

Are you mmol/mol compatible?

Since 2009, UK clinical laboratories have been dual reporting HbA_{1c} results, providing them in both per cent and the less familiar mmol/mol. With reporting in mmol/mol imminent, Ben Jones and Graham Ball report the findings of a survey on the healthcare community's readiness for the change.

By the time this reaches print, readers of *Diabetes Digest* will no longer be talking about HbA_{1c} in per cent, they will be talking in mmol/mol. At least, that was the theory.

In 2009, as part of a drive to achieve greater international standardisation of HbA_{1c} reporting, UK laboratories began dual reporting HbA_{1c} results, providing them in both the familiar DCCT (Diabetes Control and Complications Trial)-aligned (DCCT Research Group, 1993), and less familiar IFCC (International Federation of Clinical Chemistry and Laboratory Medicine; Consensus Committee, 2007), units (National Diabetes Support Team et al, 2009). It was widely publicised that the move to IFCC-only reporting would take place on 1 June 2011 (Collier et al, 2009), but a last-minute postponement until 30 September 2011 has now been announced (Diabetes UK, 2011). This extension of the dual reporting period will provide extra time for everyone to prepare for the change – probably a good thing given the results of a recent survey we conducted.

It was our perception – and one shared by a number of clinical colleagues – that many healthcare professionals do not see a direct benefit to the care of people with diabetes resulting from the change in HbA_{1c} reporting. It has been regarded as an unnecessary inconvenience at best, an abandonment of the evidence base for current blood glucose targets at worst.

To assess whether the diabetes community was ready for the change, we devised an online questionnaire that comprised 17 items to investigate the knowledge of, and opinions on, the IFCC system among healthcare professionals. The survey was rolled out in conjunction with five major UK diabetes organisations: Diabetes UK, Association of British Clinical Diabetologists, Young Diabetologists Forum, Primary Care Diabetes Society, Society for Endocrinology. The questionnaire was promoted by the participating organisations as part of their e-news bulletins and in print. One-hundred and three people completed the survey, 60% of whom were Diabetes UK members.


The survey began with questions assessing respondents' ability to convert HbA_{1c} results from one unit of measurement to the other, with five multiple-choice answers provided. In each case, a majority of respondents selected the correct answer – but only just. Up to 46% answered incorrectly on

any given conversion, and only 10% indicated that they felt confident about performing conversions unassisted. These conversion questions were prefaced with a request not to use conversion tables when answering; in reality, most (71% according to the survey responses) participants were easily able to access conversion tables and, from a practical point of view, this should help smooth the transition.

The questionnaire also looked at respondents' preference for the IFCC or DCCT units in various clinical scenarios. Perhaps unsurprisingly, the vast majority (80–90%) reported continuing to use DCCT units when discussing HbA_{1c} levels with colleagues and people with diabetes; a similar proportion considered the change to be confusing for both patients and physicians.* On this note, it was interesting to see that at this year's Diabetes UK Annual Professional Conference – which took place only 2 months prior to the originally anticipated date for the introduction of IFCC-only reporting – many posters and oral presentations continued to quote HbA_{1c} in DCCT units only.

The final area investigated by the survey aimed to determine whether respondents felt they understood the rationale behind the unit change. While it probably does not increase the IFCC units' popularity, it is important to emphasise that the advantages of the IFCC system are mainly in achieving international standardisation of HbA_{1c} reporting. Until recently, three competing and unaligned standardisation schemes meant that HbA_{1c} results reported in different countries were often not directly comparable. The worldwide acceptance of the IFCC method – which measures HbA_{1c} far more accurately than previous methods – means that IFCC-aligned results are equivalent wherever they are produced. However, within the UK, HbA_{1c} results produced across the country were and are already very consistent (as demonstrated over a number of years by the UK National External Quality Assessment Service [www.ukneqas.org.uk]). In our survey, 90% of respondents identified that improved standardisation of results was a major goal of the new system, but only 23% realised this was specifically at the international level.

*This question only asked about doctors' perceptions; a better question would have included all healthcare professionals involved in delivering diabetes care.



The introduction of IFCC HbA_{1c} reporting in 2009 was unquestionably controversial, and the results of this survey – along with the last-minute extension of dual reporting – indicate that the run-in period has not been as successful in familiarising clinicians with the new system as might have been hoped. Diabetes UK has updated its website with a handy calculator to convert between the two units (available at <http://bit.ly/ifA7bO>).

Experience with other clinical reporting unit changes (e.g. growth hormone) suggests that such moves are never popular, but most people adapt to the change over time. It is valuable for the laboratory, scientific and clinical communities to reflect on whether this change could have been handled better, learning from this experience in order to plan future unit changes more effectively. ■

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