Technical Aspects of the Parkes Error Grid

Andreas Pfützner, M.D., Ph.D.,1 David C. Klonoff, M.D.,2 Scott Pardo, Ph.D.,3 and Joan L. Parkes, Ph.D.3

Abstract

Background:
The Parkes error grid, which was developed in 1994, presented performance zones for blood glucose (BG) monitors with borders that were not mathematically specified at the time the grid was published.

Methods:
In this article, we (1) review the history of the Parkes error grid, (2) present the never-before-published exact coordinates and specifications of the grid so that others may produce an exact replica of the original grid, and (3) discuss our suggestions how this metric should be applied.

Results:
The new ISO15197:2013 guideline for system accuracy assessment of BG meters for patient self-measurement incorporates use of this metric for defining acceptable accuracy of BG monitors. It is expected that, for regulatory purposes, this document will stipulate that the error grid version for type 1 diabetes should be applied with the caveat that only the A zone represents acceptable accuracy.

Conclusions:
It remains to be seen by how much the new error grid, which is currently being developed by the Food and Drug Administration/Diabetes Technology Society/American Diabetes Association/The Endocrine Society/Association for Advancement of Medical Instrumentation, will deviate from the Parkes error grid.


Author Affiliations: 1IKFE—Institute for Clinical Research and Development, Mainz, Germany; 2Mills-Peninsula Health Services, San Mateo, California; and 3Bayer Diabetes Care, Tarrytown, New York

Abbreviations: (BG) blood glucose, (ISO) International Organization for Standardization

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Corresponding Author: Andreas Pfützner, M.D., Ph.D., IKFE—Institute for Clinical Research and Development, Parcustr. 8, D-55116 Mainz, Germany; email address AndreasP@IKFE.de