PARTNERSHIP TO FIGHT CHRONIC DISEASE

Making the Diabetes Heart Connection: Awareness, Collaboration Needed to Improve Health

April 2017

Introduction

Diabetes affects 29 million --one in eleven-- people in the U.S. and at least doubles their risk of heart failure, heart attack, stroke, or other cardiovascular complications. Less than half of them, however, are aware that they are at a much higher risk for cardiovascular disease complications. Lack of awareness prevents people with diabetes, their families, and their health care providers from addressing risks and improving health. Preventable deaths are tragic evidence of the missed opportunities to improve the overall health of people living with diabetes. A national awareness effort is an important public statement of the problem and commitment to addressing it.

Connecting Diabetes and Cardiovascular Disease

Diabetes, particularly type 2 diabetes, and cardiovascular diseases are present in the United States at epidemic proportions. Diabetes affects 29.1 million people in the U.S., including 8.1 million people who are undiagnosed.[1] Another 86 million more -- one in three adults -- have prediabetes and 15-30 percent will develop diabetes within five years without change.[2] The CDC estimates that currently one in three people in the U.S. will develop diabetes in their lifetime.[3]

Cardiovascular disease remains the leading cause of death in the U.S. in general, but exacts an even heavier toll among people with diabetes. In fact, nearly seven in ten people with diabetes age 65 and older will die from a heart attack and one in five will die of stroke.[4] People with type 2 diabetes have twice the risk of having a cardiovascular-related hospitalization compared to people without type 2 diabetes.[5] The co-occurrence of diabetes and cardiovascular disease contributes to reduced life expectancy of 5-15 years, depending on the age at diabetes diagnosis.[6] Recognizing the common occurrence of diabetes and cardiovascular disease, the American Heart Association lists diabetes as one of seven major controllable risk factors for cardiovascular disease, along with smoking, physical activity, and obesity among others.

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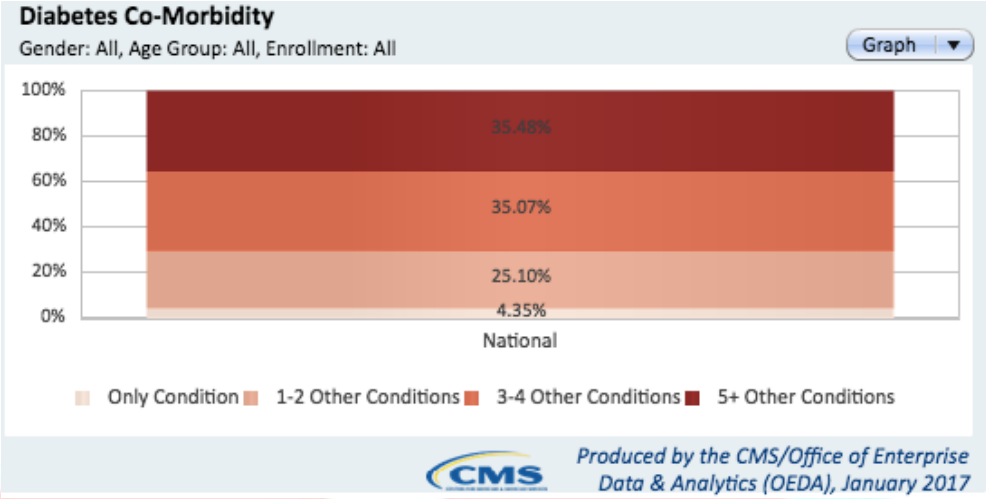
[1] CDC, Info graphic: A Snapshot of Diabetes in America, available online at http://www.diabetes.org/diabetes-basics/statistics/cdc-infographic.html.
[2] Ibid.
[3] Ibid.
[4] American Heart Association, Cardiovascular Disease and Diabetes, updated April 17, 2017. Available online at http://www.heart.org/HEARTORG/Conditions/More/Diabetes/WhyDiabetesMatters/Cardiovascular-Disease-Diabetes_UCM_313865_Article.jsp/#.WNvSfRIrJZ0.
[5] Coutinho AO, Raju A, Wang W, et al. Incremental Burden of Type 2 Diabetes Mellitus in Patients Experiencing Cardiovascular Hospitalizations (2016). Summary available online at https://www.t2dwithcvd.com/studies/t2d-cardiovascular-hospitalizations.
[6] Mannucci E, Dicembrini I, Lauria A, et al., Is Glucose Control Important for Prevention of Cardiovascular Disease in Diabetes? Diabetes Care 2013; 36(Supp. 2): S259-S263. Available online at http://care.diabetesjournals.org/content/36/Supplement_2/S259.



