



RUTHA GORDON  
Rutha has type 2 diabetes

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## Demographic changes necessitate larger healthcare workforce

An aging US population and higher rates of chronic disease will drive demand for health care services and require more health care providers to meet that demand, according to a recent study published in *Health Affairs*.<sup>1</sup> By 2050, the elderly population in the US is expected to double<sup>2</sup> and projections from the US Centers for Disease Control and Prevention (CDC) show that as many as 1 in 3 Americans could have diabetes by then if current trends continue.<sup>3</sup>

Using a Health Care Demand Microsimulation Model, the researchers projected disease prevalence and use of health care services by medical specialty and care delivery setting. With the changing demographics and expanded medical coverage because of the Affordable Care Act, the demand for adult primary care physicians is projected to increase by approximately 14 percent between 2013 and 2025.<sup>1</sup>

Emergency consultations and hospital inpatient days for patients with a primary diagnosis of diabetes are projected to decrease by 4.2 percent and 1 percent, respectively, as these patients increasingly access care in primary care and outpatient settings with the increased coverage provided by the Affordable Care Act.<sup>1</sup>

The authors suggest that emerging care delivery models, such as Accountable Care Organizations and Patient-Centered Medical Homes that encourage greater use of preventive services and management of chronic disease care, are likely to impact the number and types of health care providers needed to meet the increased demand for services. However, the authors conclude, "We believe that specialists will be a key component of...care delivery teams and that their roles will be clearly defined as part of evidence-based care plans. Failure to train sufficient numbers of specialists could exacerbate already long wait times, reduce access to care for some of the nation's most vulnerable patients, and reduce patients' quality of life."<sup>1</sup>

To read the study abstract, click [here](#).

# new & news in diabetes policy

## Diabetes greatly raises younger women's heart risk

While women under the age of 60 normally have lower risk of heart disease than their male counterparts, a Johns Hopkins study suggests diabetes can change that. According to the research, women under the age of 60 with diabetes are four to five times more likely to develop coronary heart disease than those without diabetes, placing them at the same risk level as men.<sup>4</sup> While diet, exercise, and “watch and wait” are traditional preventive measures, the authors suggest that aggressive screening and meeting cholesterol and blood pressure targets are crucial once a diagnosis of diabetes is made.<sup>4</sup> Dr. Rita Rastogi Kalyani, lead author and an endocrinologist at Johns Hopkins University

School of Medicine, stated, “Our study adds to growing evidence that gender differences exist in the risk of coronary artery disease brought on by diabetes.”<sup>5</sup> Kalyani believes the study is the first to look at gender differences in heart disease among younger and middle-aged people with diabetes.<sup>5</sup>

The study examined the heart health of more than 10,000 Americans, none of whom had a history of heart disease at enrollment. Kalyani and colleagues point to distinct genetic and hormonal factors as potential explanations for the increased risk of heart disease among women with diabetes.<sup>4</sup> You can access the full study [here](#).

**“...Diabetes is a marathon, not a sprint. Although there have been a flurry of life changes right now, diabetes is something they will live with for the rest of their lives. They will always have to be cognizant of what they eat. They will have to keep track of medications, glucose levels, carbohydrate intake, doctors' appointments, exercise, and weight. They will have to be on the lookout for the many complications that diabetes can bring. This of course is not news to anyone who has diabetes or treats diabetes...Now, we gear up for the long haul, the messy, complicated, occasionally gratifying business of living with a lifelong chronic illness.”**

– Dr. Danielle Ofri, in The New York Times Well Blog on “The Challenge of Diabetes for Doctor and Patient”<sup>6</sup>

## National Institutes of Health grant funding for vitamin D and type 2 diabetes study (D2d)

The National Institutes of Health awarded a more than \$40 million research grant to the co-director of the Diabetes Center at Tufts Medical Center in Boston, to conduct a clinical trial to determine if vitamin D supplementation can reduce the likelihood of developing type 2 diabetes in those at highest risk for the disease.<sup>7</sup> The D2d study is the first of its kind to specifically examine whether vitamin D has an effect on prevention of type 2 diabetes. About 2,500 people at high risk for diabetes will participate in the clinical trial, which will take place at 20 medical centers in 17 different states across the country. Participants will receive either vitamin D supplementation or placebo and will be followed for development of diabetes twice a year for up to four years. Results are expected in 2018. Click [here](#) for more information from the Tufts Medical Center website.<sup>7</sup>



# new & news in diabetes policy

## The Endocrine Society publishes guideline for managing pregnant women with diabetes

A recent clinical practice guideline developed by The Endocrine Society (TES) provides recommendations for health care providers for managing women with pre-existing type 1 or type 2 diabetes during preconception, pregnancy and postpartum, and for managing women with gestational diabetes during and after pregnancy. Developed by an expert task force through an evidence-based consensus process, the guidelines recommend that women not diagnosed with diabetes get tested for diabetes at their first prenatal visit or before thirteen weeks gestation.<sup>8</sup> Other recommendations include:

- Pregnant women should be tested for gestational diabetes by having an oral glucose tolerance test at 24-28 weeks' gestation
- Prior to pregnancy, weight loss is recommended for those women with diabetes who are overweight or obese
- Initial gestational diabetes treatment should include medical nutrition therapy and 30 minutes of moderate exercise daily
- Blood glucose-lowering medication should be used if lifestyle therapy is not able to control gestational diabetes.<sup>8</sup>

Access the clinical practice guideline abstract [here](#).

