

# Miscoding, misclassification and misdiagnosis



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*Acknowledgements: The Diabetes Classification Group is supported by NHS Diabetes and the Royal College of General Practitioners, and thanks to my research collaborators at St George's, University of London; University of Leicester; University of Exeter; and Imperial College London.*

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Accurate disease registers underpin high-quality primary care. If good-quality disease registers are maintained we can recall people with a particular condition and ensure they are managed according to best practice.

It has recently been recognised that there are problems with miscoding, misclassification and misdiagnosis of diabetes. This is important because different types of diabetes are managed according to different guidelines and educational support packages.

We carried out an investigation into errors in the coding of diabetes using anonymised data from two studies of routinely collected computer data (de Lusignan et al, 2010). Three main problems were identified and are outlined below.

## Problem 1: Miscoding

Miscoding is defined as vague or contradictory diagnosis codes. Around half of people with diabetes are miscoded (de Lusignan et al, 2010), predominantly using vague codes that do not map to one of the types of diabetes set out in the World Health Organization classification: type 1, requiring insulin for survival; type 2, insulin resistance and relative insufficiency; and other specific types (Alberti and Zimmet, 1998).

Miscoding is important because the Quality and Outcomes Framework (QOF) will not include these miscoded people in the diabetes population. This means that the miscoded people may miss out on any recalls based on the QOF population (for influenza immunisation, for example). At the national level, the apparently low prevalence of diabetes reported by QOF may reflect that many people with diabetes have not yet been coded appropriately.

## Problem 2: Misclassification

Misclassification is when a person is coded as having type 1 diabetes who really has type 2 diabetes, and was the most common error identified (de Lusignan et al, 2010).

These people were identified because they were not on insulin or were taking an oral antidiabetes drug (OAD) as well as insulin. We found that

between 10% of people with type 1 diabetes in one study, and 26% in another, should really have been labelled as type 2 diabetes.

Misclassification matters because there are different guidelines, educational programmes and some treatment options that are only open to people with particular types of diabetes.

## Problem 3: Misdiagnosis

Misdiagnosis can occur when people are labelled as having type 2 diabetes but there is no objective indication in their records that they have diabetes at all.

Diabetes was misdiagnosed in a third to a half of those with type 2 diabetes (de Lusignan et al, 2010). They had no objective evidence of diabetes in their computer record. For example, no therapy for diabetes, normal blood glucose (although most specimens are not labelled as to whether they are taken fasted or not) and no raised HbA<sub>1c</sub> level.

Misdiagnosis may result in medical harm, as these people could benefit from lifestyle or other advice. However, the implications of misdiagnosis are wastage of the individual's time, NHS resources on tests, and clinic time.

## Conclusion

There is scope to improve the quality of disease registers and, in turn, diabetes care. Clinicians can take three practical steps:

1. Conduct a search to identify the people miscoded with vague codes. (Search for people with diabetes using the C10 code, but who do not have C10E or C10F – the type 1 and type 2 codes recognised by QOF.)
2. Search for people with type 1 diabetes who are not prescribed insulin or who are prescribed insulin plus OADs.
3. Carefully review people with type 2 diabetes bearing in mind that many may have been incorrectly diagnosed.

Conducting an audit based on this study should not be too onerous. We estimate that between 60 and 65 errors will be flagged in a practice of 10 000 people. Please read the full article for further information. ■