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[Intervention Review]

# Computer-assisted versus oral-and-written family history taking for identifying people with elevated risk of type 2 diabetes mellitus

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## ABSTRACT

### Background

Diabetes is a chronic illness characterised by insulin resistance or deficiency, resulting in elevated glycosylated haemoglobin A1c (HbA1c) levels. Because diabetes tends to run in families, the collection of data is an important tool for identifying people with elevated risk of type2 diabetes. Traditionally, oral-and-written data collection methods are employed but computer-assisted history taking systems (CAHTS) are increasingly used. Although CAHTS were first described in the 1960s, there remains uncertainty about the impact of these methods on family history taking, clinical care and patient outcomes such as health-related quality of life.

### Objectives

To assess the effectiveness of computer-assisted versus oral-and-written family history taking for identifying people with elevated risk of developing type 2 diabetes mellitus.

### Search methods

We searched *The Cochrane Library* (issue 6, 2011), MEDLINE (January 1985 to June 2011), EMBASE (January 1980 to June 2011) and CINAHL (January 1981 to June 2011). Reference lists of obtained articles were also pursued further and no limits were imposed on languages and publication status.

### Selection criteria

Randomised controlled trials of computer-assisted versus oral-and-written history taking in adult participants (16 years and older).

### Data collection and analysis

Two authors independently scanned the title and abstract of retrieved articles. Potentially relevant articles were investigated as full text. Studies that met the inclusion criteria were abstracted for relevant population and intervention characteristics with any disagreements resolved by discussion, or by a third party. Risk of bias was similarly assessed independently.

### Main results

We found no controlled trials on computer-assisted versus oral-and-written family history taking for identifying people with elevated risk of type 2 diabetes mellitus.

**Authors' conclusions**

There is a need to develop an evidence base to support the effective development and use of computer-assisted history taking systems in this area of practice. In the absence of evidence on effectiveness, the implementation of computer-assisted family history taking for identifying people with elevated risk of type 2 diabetes may only rely on the clinicians' tacit knowledge, published monographs and viewpoint articles.

## PLAIN LANGUAGE SUMMARY

**Computer-assisted versus oral-and-written family history taking for identifying people with elevated risk of type 2 diabetes mellitus**

We know that diabetes runs in families. For this reason, healthcare professionals routinely take family histories to help them identify people who are at high risk of developing diabetes. Patient histories may be recorded manually by using oral-and-written methods or via a computer-assisted history taking system. Computer-assisted history taking systems can be used by healthcare professionals, or directly by patients, as in the case of, for example, pre-consultation interviews. They can be used remotely, for example via the Internet, telephone or on-site. They draw on a range of technologies such as personal computers, personal digital assistants, mobile phones and electronic kiosks; data input can be mediated via, amongst others, keyboards, touch screens and voice-recognition software. Although computer-assisted history taking methods were first used in the 1960s we are still not certain about their effects on history taking in people with a high risk to develop diabetes. Therefore, we reviewed the literature to find studies that compare the effects of oral-and-written methods to those of computer-assisted family history taking on the quality of collected data as well as on allowing us to identify people who are at risk of developing diabetes. In this occasion we found no randomised controlled trials that investigated the above. We therefore suggest that more primary research is required in this area to allow an informed decision to be made by physicians, patients and policymakers.