## Youth with type 2 diabetes have earlier onset of complications than youth with type 1

In a study evaluating nearly 3,000 youth between the ages of one and 18 years, researchers found that young people with type 2 diabetes had a 47 percent greater risk of any complication than youth with type 1 diabetes.<sup>9</sup> The study assessed 342 youth with type 2 diabetes, 1,011 youth with type 1 diabetes, and 1,710 young people without diabetes identified from a clinical registry and then linked to medical records to examine long-term outcomes. According to the authors, "This is the largest natural history study of youth onset type 2 diabetes published to date."<sup>9</sup>



KELLY HECTOR  
Kelly has type 1 diabetes

Study findings show a more than 6-fold higher risk of developing vascular disease among youth with type 2 diabetes. In addition, major complications, including kidney failure, blindness and amputation, started to manifest 10 years after diagnosis in the type 2 diabetes cohort.<sup>9</sup> Compared to the type 1 diabetes group, the children with type 2 were generally older at the time of diagnosis and more likely to be female.<sup>9</sup> Sixteen percent of type 2 children also had a mother diagnosed with pre-gestational diabetes compared to 3 percent of children with type 1.<sup>9</sup>

Access the study abstract [here](#).



# new & news in diabetes policy

## **Inpatient diabetes education is associated with less frequent hospital readmission among patients with poor glycemic control**

In a recent study, individuals with diabetes who had A1C levels > 9 and received inpatient diabetes education during a hospital stay had a significantly lower rate of hospital readmission within 30 days after their discharge.<sup>10</sup> Previous research has shown that people with diabetes have 30-day readmission rates as high as 20 percent, compared to five to 14 percent for all discharges.<sup>11</sup> In 2008, nearly one in five hospital stays was related to patients with diabetes, totalling over 7.7 million stays and \$83 billion in hospital costs.<sup>12</sup>

The research team identified more than 2,000 patients who were discharged from a medical center during the years 2008 through 2010 with a diagnosis of diabetes and A1C > 9. They then confirmed readmissions within 30 days and 180 days and formal physician or diabetes education consult based on electronic medical records.

Providing formal diabetes education reduced the likelihood of readmission for patients with poorly controlled diabetes within 30 days and 180 days by 34 percent and 20 percent, respectively.<sup>10</sup> Few of these patients were admitted primarily for uncontrolled diabetes, and therefore the findings support “a role for formal diabetes education that extends beyond the management of diabetes emergencies,” the authors suggest.<sup>10</sup> Access to the full study can be found [here](#).



CAMERON HUBBARD  
Cameron has type 1 diabetes

## **Study: Use of EHRs for patients with diabetes linked with reduction in emergency department visits and hospitalizations**

In a Kaiser Permanente study in Northern California among patients with diabetes, researchers found that in this integrated health system, the adoption of outpatient electronic health records (EHRs) was associated with a 5.5 percent decline in emergency department (ED) visits and a 5.2 percent decrease in hospital stays, but no decline in office visits.<sup>13</sup> The researchers looked at ED visits and hospitalizations before EHR implementation in 2004 and after adoption in 2009 for nearly 170,000 people with diabetes. The Health Information Technology for Economic and Clinical Health Act authorizes up to \$27 billion during 10 years to promote meaningful use of EHRs, with penalties for lack of EHR use beginning in 2015.<sup>13</sup> Access to the study abstract can be found [here](#).



# new & news in diabetes policy

## For people with diabetes and their families, Medicare Part D reduces the burden of health care costs

**Following the introduction of Medicare Part D in January 2006, out of pocket expenses for Medicare beneficiaries with diabetes and their families began to steadily decline, reversing what had been an upward trend before that time.<sup>17</sup>**

For more than a decade, health care costs in the US have increased by more than 6 percent every year.<sup>14</sup> People with diabetes face an even greater financial burden—on average, their medical costs are more than twice as high as people without diabetes.<sup>15</sup>

Medicare Part D was introduced in 2006 to reduce the burden of high out of pocket expenses for adults age 65 and older. Surveys show that more than 94 percent of Medicare beneficiaries are satisfied with Medicare Part D, the program is 45 percent under budget, and premiums remain stable.<sup>16</sup>

For the more than 11 million older adults in Medicare who have diabetes, Medicare Part D has been an economic lifesaver according to a recent study from the Centers for Disease Control and Prevention (CDC).<sup>17</sup> Following the introduction of Medicare Part D in January 2006, out of pocket expenses for Medicare beneficiaries with diabetes and their families began to steadily decline, reversing what had been an upward trend before that time.<sup>17</sup>

In fact, in 2006<sup>17</sup>:

- Individual out of pocket expenses for prescription medication dropped 28 percent;
- Individual and family out of pocket expenses for all health care dropped 23 percent; and
- The percentage of families with high financial burden—with out of pocket expenses accounting for 10 percent or more of total family income—dropped by 24 percent.

