

We use cookies to enhance your experience on our website. By clicking 'continue' or by continuing to use our website, you are agreeing to our use of cookies. You can change your cookie settings at any time.

[Continue](#)  
[Find out more](#)



**CEU**  
CLINICAL ENDOCRINOLOGY UPDATE  
**2019**  
MIAMI, FL  
SEPT 5-7, 2019  
SEATTLE, WA  
SEPT 19-21, 2019

RECEIVE THE LATEST UPDATES  
IN THE CLINICAL PRACTICE  
OF ENDOCRINOLOGY.



All The Journal of



Advance

Clinical

Endocrinology &

Metabolism

## **Proximal HbA<sub>1C</sub> Level and First Hypoglycemia Hospitalization in Adults With Incident Type 2 Diabetes**

Victor W Zhong, Juhaeri Juhaeri, Stephen R Cole, Christina M Shay, Penny Gordon-Larsen, Evangelos Kontopantelis, Elizabeth J Mayer-Davis 

*The Journal of Clinical Endocrinology & Metabolism*, Volume 104, Issue 6, June 2019, Pages 1989–1998, <https://doi.org/10.1210/jc.2018-01402>

**Published:** 03 January 2019    **Article history** 

 Cite     Permissions     Share 

### **Abstract** **Context**

Hemoglobin A<sub>1C</sub> (HbA<sub>1C</sub>) is an important predictor of severe hypoglycemia.

### **Objective**

To determine the association of proximal HbA<sub>1C</sub> level with first hypoglycemia hospitalization (HH) in adults with incident type 2 diabetes (T2D).

## Design, Setting, and Participants

A nested case-control study was designed using linked data from the Clinical Practice Research Datalink and Hospital Episode Statistics in England in 1997 to 2014. The first hypoglycemia event as primary diagnosis for hospitalization after T2D diagnosis was identified. Proximal HbA<sub>1C</sub> was measured within 90 days before the first HH.

## Main Outcome Measure

OR for developing HH.

## Results

The association of proximal HbA<sub>1C</sub> level with first HH was similar between HbA<sub>1C</sub> levels of 6.0% (OR, 1.54; 95% CI, 1.12 to 2.11) and 9.0% [1.48 (1.01 to 2.17)] compared with the reference HbA<sub>1C</sub> level of 7.0%. For proximal HbA<sub>1C</sub> level of 4.0% to 6.5%, every additional 0.5% increase in HbA<sub>1C</sub> was associated with lower first HH risk, with ORs (95% CI) ranging between 0.37 (0.20 to 0.67) and 0.86 (0.76 to 0.98). For proximal HbA<sub>1C</sub> level of 8.0% to 11.5%, every additional 0.5% increase in HbA<sub>1C</sub> was associated with higher first HH risk, with ORs (95% CI) ranging between 1.16 (1.04 to 1.29) and 1.34 (1.18 to 1.52). The U-shaped association between proximal HbA<sub>1C</sub> level and first HH did not exist among current sulfonylurea users but persisted among current insulin users ( $P_{\text{interaction}} = 0.002$ ). Among current noninsulin nonsulfonylurea users who had a first HH, 78% took insulin or sulfonylureas before the HH.

## Conclusions

Having either poor or near-normal HbA<sub>1C</sub> was associated with a higher risk of first HH within 3 months in T2D.

**Issue Section:** [Diabetes, Pancreatic and Gastrointestinal Hormones](#),

Copyright © 2019 Endocrine Society

You do not currently have access to this article.

## Sign in

Don't already have an Oxford Academic account? [Register](#)

### Oxford Academic account

Email address / Username 

### Endocrine Society members



[Sign in via society site](#)

Password

[Forgot password?](#)  
[Don't have an account?](#)

---

**Sign in via your Institution**

[Sign in](#)

## Purchase

---

[Subscription prices and ordering](#)

## Short-term Access

To purchase short term access, please sign in to your Oxford Academic account above.

