there is a real urgency in some of the cases, where we are seeing an extreme and often sudden rise in HbA_{1c} levels.

The cases are further complicated by an increase in mental health issues that have been experienced. A rise in anxiety levels experienced in the whole population over the last 18 months has been seen (Office for National Statistics, 2020). People with diabetes experience a higher level of anxiety than the background population and so it is not unsurprising that we are seeing the impact of this additional rise when reviewing people with diabetes (Huang et al, 2020).

Health inequalities

A topic that has caught my attention recently is in relation to increasing health inequalities. A review of the National Paediatric Diabetes Audit (Royal College of Paediatrics and Child Health, 2021) discusses the disquieting evidence that children and young adults from minority ethnic communities have had higher HbA_{1c} than their peers each year (Ng and Evans, 2021). In addition, the gap in access to pumps and real-time continuous glucose monitoring (CGM) is increasing, demonstrated by the evidence that Black children and those from the most deprived areas have the lowest usage of this technology. Equally concerning is the fact that those living in more deprived areas were found to have a higher risk of retinopathy, albuminuria, need for additional psychological support and higher HbA_{1c} levels.

Although Ng and Evans review inequalities in our children and young adult services, I am sure it is no different in adult care, and so it is imperative that we all reflect on the findings of this audit and work to ensure we all address the inequalities that we see in our own demographics. The PCDS recently broadcast a Question Time session focusing on health inequality, which is well worth a watch. It will soon be available on demand at: https://live.diabetesonthenet.com.

Access to technology

As I am sure you are all aware, 2021 marks 100 years since the discovery of insulin. This discovery was revolutionary in the management of diabetes. Since then, as well as continued advancements in insulin profiles, we have seen impressive leaps in the use of technology for the management of diabetes. The use of insulin pumps is becoming more widespread, and access to both continuous and flash glucose monitoring is also gaining pace. The amazing news last week that almost 50% of those with type 1 diabetes have access to the FreeStyle Libre really is an excellent development.

Moreover, I feel the recent announcement by Sir Simon Stevens, at the NHS Confederation conference, that up to 1000 people will have access to closed-loop insulin delivery systems in a pilot project is tremendous news for those with type 1 diabetes. This marks a monumental step forward for the use of technology in the management of this condition.

The closed-loop or "artificial pancreas" technology has been shown to improve glucose control and increase time in range (Brown et al, 2019). The system continually monitors glucose levels using CGM technology and then automatically adjusts the amount of insulin delivered via an insulin pump. This automated adjustment reduces the time spent above or below target range, temporarily suspending insulin delivery when glucose levels are running low and increasing the delivery rate when levels are rising. We will watch the pilot study closely and hope that the results support making this technology available to all on the NHS.

So as we enter the first days of summer, there are some rays of sunshine for people with type 1 diabetes after a long and difficult year. I hope readers too are all meeting up again with friends and family and are able to take a well-earned break in the coming months. ■

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