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SYMPOSIUM

Creating Low Vision and Nonvisual Instructions for Diabetes Technology: An Empirically Validated Process

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Abstract

Introduction:

Nearly 20% of the adults with diagnosed diabetes in the United States also have visual impairment. Many individuals in this group perform routine diabetes self-management tasks independently, often using technology that was not specifically designed for use by people with visual impairment (e.g., insulin pumps and pens). Equitable care for persons with disabilities requires providing instructions in formats accessible for nonreaders. However, instructions in accessible formats, such as recordings, braille, or digital documents that are legible to screen readers, are seldom available.

Method:

This article includes a summary of existing guidelines for creating accessible documents. The guidelines are followed by a description of the production of accessible nonvisual instructions for use of insulin pens used in a study of dosing accuracy. The study results indicate that the instructions were used successfully by 40 persons with visual impairment.

Discussion and Conclusions:

Instructions in accessible formats can increase access to the benefits of diabetes technology for persons with visual impairment. Recorded instructions may also be useful to sighted persons who do not read well, such as those with dyslexia, low literacy, or who use English as a second language. Finally, they may have important benefits for fully sighted people who find it easier to learn to use technology by handling the equipment while listening to instructions. Manufacturers may also benefit from marketing to an increased pool of potential users.

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Abbreviations: (NFB) National Federation of the Blind, (NIMAS) National Instructional Materials Accessibility Standards, (NLS) National Library Service

Keywords: blindness, diabetes technology, low literacy, patient education, self-management, visual impairment

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