Don't already have an Oxford Academic account? [Register](#)

Proximal HbA1C Level and First Hypoglycemia Hospitalization in Adults With Incident Type 2 Diabetes - 24 Hours access

EUR €36.00

GBP £28.00

USD \$45.00

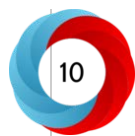
**CEU 2019**  
CLINICAL ENDOCRINOLOGY UPDATE

**MIAMI, FL**      **SEATTLE, WA**  
SEPT 5-7, 2019      SEPT 19-21, 2019

ENHANCE YOUR PATIENT CARE  
WITH THE LATEST UPDATES  
IN CLINICAL ENDOCRINOLOGY.

ENDOCRINE SOCIETY

The advertisement features a blue and orange color scheme. The top part has the text 'CEU 2019' in large blue letters, followed by 'CLINICAL ENDOCRINOLOGY UPDATE' in smaller blue letters. Below that, the locations and dates for two events are listed: 'MIAMI, FL SEPT 5-7, 2019' and 'SEATTLE, WA SEPT 19-21, 2019'. The bottom part of the ad has a blue background with the text 'ENHANCE YOUR PATIENT CARE WITH THE LATEST UPDATES IN CLINICAL ENDOCRINOLOGY.' in orange and white. At the bottom, the 'ENDOCRINE SOCIETY' logo is displayed in white on a blue background. The background of the ad shows a cityscape at night and a road leading to a city.



[View Metrics](#)

#### Email alerts

[New issue alert](#)

[In progress issue alert](#)

[Advance article alerts](#)

[Article activity alert](#)

[Receive exclusive offers and updates  
from Oxford Academic](#)

#### Related articles in

[Google Scholar](#)

#### Citing articles via

[Google Scholar](#)

[CrossRef](#)

**Latest** | **Most Read** | **Most Cited** |

Association between urinary triclosan with bone mass density and osteoporosis in the US adult women, 2005-2010

Genomic and transcriptomic characterization of papillary microcarcinomas with lateral neck lymph node metastases

Adrenal insufficiency after unilateral adrenalectomy in primary aldosteronism – long-term outcome and clinical impact

Recovery of the hypothalamo-pituitary-adrenal axis following trans-sphenoidal adenomectomy for non-ACTH secreting macroadenomas

Impaired 11 $\beta$ -Hydroxysteroid

Dehydrogenase Type 2 in Glucocorticoid Resistant Patients

# CEU2019

CLINICAL ENDOCRINOLOGY UPDATE

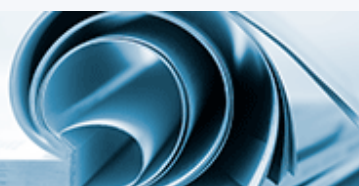
MIAMI, FL  
SEPT 5-7, 2019

SEATTLE, WA  
SEPT 19-21, 2019

RECEIVE THE LATEST UPDATES  
IN THE CLINICAL PRACTICE  
OF ENDOCRINOLOGY.



## WHY PUBLISH WITH THE ENDOCRINE SOCIETY?



ENDOCRINE  
SOCIETY

About The Journal of Clinical Endocrinology & Metabolism

About the Endocrine Society

Editorial Board

Author Guidelines

Contact Us

Facebook

Twitter

LinkedIn

Purchase

Recommend to your Library

Advertising and Corporate Services

Journals Career Network



Online ISSN 1945-7197

Print ISSN 0021-972X

Copyright © 2019 Endocrine Society

About Us

Contact Us

Careers

Help

Access & Purchase

Rights & Permissions

Open Access

### Resources

Authors

Librarians

Societies

Sponsors & Advertisers

Press & Media

### Connect

Join Our Mailing List

OUPblog

Twitter

Facebook

YouTube

Tumblr

### Explore

Shop OUP Academic

Oxford Dictionaries

Oxford Index

Epigeum

OUP Worldwide

Agents

University of Oxford

*Oxford University Press is a department of the University of Oxford. It furthers the University's objective of excellence in research, scholarship, and education by publishing worldwide*



Copyright © 2019 Oxford University Press [Cookie Policy](#) [Privacy Policy](#) [Legal Notice](#) [Site Map](#)  
[Accessibility](#) [Get Adobe Reader](#)