The interrelationship between having diabetes and developing cardiovascular disease is not well known, even among people living with diabetes, which greatly prevents them from lowering their risks. Greater awareness and better education of patients, providers, policymakers and others of this coexistence is an important step toward saving lives and reducing the burden of diabetes with cardiovascular disease. Validation of such efforts can be drawn from new evidence-based guidelines for patients with diabetes and cardiovascular disease, including the American Diabetes Association's Standards of Medical Care in Diabetes in 2017[7] and the European Society of Cardiology Guidelines in 2016.[8]

Cardiovascular Complications Add Significantly to Costs

The CDC estimates that diabetes costs the United States $245 billion a year in medical costs and economical losses from premature death and disability.[9] The medical costs for people with diabetes are twice as high as the medical costs for someone without diabetes.[10] Overall, nearly one out of five health care dollars we spend is associated with caring for someone with diabetes.[11] Of the annual medical costs incurred by a person with diabetes, almost a third is related to diabetes and its related complications with cardiovascular-related complications contributing 28 percent of those costs.[12]

In making people more aware of the prevalent coexistence of diabetes and cardiovascular disease, a measurable impact could be made on these costs. Potential prevention of diagnosis, reductions in hospitalizations and other healthcare costs are all valuable opportunities to better address these chronic conditions.

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[7] American Diabetes Association, Standards of Medical Care in Diabetes – 2017, Diabetes Care. 2017; 40(Supp. 1-135). Available online at http://professional.diabetes.org/sites/professional.diabetes.org/files/media/dc_40_s1_final.pdf.

[8] European Society of Cardiology, 2016 ESC Guidelines for the Diagnosis and Treatment of Acute and Chronic Heart Failure. EU Heart J 2016; 37: 2129-2200. Available online at http://www.siacardio.com/wp-content/uploads/2015/01/Guia-2016-ESC-ICC.pdf.

[9] CDC, Info graphic: A Snapshot of Diabetes in America, available online at http://www.diabetes.org/diabetes-basics/statistics/cdc-infographic.html.

[10] Ibid.

[11] American Diabetes Association, The Staggering Costs of Diabetes. Available online at http://www.diabetes.org/diabetes-basics/statistics/infographics/adv-staggering-cost-of-diabetes.html.

[12] Sander SD, Lunacsek O, Stafkey-Mailey D, et al. "Disproportionately High Direct Economic Burden of Type 2 Diabetes Mellitus Patients with Comorbid Cardiovascular Disease," 2016 Poster. Available online at https://www.t2dwithcvd.com/pdfs/PC-00194%20AMCP%20Poster%203.1.pdf.

Vulnerable Populations Disproportionately Affected

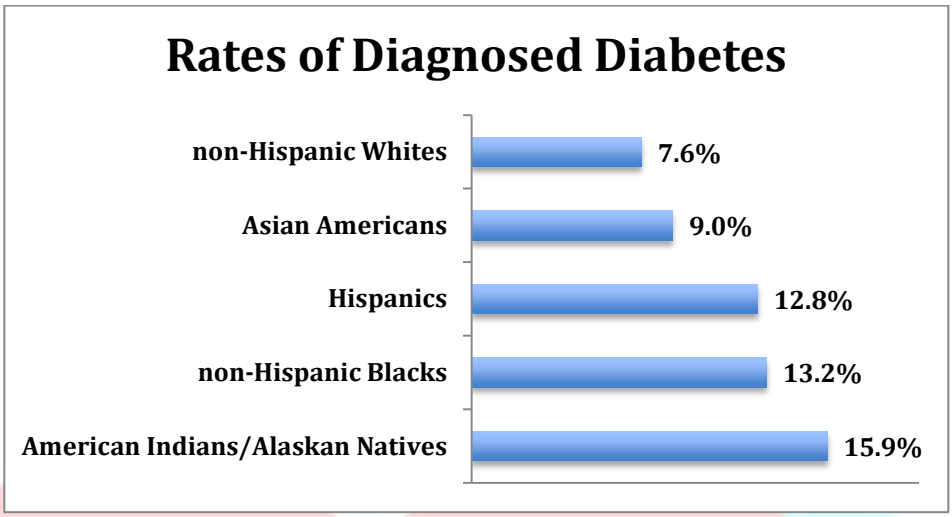
Diabetes and co-occurring chronic conditions are particularly prevalent in Medicare. In fact, one in every three dollars Medicare spends goes to treating someone with diabetes.[13]

