Diabetes and dementia: Personal and service impacts

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As I belong to the "Google" rather than the "Youtube" generation, I googled to find out the recent NHS news in diabetes as preparation for this editorial. Headlines included the weight-loss success in the NHS type 2 diabetes prevention trials, and the naming of the organisations who will provide dedicated coaches to continue expanding this initiative.

The major focus so far in 2019 appears to be on diabetes prevention. It is sensible to try and prevent a problem rather than just manage it. The NHS provides most diabetes care in the UK, and it faces serious difficulties both with funding overall and with trying to manage diabetes expenditure. Current figures suggest that diabetes and its complications cost 10% of the overall NHS budget and 9% of total hospital expenditure, with 10% of hospital beds being occupied by people with diabetes, who have a longer length of stay on average. Trying to prevent some of this expenditure makes sense, but if this happens, where will the savings go? Whilst I acknowledge the many demands on finite NHS resources, it would be tragic if these savings were not reinvested in other aspects of diabetes care, particularly those aspects that have growing numbers of patients along with a need for specialised and organised support. I refer, of course, to those with diabetes and dementia.

Both diabetes and dementia are becoming increasingly common, and thus the number of people with the two conditions together is increasing. Indeed, a proposed alternative name for Alzheimer's disease, which is partly caused by insulin resistance in the brain, is "type 3 diabetes" (de la Monte and Wands, 2008). Therefore, consideration of the personal and family impacts of these conditions on people's lives, and their resulting service needs, must be understood and reflected in our services.

In my experience, over the last 30 years, diabetes care has positively changed to respond to client needs and service priorities, but this explosion in diabetes and dementia is the latest in a line of difficulties facing clinicians who are already challenged by insufficient resources and rising demand. To change once again and keep the person central to our care requires several things: knowledge of the problems the individuals face, plus the realities of our services and their potential (or not) to change. It will also require enthusiasm and commitment of all those involved to make any resulting service change succeed.

Two articles in this issue of the Journal outline the challenges of managing the two conditions and provide insights into some service processes which may be of value. Jill Hill offers a broad and informed review of diabetes and dementia in general, how these conditions are predicted to increase, and how this combination adversely affects both outcomes and individualised care. Dementia is irreversible, and it has a close association with type 2 diabetes, possibly due to the latter's cardiovascular effects and associated insulin resistance, which reduces the flow of insulin via receptors into the brain. She highlights the need for early diagnosis of both conditions so that prompt treatment of diabetes can be commenced and any difficulties with self-care due to dementia can be determined, and care planned accordingly. She identifies cognitive impairments due to dementia that can affect diabetes self-management, and considers the impact of dementia on diabetes, and diabetes on dementia. This enables informed and realistic individualised management. She includes communication tips, useful in clinical practice, along with the use of advance statements, advance decision to refuse treatment statements and preferred place of care statements, all of which document patients' wishes ahead of the time when they may not be able to communicate them.

Drawing on his experience with the DIADEM project, Amar Puttanna considers the service needs of people with diabetes and dementia. His focus

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is on the secondary care setting, which he argues can offer better surveillance of blood tests and monitoring of the condition (inputs and outputs), which therefore will aid management planning. However, this will depend upon where in the hospital the person is being treated; we all know the frantic nature of emergency ward areas versus an elderly rehabilitation unit, so this can impact the quality and frequency of surveillance. Recognising the knowledge gap in managing people with the two conditions in hospital led to this project, the aim of which was to provide a clinical review with a focus on medication de-intensification and creating an individualised care plan. Members of the diabetes team, including a lead clinician, a senior house officer and DSNs, formed the DIADEM team, DIADEM being an acronym of the key elements of the process used in the review. Each stage of this process is briefly discussed, including practical advice useful in practice. The author also suggests a frailty assessment tool that can be helpful in assessing cognitive impairment.

While the article provides general pointers on setting up such a service, more detail specific to the DIADEM pathway and the methodology, tools and investment required to set it up will be of value to clinicians wanting to review their services, and are eagerly awaited. Outcome data are also being collected, and we look forward to seeing the results. ■

de la Monte SM, Wands JR (2008) Alzheimer's disease is type 3 diabetes – evidence reviewed. *J Diabetes Sci Technol* **2**: 1101–13