Almost half of Medicare beneficiaries with diabetes also had one or more persons with Medicare in their family, so the benefits of Medicare Part D were magnified.

By 2008, the percentage of Medicare beneficiaries with diabetes living in families with a high financial burden was 37 percent lower than it would have been without Medicare Part D.<sup>17</sup> The authors conclude: “Medicare Part D has reduced out of pocket expenses and family financial burden for Medicare beneficiaries with diabetes. This reduction may improve health outcomes by increasing medication adherence and by freeing up family resources to improve the quality of life.”<sup>17</sup>

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## references

- 1 Dall TM, Gallo PD et al. An aging population and growing disease burden will require a large and specialized workforce by 2025. *Health Affairs*. 2013; 11(32):2013-2020.
- 2 Vincent GK, Velkoff VA. The next four decades: the older population in the United States: 2010 to 2050. US Census Bureau website. <http://www.census.gov/prod/2010pubs/p25-1138.pdf>. Published May 2010. Accessed November 19, 2013.
- 3 Boyle JP, Thompson TJ, Gregg EW, Barker LE, Williamson DF. Projection of the year 2050 burden of diabetes in the US adult population: dynamic modeling of incidence, mortality, and prediabetes prevalence. *Popul Health Metr*. 2010; 8(1):29.
- 4 Kalyani R, Lazo M, Ouyang P, et al. Gender differences in diabetes and risk of incident coronary artery disease in healthy young and middle aged adults [Published online ahead of print October 31, 2013]. *Diabetes Care*. doi: 10.2337/dc13-1755.
- 5 HealthDay. Diabetes greatly raises women's heart risk: study. HealthDay website. <http://consumer.healthday.com/diabetes-information-10/misc-diabetes-news-181/diabetes-greatly-raises-younger-women-s-heart-risk-study-681766.html>. Accessed November 17, 2013.
- 6 Offrio D. The challenge of diabetes for doctor and patient. The New York Times website. [http://well.blogs.nytimes.com/2013/10/17/the-challenge-of-diabetes-for-doctor-and-patient/?\\_r=0](http://well.blogs.nytimes.com/2013/10/17/the-challenge-of-diabetes-for-doctor-and-patient/?_r=0). Published October 17, 2013. Accessed November 19, 2013.
- 7 Tufts Medical Center. Tufts Medical Center receives \$40 million NIH grant to study the effects of vitamin D on type 2 diabetes. Tufts Medical Center website. <https://www.tuftsmedicalcenter.org/News-Events-Media/News/Web/Vitamin-D-and-Diabetes-Study.aspx>. Published October 18, 2013. Accessed November 17, 2013.
- 8 Blumer I, Hadden D, Jovanović L, et al. Diabetes and pregnancy: an endocrine society clinical practice guideline. *J Clin Endocrinol Metab*. 2013; 98(11):4227-4249.
- 9 Dart AB, Martens PJ, Rigatto C, Brownell MD, Dean HJ, Sellers EA. Early onset of complications in youth with type 2 diabetes [Published online ahead of print October 15, 2013]. *Diabetes Care*. doi: 10.2337/dc13-0954
- 10 Healy SJ, Black D, Harris C, Lorenz A, Dungan KM. Inpatient diabetes education is associated with less frequent hospital readmission among patients with poor glycemic control. *Diabetes Care*. 2013; 36(10):2960-2967.
- 11 Robbins JM, Webb DA. Diagnosing diabetes and preventing rehospitalizations: the urban diabetes study. *Med Care*. 2006; 44(3):292-296.
- 12 Frazee T, Jiang J, Burgess J. Hospital stays for patients with diabetes, 2008. HCUP Statistical Brief 93 [Internet], 2010. Rockville, MD, Agency for Healthcare Research and Quality. Available from <http://www.hcupus.ahrq.gov/reports/statbriefs/sb93.pdf>. Accessed November 19, 2013.
- 13 Reed M, Huang J et al. Implementation of an outpatient electronic health record and emergency department visits, hospitalizations and office visits among patients with diabetes. *JAMA*. 2013; 310(10):1060-1065.
- 14 Centers for Medicare and Medicaid Services. National health expenditures. Aggregate and per capita amounts, annual percent change and percent distribution: selected calendar years 1960-2011. Centers for Medicare and Medicaid Services website. Available at: <http://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/NationalHealthExpendData/downloads/tables.pdf>; 2013. Accessed November 19, 2013.
- 15 American Diabetes Association. Economic cost of diabetes in the US in 2012. *Diabetes Care*. 2013; 36(4):1033-1046.
- 16 Medicare Payment Advisory Commission. Report to the Congress. Available at [http://www.medpac.gov/documents/Mar13\\_entirereport.pdf](http://www.medpac.gov/documents/Mar13_entirereport.pdf). Published March 2013. Accessed November 27, 2013.
- 17 Li R, Gregg EW, Barker LE, et al. Medicare Part D is associated with reducing the financial burden of health care services in Medicare beneficiaries with diagnosed diabetes. *Med Care*. 2013; 51(10):888-893.