

Should the term “diabetes resolved” ever be used? A perspective from retinopathy screening services



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It has become apparent to the retinopathy screening service in England that some practices are using the Read code of “diabetes resolved” after pancreatic or islet cell transplant, or after successful bariatric surgery or other intensive weight reduction, where these treatments have begun to normalise hyperglycaemia. An implication of this is that use of this code might be felt to mean that the person no longer needs to have annual screening for the macrovascular and microvascular complications of diabetes. This has a specific impact on the register of those people who require annual retinal screening, where it may mean that those with a “diabetes resolved” code no longer get invited.

Abnormal glucose metabolism leading to hyperglycaemia defines the disease of diabetes mellitus, but hyperglycaemia exists on a continuum. The levels of fasting glucose (at or above 7.0 mmol/L) and HbA_{1c} (at or above 48 mmol/mol [6.5%]) that are used to define the diagnosis of diabetes are chosen because they are the levels associated with the diabetes-specific complication of diabetic retinopathy. Levels of glucose below these diagnostic values but above “normal” levels (i.e. fasting glucose between 6.0 and 6.9 mmol/L and an HbA_{1c} of 42–48 mmol/mol [6.0–6.5%]) have been defined to indicate people who are at increased risk of developing type 2 diabetes. Levels of fasting glucose below 6 mmol/L and HbA_{1c} levels below 42 mmol/mol (6.0%) are defined as within the normal range. Successful management of diabetes with lifestyle, medication or a combination of the two, or with transplant or bariatric surgery may result in glucose levels below those diagnostic of diabetes, but should this be termed “good diabetes control”, “remission”, “resolution” or “cure”?

Published information

Very little scientific or actuarial evidence is available to guide this debate. A report from a

group of diabetes experts, convened under the auspices of the American Diabetes Association (ADA), was published in 2009 (Buse et al, 2009). Consensus was difficult to achieve in some areas and the published recommendations are not the official position of the ADA.

A report on the results from diabetic retinopathy screening in 119 people with diabetes after bariatric surgery showed that 18% developed new diabetic retinopathy or worsened pre-existing retinopathy. The authors concluded that the rapid improvement in glycaemic control following bariatric surgery is well recognised but that the potential for worsening of diabetic retinopathy is less commonly perceived. It is vital, therefore, to continue retinal screening in people with diabetes after bariatric surgery (Varadhan et al, 2012).

A recent publication on the association of an intensive lifestyle intervention with type 2 diabetes status uses the term “remission” (Gregg et al, 2012). It suggests that an intensive lifestyle intervention may be associated with a partial diabetes remission in a subset of people with type 2 diabetes, particularly those whose diabetes is of short duration, who have lower HbA_{1c} levels at entry and who have substantial weight loss or fitness change. In addition, the Chinese Da Qing study showed that retinopathy was prevalent in people at high risk of diabetes, with a 47% reduction in those receiving intensive lifestyle intervention (Gong et al, 2011).

Expert views

A draft of this comment piece was sent to diabetes experts in the UK who have been part of the Diabetes Classification working group that produced the consensus statement published by the Royal College of General Practitioners and NHS Diabetes (2011). Among those, 15 people replied (listed in the Acknowledgement section).

“There is evidence that the term ‘diabetes resolved’ is being used inappropriately by clinicians. This can result in people no longer being recalled for diabetes risk factor or complication screening even though they are at risk of such complications. The authors recommend that, where appropriate, the term ‘diabetes in remission’ be used and that ‘diabetes resolved’ is not used.”

All stated that they felt the term “diabetes in remission” was the appropriate term that should be used. None supported the continued use of “diabetes resolved”. All said that using the term “diabetes in remission” should mean that the person continues to receive annual surveillance for the microvascular and macrovascular complications of diabetes.

Our proposed definitions and recommendations for England

We propose that the definitions and recommendations presented below be applied in England. The term “people with diabetes” is used to apply to people who have had a correct diagnosis of diabetes made according to UK and WHO criteria (John and UK Department of Health Advisory Committee on Diabetes, 2012).

[1] People with diabetes on glucose-lowering therapy and who have an HbA_{1c} below 48 mmol/mol (6.5%)

People with diabetes who continue on glucose-lowering therapy and who have an HbA_{1c} below 48 mmol/mol (6.5%) should not have any additional coding attached unless they fulfil criteria in section [2] below. These people would be classed as having well-controlled diabetes and *should not* have a “diabetes resolved” Read code added.

[2] People with diabetes and an HbA_{1c} below 42 mmol/mol (6.0%) who: (a) have had bariatric surgery or pancreas or islet cell transplant, or very significant weight loss from dieting; and (b) who are taking no glucose-lowering therapy and are not undertaking ongoing surgical procedures

If a person’s glucose levels have remained below diagnostic criteria for diabetes for 1 year or more, he or she may be considered as being in partial remission but needs continuing annual screening for risk factors and complications. Thus, the “diabetes resolved” Read code should not be used. There is as yet no Read code that can be used for diabetes “in remission”.

There is no evidence to suggest if and when annual complications screening for people in this group could be altered to every 2 years or could

cease. In view of this, we recommend that until such evidence appears, annual complications screening should continue indefinitely.

Read codes to be used

“Diabetes resolved” Read codes are being used by clinicians to indicate any of the following:

- Administrative error (the individual was wrongly coded as having diabetes).
- Diagnostic error (the individual was wrongly diagnosed as having diabetes).
- There has been remission of diabetes.

A working party is being set up to recommend which Read codes should be used in each of these circumstances and this is due to report before the end of 2013.

Summary

There is evidence that the term “diabetes resolved” is being used inappropriately by clinicians. This can result in people no longer being recalled for diabetes risk factor or complication screening even though they are at risk of such complications. We recommend that, where appropriate, the term “diabetes in remission” be used and that “diabetes resolved” is not used. ■

Acknowledgement

Views were received from the following: Gerry Rayman, Dipesh Patel, Chris Walton, Russell Drummond, Rob Gregory, John McKnight, Kamlesh Khunti, Mark Savage, Ketan Dhatariya, Bob Ryder, Andy James, John Newell-Price, Martin Hadley-Brown, Garry John, and Simon de Lusignan.

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