Hypoglycemia Prevention

Fast Facts About Hypoglycemia

Insulin is the second most common drug associated with emergency department visits for adverse drug effects.(1)

Hospital admissions for hypoglycemia among Medicare beneficiaries increased by 22% from 1999-2010, in contrast to a 40% decrease in the rate of hyperglycemia admissions. (2)

Severe hypoglycemia may result in serious consequences like coma, seizures, and even death.(3)

Evidence is accumulating that even mild hypoglycemic events have consequences, including lower health related quality of life, higher mortality, increased risk for cardiovascular disease, serious fractures related to falls, and automobile crashes.(4,5,6)



Good news! Hypoglycemia can be prevented. Use shared decision making to individualize A1C goals for patient safety.



What are some of the risk factors? Previous Low health hypoglycemia tood literacy or insufficiency numeracy Housing situation (e.g., homeless) Visual impairment Older age **Cognitive Impairment**



Difficulty in self management (e.g., poor dexterity)



Why is it Important to Individualize Glycemic Goals?

- Tight control of blood glucose may increase the incidence of #1 hypoglycemia. Additionally, not all patients recognize and report symptoms.
 - Risk factors for hypoglycemia should be taken into consideration
- to prevent adverse drug events and longer term consequences of #2 hypoglycemia.

Individualizing A1C Goals

Scientific evidence supports individualizing glycemic goals based on life expectancy, existing chronic comorbid conditions, and patient preferences. This is the basis for the American Diabetes Association (ADA) Standards of Medical Care in Diabetes and the ADA/American Geriatrics Society guidelines, as well as the Department of Veterans Affairs and Department of Defense (VA/DOD) guidelines.(7)



7.0-7.5 in healthy adults with long life expectancy

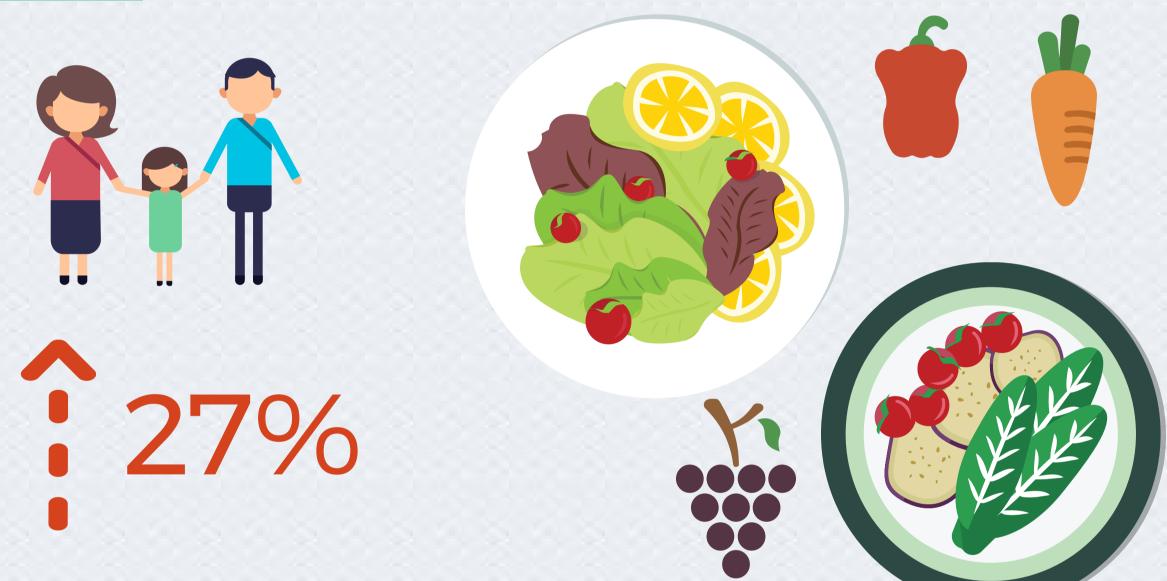
7.5-8.0 in those with moderate co-morbidity and a life expectancy <10 years

8.0-9.0 in those with multiple morbidities and shorter life expectancy

What else should you consider about your patients?

Food Insecurity





1 in 7 U.S. households do not have adequate access to food.(8)

Visits to the emergency department because of hypoglycemia go up 27% in the last week of the month versus the first week in low-income populations.(9)

Social Environment

Ask patients if there are changes in their life that may impact their disease management and quality of life.

It is also important to identify and connect patients to community resources (e.g., housing, education, financial) and engage social services when necessary.

Housing Income

What else can you do to support your patients?

Ask about low blood glucose symptoms at every encounter



Review medication regimen at every visit



Individualize A1C goals





Utilize telephone/remote monitoring

Summing it up.....

Acknowledge the patient as the expert



Discuss patient goals and preterences

- 1. Keep patients and families involved
- 3. Engage in shared decision making



2. Individualize glycemic goals

4. Identify social needs and comorbidities

ADDITIONAL RESOURCES

National Diabetes Education Program

- Federally funded program sponsored by the U.S. Department of Health and Human Services, National Institutes of Health, and the Centers for Disease Control and Prevention and includes over 200 partners at the federal, state, and local levels, working together to reduce the morbidity and mortality associated with diabetes. Web link: www.ndep.nih.gov & www.yourdiabetesinfo.org

National Diabetes Information Clearinghouse

- Service of the National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK). The NIDDK is part of the National Institutes of Health of the U.S. Department of Health and Human Services. The Clearinghouse provides information about diabetes to people with diabetes and to their families, health care professionals, and the public. Web link: www.diabetes.niddk.nih.gov

<u>Veterans Affairs/Department of Defense Clinical Practice</u> <u>Guidelines</u>

- Provides materials promoting awareness about low blood glucose to Veterans and clinicians. Strong emphasis on the importance of partnering and sharing decision making between patients and whole healthcare team. Web link:

www.healthquality.va.gov/guidelines/CD/diabetes

<u>AHRQ Health Literacy Universal</u>

- Precautions Toolkit Web link: www.ahrq.gov/literacy



References

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(5) Johnston, S. S., Conner, C., Aagren, M., Ruiz, K., & Bouchard, J. (2012). Association between hypoglycaemic events and fall-related fractures in Medicare-covered patients with type 2 diabetes. Diabetes, Obesity and Metabolism, 14(7), 634-643.

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(7) See http://www.choosingwisely.org/clinicianlists/american-geriatricssociety-medication-tocontrol-type-2-diabetes/ for more information on Choosing Wisely Campaign and AGS recommendations.

(8) See https://www.ers.usda.gov/topics/foodnutrition-assistance/food security-in-the-us/keystatistics-graphics.aspx for more information on USDA food security statistics.

(9) Seligman, H. K., Bolger, A. F., Guzman, D., López, A., & Bibbins-Domingo, K. (2014). Exhaustion of food budgets at month's end and hospital admissions for hypoglycemia. Health Affairs, 33(1),116-123.

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