New insight into reducing racial/ethnic disparities in diabetes

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Despite higher rates of diabetes in black and Hispanic women, the rate at which women die of diabetes-related diseases such as cardiovascular disease and cancer is the same for all postmenopausal women, regardless of race or ethnicity, according to a new UMass Medical School study.

Lead author Yunsheng Ma, MD, PhD, MPH, associate professor of medicine, concludes that the way to reduce high diabetes-related death rates among all postmenopausal women—including black and Hispanic women—is through prevention of diabetes. This is particularly important, since much remains unknown concerning the total balance of risks and benefits of the antihyperglycemic medications in aging women, particularly those who are either in poor health or of advanced age(older than 75). The research will be published online in the *American Journal of Epidemiology* on Sept. 16.

"Although the probability of dying conditioned upon diabetes did not differ significantly by racial/ethnic group, the percentages of women with prevalent or incident diabetes were significantly different by race," said Dr. Ma. The disparity in diabetes rates is stark: 27.1 percent for blacks, 20.8 percent for Hispanics, 15.9 percent for Asians and 11.7 percent for whites.

The study analyzed data from the Women's Health Initiative (WHI), a landmark research endeavor that enrolled 161,808 women in clinical trials and 93,676 in an observational study between 1993 and 1998, with ongoing follow up through 2009. The WHI is funded by the National

Heart, Lung, and Blood Institute. Ma and colleagues compared all-cause, cardiovascular and cancer mortality in white, black, Hispanic and Asian postmenopausal women with and without diabetes. Regardless of race or ethnicity, all the women with diabetes had a two-to-three times higher mortality risk for these diseases compared to women without diabetes. It is important to note that WHI is not a representative sample of all postmenopausal women across the U.S., but rather women interested in participating in a study and, as such, represents a more educated sample of women with high rates of access to health care.

This study is the first to show that mortality risk is not significantly different between racial or ethnic subgroups according to diabetes status. However, since rates of diabetes for minorities, especially black and Hispanic women, are considerably higher than for whites and Asians, more minority women die as a result of diabetes.

"Because of the 'amplifying' effect of diabetes prevalence, efforts to eliminate racial and ethnic disparities in diabetes mortality should focus on prevention of type 2 diabetes," added Ma.

"We and other researchers have shown that 80 to 90 percent of diabetes cases may be preventable by lifestyle modifications, such as being physically active, maintaining a healthy weight and having a healthful diet," said JoAnn Manson, MD, of Harvard-affiliated Brigham and Women's Hospital, a WHI investigator and a co-author of the study. "This seems to be true across all racial/ethnic groups."

Of 158,833 women included in the analyses, the average age was 63 years; 84.1 percent were white; 9.2 percent were black; 4.1 percent were Hispanic; and 2.6 percent were Asian. In general, the women with diabetes had higher body mass index, worse dietary habits, were less active and had more medical conditions, including hypertension and high cholesterol, compared to women not reporting diabetes.

"Rather than emphasizing aggressive use of anti-diabetic medications in postmenopausal minority women, we should focus on educating them about preventing diabetes," Ma concluded.

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