

Medical Diabetes

Incorrect diabetes diagnoses failing patients: expert



[Rachel Worsley](#) 6 September 2017



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Inadequate clinical guidelines are contributing to a disastrous rise in diabetes misdiagnosis, a visiting specialist warns.

Professor Andrew Hattersley, a professor of molecular medicine at the University of Exeter, UK, says growing numbers of patients are being misdiagnosed with type 2 instead of type 1 diabetes, or vice versa.

In a wide-ranging plenary talk at last week's ADS-ADEA conference in Perth he argued that diagnosis is being overlooked as a critical element of diabetes care.

Leading international guidelines actually provide little advice on diagnosis beyond identifying clinical features such as age of onset, he said.

An example was the role of C-peptide levels, which could provide a valuable clue to whether the patient had type 1 or type 2 disease.

“We’ve done a systematic review [and] there are only 10 papers ever written that compare clinical features with long-term C-peptide levels - and most of those are pretty

low-quality.

“Most of us use the clinical criteria to base our diagnosis without an evidence base behind it.”

Professor Hattersley said that most doctors assume certain clinical characteristics were sufficient to diagnose diabetes accurately but wrong decisions were increasingly made, leading to patients being put on inappropriate treatments.

He cited the case of UK Prime Minister Theresa May, who, at the age of 56 had been mistakenly diagnosed with type 2 diabetes after presenting with polyuria, polydipsia and weight loss.

Her glycaemic control failed to improve with metformin and sulfonylureas “until the penny dropped” and she was diagnosed correctly with type 1 diabetes. Since being on basal-bolus insulin, her glycaemic control had substantially improved.

“These errors are really common in those diagnosed between 30-60 years,” he said. “Around 7-14% diagnoses are wrong.”

In unpublished data from Exeter, Professor Hattersley has found that that most people diagnosed with type 1 diabetes actually had type 2 diabetes, and this was discovered after long-term follow-up of their C-peptide levels.

“That’s a pretty bad error rate,” he said.

At the same time, late-onset type 1 diabetes cases were getting lost among the rising number of type 2 cases in the same age group.

Advice to doctors should incorporate tests such as measuring islet autoantibodies and C-peptide levels alongside typical clinical features to increase diagnostic accuracy.

This will contribute to precision diabetes, where just like cancer, treatment can start to be tailored to the particular cause of the disease.

“No single criterion is enough on its own. But if you put them all together...you could 98% sure whether it is type 1 or type 2 diabetes.”

He recommends a free mobile app called Diabetes Diagnostics, which guide doctors as to the most appropriate diabetes diagnosis based on clinical features and tests.

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Rachel Worsley is a reporter with Medical Observer and the Specialist Updates sister publications. She has written for *The Sydney Morning Herald* and *The Conversation*, and was an executive producer on community radio station 2SER.