As the following table describes, among Medicare beneficiaries with at least two chronic conditions, almost a third have diabetes and hypertension, almost one in six have diabetes and ischemic heart disease, and one in ten have diabetes and heart failure. Among those beneficiaries with three or more chronic conditions, close to a third have diabetes, hyperlipidemia, and hypertension; and nearly one in ten have diabetes, ischemic heart disease, and heart failure.

	Co-Prevalence – Diabetes & Cardiovascular Disease. Of beneficiaries with diabetes &	
Diabetes Prevalence	**One other Chronic Condition**	**Two other chronic conditions**
26.55 % of Medicare FFS beneficiaries have diabetes	32.8% have diabetes & hypertension	31.9% have diabetes, hyperlipidemia, & hypertension
Of those, more than 95% have at least one other chronic condition	27.5% have diabetes & hyperlipidemia	20.1% have diabetes, ischemic heart disease, & hypertension
	17.4% have diabetes & ischemic heart disease	17.3% have diabetes, ischemic heart disease, & hyperlipidemia
	10% have diabetes & heart failure	11.8% have diabetes, heart failure, & hypertension
	4.6% have diabetes & atrial fibrillation	9.7% have diabetes, heart failure, & ischemic heart disease
	2.6% have diabetes & stroke	9.5% have diabetes, heart failure, & ischemic heart disease

Further, some racial and ethnic populations are disproportionately affected by diabetes, particularly type 2 diabetes. In the seminal report, "Unequal Treatment: Confronting Racial and Ethnic Disparities in Health Care," the Institute of Medicine noted that African Americans, American Indians, and Hispanics experience a 50-100 percent higher burden of illness and death from diabetes than white Americans.[14] Geographical disparities across regions, between and even within states exist in both the prevalence of diabetes, cardiovascular disease and their co-occurrence as data mapping showing the burden on Medicare beneficaries demonstrates.[15]

[13] American Diabetes Association, The Staggering Costs of Diabetes. Available online at http://www.diabetes.org/diabetes-basics/statistics/infographics/adv-staggering-cost-of-diabetes.html.
[14] Institute of Medicine, Unequal Treatment: Confronting Racial and Ethnic Disparities in Health Care (2003). Available online at https://www.nap.edu/catalog/10260/unequal-treatment-confronting-racial-and-ethnic-disparities-in-health-care.
[15] T2D with CVD, Mapping T2D and CVD (2016), available online at https://www.t2dwithcvd.com/interactive-map.



American Diabetes Association, Diabetes by Race/Ethnicity

Change Starts with Awareness

Making a difference starts with raising awareness of diabetes' role as a controllable risk factor for cardiovascular disease and related complications. Knowledge of the risk factors, vulnerable populations, and access to care will enable individuals at risk to make needed changes and to seek care not just when sick, but also to take preventive measures to protect their health. Promoting greater awareness among medical providers will support earlier identification and education among at risk populations and encourage vigilance in treating patients with diabetes to avoid cardiovascular complications.

Policymakers also have an important role in raising awareness and promoting better health outcomes for people living with diabetes. Supporting nationwide awareness efforts, including establishing an annual National Diabetes Heart Connection Day on November 9th, will help bring much needed attention to the problem. Also, assuring that public health efforts dedicated to either diabetes or cardiovascular disease include educational information that makes the connection between diabetes and cardiovascular disease will extend the reach of these messages. Finally, in the movement toward quality-based payment incentives, assuring that metrics capture the improvement of health outcomes for people with co-morbid conditions, including diabetes with cardiovascular disease, would help to align financial incentives, the health status of the populations being served, and the goals of achieving better overall health and improved quality of care.

Making the Diabetes Heart Connection

MAKE THE CONNECTION & MAKE A DIFFERENCE!

Visit www.CardioDiabetesMap.com to discover how diabetes and cardiovascular disease affect your state.
Visit www.diabetesheartconnection.org to learn more about the problem & help raise awareness.
Follow & engage on Twitter @DiabetesHeart & www.Facebook.com/DiabetesHeart.