Reviewer's report

Title: How to Analyze and Monitor Patients' Therapeutic Decisions in Self-Administered Insulin Therapy: Proposal of a Method and Indicators

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Reviewer: David Cavan

Reviewer's report:

This paper describes the implementation of a guideline for insulin dose adjustment in a computer system, with the aim of measuring the appropriateness of patients' therapeutic decisions. It does this by comparing the actual dose given with the revised dose recommended by the guideline. The reported data show that nearly 50% of doses given were classed as over or undertreatment or extreme disagreement. No data were presented on the resulting capillary blood glucose values to show whether the actual dose given was appropriate or effective, apart from data from one subject (fig 4) whose actual dose was more appropriate the the guideline dose. The high discrepancy between actual and guideline dose calls into question the validity of the guideline, which takes no account of carbohydrate intake (the most important factor determining blood glucose levels), and which relies on the previous day's experience to determine dosage. This may not be appropriate: a hypoglycaemia the previous day may have resulted from exercise or reduced carbohydrate intake, and if these were not to be repeated, the recommended dose reduction would be inappropriate.

The authors' conclusion that actual doses may be more appropriate than the guideline dose negates the usefulness of a system which records deviation from the guidelines. In summary this paper describes a system which records information which is of little clinical use. While such systems may have applications in other disease areas, the authors have not convinced this reviewer that it has a role in type 1 diabetes.

Level of interest: An article of insufficient interest to warrant publication in a scientific/medical journal

Quality of written English: Acceptable

Statistical review: No, the manuscript does not need to be seen by a statistician.

Declaration of competing interests:

I declare that I have no competing interests