Delay in Diagnosis of Diabetes Is Not the Patient's Fault

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Journal Title: Diabetes Care
Volume: Volume 33, Number 1
Publisher: American Diabetes Association | 2010-01, Pages e10-e10
Type of Work: Article | Final Publisher PDF
Publisher DOI: 10.2337/dc09-1129
Permanent URL: http://pid.emory.edu/ark:/25593/fz9bp

Final published version: http://care.diabetesjournals.org/content/33/1/e10

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Accessed March 5, 2019 2:10 AM EST
**OBSERVATIONS**

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Previous reports have suggested that onset of diabetes occurs 4–7 years before clinical diagnosis (1). However, it is not known whether delay in diagnosis reflects patient factors, such as lack of medical visits or glucose measurements, or provider factors, such as clinical inertia (2).

We reviewed the charts of 50 patients selected for delayed diagnosis at the Atlanta Veterans Affairs (VA) Medical Center. Date of first diabetes range hyperglycemia (D1) was defined by outpatient fasting plasma glucose (0630–1000 h) ≥126 mg/dl, random glucose (1001–1800 h) ≥200 mg/dl, 2-h post–oral glucose tolerance test (OGTT) glucose >200 mg/dl, or A1C >6.5%. Date of second diabetes range hyperglycemia (D2) was defined by having any two of these values or any value twice. The date of diagnosis was defined by initial use of ICD-9 code 250.xx at a primary care visit, any use of the code twice, and/or initial prescription of a diabetes drug—criteria (clinical inertia) as the cause of delay.

This review included only 50 male Atlanta VA Medical Center patients and therefore may have limited generalizability. However, the findings suggest that practitioners need to improve their response to glycemic indexes that indicate that diabetes is likely, particularly random plasma glucose ≥125 mg/dl (4) and A1C ≥6.5% (5). Although OGTTs were rare, abnormal results were followed quickly by a diagnosis, implying that elevated glucose levels may also be more likely to prompt diagnosis if tests are ordered for screening rather than routine chemistry. Further analysis of the basis for the delay in diagnosis may lead to better approaches to aid recognition of diabetes early in its natural history.

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DOI: 10.2337/dc09-1129

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**Acknowledgments—** This work was supported in part by National Institutes of Health Award DK066204 and VA Health Services Research and Development Awards SHP 08-144 and IIR 07-138.

No potential conflicts of interest relevant to this article were reported.

We thank Christine Jasien, Johnita Byrd-Sellers, Jane Caudle, and Circe Tsui (systems and database support), as well as Martha Forrester, Jennifer Leong, Margaret Jenkins, and Jennifer Michaels (research nurse and research coordinator support) for their assistance.

**References**


