

Curiosity and the Cat

Curiosity killed the Cat, but satisfaction brought it back

A life in research: a personal perspective

Melanie Davies CBE

Professor of Diabetes Medicine

Professor Davies gave an impassioned oration on her career principally in Leicester where she has continued to develop the historic interest in the sphere of Diabetes.

Melanie was a first generation Medic being the daughter of a Hampshire farming family.

Following graduation from Sheffield University she was able to develop her early interest in Diabetes and its research initially in Ipswich and then Cambridge.

Her early inspiration was Dr Joan Walker in Leicester who had taken on a Specialty not considered reputable at the time just after the second world war and before the NHS had been established.

Although she was initially only on a Temporary Appointment as a Consultant Physician she was described as 'A Woman ahead of her time' developing a redesigned service for the local community incorporating many ideas that are now accepted practice including the use of a multidisciplinary team and focussing on patient and family education. She was able to drastically cut the foetal mortality rate.

Between the years 1996 and 2006 Professor Davies established a successful career as an NHS Consultant within the UHL and in the interim raising her family. Following her time as Head of Diabetes at the Leicester Hospitals and bringing with her the continued academic interest she was appointed Professor of Diabetes Medicine at the University of Leicester.

The hub of her activities is the Leicester Diabetes Centre ( LDC ) which involves not only patient care but staff training, clinical research, patient education and the wider involvement of both patients and the public. A prodigious number of research papers have been published over the years concentrating on structured education and prevention. More papers have been published on South Asian Health than any other research group outside India. Melanie has been accorded the accolade of top global expert in Diabetes ( Expertscape ).

With an emphasis on Prevention a Leicester Diabetes Self-Assessment Risk score has been developed and now recommended for use in the NICE guidelines on preventing Type 2 diabetes. The LDC is a selected provider in the national Diabetes Prevention programme covering a third of the UK and seeing significant results. In addition it has developed a portfolio of self-management education to support a wide range of circumstances. The project DESMOND ( a structured Diabetes Type 2 prevention education programme ) has been rolled out to Qatar, Australia and New Zealand and programmes developed to be used in low-to-middle income countries.

Management of Hyperglycaemia is complex with treatment options targeted at a number of sites. Glucagon like peptide-1 , ( GLP-1 ) as 'conductor of the diabetes orchestra' is pivotal and restoring its response is a logical target for treatment. GLP-1 Receptor agonists mimic native GLP-1 to restore GLP-1 activity and Dipeptidyl peptidase-4 ( DPP-4 ) Inhibitors prevent enzymatic degradation of native GLP-1 by DPP-4.

Sodium-glucose cotransporter-2 ( SGLT2 ) inhibition by giflozins allows increased glucose excretion by blocking glucose reabsorption in the proximal renal tubule and so reduces glycaemia, and through loss of energy ( calories ), weight loss. In addition increased sodium excretion leads to blood pressure reduction. The results of a series of trials with different SGLT-2 inhibitors were presented and demonstrated the benefits.

Melanie was a Co-Chair of a American/European panel which came to a consensus view of the management and recommended pathways to assist practitioners.

On 2012 the centre moved to closed medical wards at LGH in the first phase of the development of an International Centre of Excellence supported by Trust, CCG, with political support. A large team

has been assembled. Communications and publicity are designed to influence the National Agenda. Leicester is leading the way and 'Changing Diabetes' along with other influential centres throughout the world.

In conclusion Professor Davies reflected on her unconventional career path, the paucity of female role models in medicine, the difficult work life balance of today's doctors ( sandwich generation ) who are very busy and the 'Imposter Syndrome' in which high achievers are unable to internalise their accomplishments, fear being exposed as frauds and in which success may be dismissed as luck. It is particularly common in women. She stressed that women had to work very hard, aspire to be better than their male counterparts. They require a clear personal vision, enjoy their work and choose their colleagues carefully. Her partnership with Professor Kamlesh Khunti is key to the success of the project and the influence of grandmother recognised.

To quote from The News which reported on the CBE which Melanie received for services to diabetes research the 'centre is now recognised across the world for its leading research, education and innovation'.