



COMMENT ON EVRON ET AL.

## Changes in Screening Practices for Prediabetes and Diabetes Since the Recommendation for Hemoglobin A<sub>1c</sub> Testing. *Diabetes Care* 2019;42:576–584

*Diabetes Care* 2019;42:e102 | <https://doi.org/10.2337/dc19-0375>

Liubov Stankevich,<sup>1</sup>  
Jean-Philippe Galhau,<sup>1</sup>  
Roman Kuvshinov,<sup>1</sup> Catherine Helmer,<sup>2</sup>  
Pauline Poupon,<sup>2,3</sup> Laurence Blanco,<sup>3</sup>  
Marie Monlun,<sup>3</sup> Ninon Foussard,<sup>3</sup>  
Kamel Mohammedi,<sup>2,3</sup> and  
Vincent Rigalleau<sup>2,3</sup>

We were interested by the recent article from Evron et al. (1). Based on the results of 12,772 eligible patients, the authors reported a 78% screening rate during 2010–2013 ( $N = 9,941$  screened), which is higher than the reported 69% (2) before the 2010 American Diabetes Association HbA<sub>1c</sub> screening recommendation. In France, as in some other countries (3), HbA<sub>1c</sub> is not recommended for screening, but it is popular among general practitioners as the 5.7–6.5% thresholds (4) are mentioned on laboratory reports. How much does this HbA<sub>1c</sub>-based screening expand, and what are the results?

The LABEXA consortium is the biggest laboratory group in New Aquitaine; it comprises three laboratories and 77 blood collecting points distributed in the area and receives 10,000 patients per day. We collected indications for (screening or monitoring or unknown) and results of the first HbA<sub>1c</sub> analysis performed by LABEXA, from 1 April 2017 to 1 May 2018.

For the large majority ( $N = 21,102/30,383$ ; 69.45%) of patients who had a first HbA<sub>1c</sub> analysis, the screening purpose was reported; only 10.96% of HbA<sub>1c</sub> analyses were done for the monitoring of known diabetes, and 19.59% were done for an unknown reason. The HbA<sub>1c</sub> results were  $5.5 \pm 0.7\%$  in case of screening,  $6.7 \pm 1.6\%$  in case of monitoring, and

$5.6 \pm 1.0\%$  in case of unknown reason, which suggests that most of unknown indications for analysis were in fact screenings. Almost 90% of the first HbA<sub>1c</sub> analyses performed in outpatient setting were therefore indicated for screening people for diabetes and prediabetes, an unexpected finding because this is not recommended in France.

This screening identified diabetes ( $\text{HbA}_{1c} \geq 6.5\%$ ) for 4.1% of our population and prediabetes ( $5.7\% < \text{HbA}_{1c} < 6.5\%$ ) for 21.3%; abnormal results therefore concerned 25.4% of our participants, which is much less than the 63% proportion screened with HbA<sub>1c</sub> by Evron et al. (1), who usually based their screening on glycemia and more likely used HbA<sub>1c</sub> for higher-risk patients, as reflected by their data of mean HbA<sub>1c</sub>  $8.2 \pm 2.3\%$  for positive screenings of diabetes. The prevalence of diabetes was estimated to be about 2.8% to 4.5% in the adult population of Aquitaine in year 2009 (5); thus, the identification of 4.1% of diabetes in our population shows that screening based on HbA<sub>1c</sub> can be effective. The 21.3% proportion of prediabetes based on HbA<sub>1c</sub> in our population is important, but the ratio of five prediabetes cases to one diabetes case cannot be considered unexpected: this ratio was at three to one in the study by Evron et al. (1).

The use of HbA<sub>1c</sub> for diabetes screening in general practice, as proposed by

the American Diabetes Association, is rapidly expanding in France, where it has led to a diagnosis of diabetes or prediabetes for about 25% of the screened population—a good yield. Screening 21,102 people per year for diabetes in a population of 6 million can, however, not be considered a sufficient action for public health, and it remains to be determined whether these frequent abnormalities appropriately led to dietary and physical activity counseling, as well performed for the majority of participants in the study by Evron et al. (1).

**Duality of Interest.** L.S., J.-P.G., and R.K. are employees of LABEXA. No other potential conflicts of interest relevant to this article were reported.

### References

1. Evron JM, Herman WH, McEwen LN. Changes in screening practices for prediabetes and diabetes since the recommendation for hemoglobin A<sub>1c</sub> testing. *Diabetes Care* 2019;42:576–584
2. Ealovega MW, Tabaei BP, Brandle M, Burke R, Herman WH. Opportunistic screening for diabetes in routine clinical practice. *Diabetes Care* 2004;27:9–12
3. Higgins T. HbA<sub>1c</sub> for screening and diagnosis of diabetes mellitus. *Endocrine* 2013;43:266–273
4. American Diabetes Association. Diagnosis and classification of diabetes mellitus. *Diabetes Care* 2010;33(Suppl. 1):S62–S69
5. Ricci P, Blotière PO, Weill A, et al. Diabète traité: quelles évolutions entre 2000 et 2009 en France? *Bull Epidemiol Hebd* 2010;42-43:425–432

<sup>1</sup>LABEXA Group (EXALAB, LBA, SEALAB), Bordeaux, France

<sup>2</sup>Population Health Research Center, Inserm UMR 1219, Université de Bordeaux, Bordeaux, France

<sup>3</sup>Endocrinology-Nutrition Department, Centre Hospitalier Universitaire de Bordeaux, Université de Bordeaux, Bordeaux, France

Corresponding author: Vincent Rigalleau, [vincent.rigalleau@chu-bordeaux.fr](mailto:vincent.rigalleau@chu-bordeaux.fr)

© 2019 by the American Diabetes Association. Readers may use this article as long as the work is properly cited, the use is educational and not for profit, and the work is not altered. More information is available at <http://www.diabetesjournals.org/content/license>.