## The more I learn, the more I realise how much I don't know

have always been fascinated by the unusual in diabetes. Albert Einstein famously said, "The more I learn, the more I realise how much I don't know." This still rings true. We are constantly learning in diabetes care, and our knowledge of the complexities it holds are forever evolving.

When I began my diabetes nursing career, things seemed so much simpler. We referred to two types of diabetes, even when people's diabetes did not follow an expected pattern. Along with a few insulins, we only had two oral medication classes as therapies. How times have changed!

Over the decades, I have found it fascinating to see our understanding of the many rarer types of diabetes grow. This includes the revolution that has occurred in the field of type of diabetes that have a genetic cause. As our appreciation of these conditions has grown, so has our ability to manage them more appropriately. A change in diagnosis can have a huge impact on not only the person with diabetes, but also their living relatives and future generations who may have the same form of genetic diabetes.

Our recent article by Paula Johnston, providing a succinctly written "basics" of maturity-onset diabetes of the young (MODY), is a highly recommended read. As well as providing a valuable overview of the different types of MODY, and what to do if it is suspected, it highlights the frequency of its misdiagnosis and misclassification, which can sometimes lead to years of unnecessary insulin treatment. I liken this to the impact of the misclassification of type 3c diabetes (or pancreatic diabetes), with people often being coded as having type 2 diabetes and spending many months or years trying oral diabetes medication without effect, when insulin is indicated to treat the cause of their condition.

Whilst musing about today's challenges of getting the right diagnosis, I read with huge interest the report of a study by Susan Martin and colleagues in the Genes & Health Research Team looking at the impact of glucose-6-phosphate dehydrogenase (G6PD) deficiency. For many years we have discussed how HbA<sub>1c</sub> measurement, our test for the diagnosis and monitoring of diabetes control, can be affected by different factors. Anything that affects the structure of the red blood cells (RBCs) or their life span can alter the result. We are aware of factors, such as iron deficiency anaemia, alcoholism and the ageing process, that affect how long RBCs live and are exposed to glucose, and that may create falsely high HbA<sub>1c</sub> measurements.

The study centres around a deficiency of the G6PD enzyme, which is responsible for protecting RBCs from damage. A deficiency, which presents silently, can result in the HbA, reading far lower than circulating glucose would suggest, with the result that a diagnosis of diabetes can be missed. The study estimated that 1 in 7 Black and 1 in 63 South Asian males carry the gene variant responsible for G6PD deficiency, compared with just 1 in 100 000 White males. The question this raises is, should we routinely screen for this deficiency in these populations prior to diagnosing diabetes? For those affected who subsequently receive a diabetes diagnosis, should an alternative to HbA, monitoring be used, such as time in range using continuous glucose monitoring? As I say, the more we know, the more there is always to learn!

For a refreshing view on the reuse of the mountains of unneeded IT equipment generated by the health service, take a look at our article from Jenny Foster. It relates the amazing collaboration across a range of groups to improve access to smartphone technology for children and young people from low-income households, thereby enabling them to access hybrid closed-loop therapy and improve uptake. The project took redundant NHS laptops and phones, collaborated with a local IT asset disposal company to refurbish them, and worked with a patient and parent support group to distribute them to those referred.



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This project has received national recognition in the form of a QiC Diabetes Equality, Diversity and Health Equalities award. More importantly, it has become standard practice across the Gateshead Health NHS Foundation Trust.

It is a fantastic read, and through the learning, I see that this could be rolled out across the UK not just to children and young adults, but also to the

many other vulnerable groups who have limited access to technology and are, therefore, falling far behind in terms of equity of access to diabetes technologies. Specifically, I am thinking of the elderly and access to CGM data sharing. I really do urge you to read this article with a wider access view in mind!

Until next time...