It seems intuitive that in a disease marked by hyperglycemia, normalization of glycemia should prevent the end-organ damage associated with it. Indeed, lowering blood glucose has been the focus of diabetes management for decades on the presumption that it would improve risk of renal failure, cardiovascular events, and death in patients with elevated levels of glycated hemoglobin, even though the proof for such effect has been elusive. The United Kingdom Prospective Diabetes Study (UKPDS) appeared to validate the targeting of lower hemoglobin A<sub>1c</sub> (HbA<sub>1c</sub>) levels in type 2 diabetes, as this randomized trial showed lower rates of microvascular complications of diabetes such as retinopathy and renal failure in patients under intensive glycemic control compared with conventional therapy. However, a growing body of evidence supports the idea that intensive glycemic control causes harm in certain subpopulations of diabetic patients who were underrepresented in trials like the UKPDS. Consider that patients in the UKPDS were newly diagnosed and relatively healthy, with a mean age of 53 years. Those older than 65 years were excluded. Contrast this with the Action to Control Cardiovascular Risk in Diabetes (ACCORD) trial, in which the upper age limit was 79 years and the mean age was 63 years. This trial was stopped early because of higher all-cause mortality in the intensive therapy group. Clearly, for this patient demographic, intensive glycemic control is risky business. Indeed, what was previously considered good control for all is now considered overtreatment in elderly patients because it is associated with more harm than benefit.
Given the risks associated with intensive glycemic control in elderly individuals and in those with chronic medical conditions, it now behooves physicians and health systems to understand the extent of potential diabetic overtreatment in everyday practice and seek to improve it. In the February issue of JAMA Internal Medicine, Tseng and colleagues further evaluated the scope of potential diabetic overtreatment within Veterans Health Administration (VHA) facilities, and the results are sobering. Using VHA databases, these investigators identified patients older than 75 years with diabetes being managed with either a sulfonylurea or insulin therapy who also had either a serum creatinine level greater than 2.0 mg/dL or a diagnosis of cognitive impairment or dementia. That is, the patients in this study were at high risk for hypoglycemic events and associated adverse outcomes and unlikely to achieve health benefits from intensive control. The investigators then identified the proportion of these high-risk individuals who had HbA1c levels less than 7%, less than 6.5%, and less than 6%, representing categories of increasingly intensive glycemic control. They found that half of the patients (50.0%) identified as high risk for adverse outcomes had HbA1c levels less than 7.5%. Furthermore, 28.6% of these high-risk patients had HbA1c less than 7.0% and more than 1 in 10 (11.3%) had a normal or near-normal HbA1c level, less than 6.0%. These results show a substantial proportion of individuals are being overtreated and placed at risk for serious harm with such treatment.

Why does this happen? In view of the findings from the ACCORD study, Veterans Affairs Diabetes Trial (VADT), and Action in Diabetes and Vascular Disease (ADVANCE) trials, all of which showed no benefit or harm associated with intensive glycemic control, how do well-meaning physicians seemingly ignore the evidence and either initiate therapy inappropriately or fail to step down therapy when indicated? A definitive answer requires further research, but several explanations are possible. First, reconciling the practice of evidence-based and patient-centered medicine is challenging and requires relentless mindfulness to assimilate the latest evidence and the changing health status of patients, to include preferences, cognitive function, life expectancy, and other competing illness demands. Second, clinical inertia appears to work both ways: not only are physicians slow to initiate treatment when indicated, as has been shown in studies of treatment initiation or intensification in hypertension, but physicians also hesitate to pull back or scale down therapy. Clinical inertia provides a framework for further study of the reasons why physicians fail to reduce therapy. Third, physicians and patients alike are inundated with conflicting and obfuscating information. On the one hand, multiple guidelines from reputable organizations often contain radically different messages. On the other hand, intense marketing efforts from the pharmaceutical industry and direct-to-consumer advertising make it difficult for physicians to counter-detail at the point of care. Fourth, discussing the de-escalation of any care can be challenging for patients and physicians alike. Patients or caregivers may be reluctant to contemplate or acknowledge their own decline in health and limited life expectancy. Conversations about forgoing treatment are difficult for a primary care physician to have within the space of a typical 15- or 20-minute appointment. It is much easier to just refill the prescription for glipizide. Nevertheless, physicians owe it to patients to discuss the de-escalation of care in a timely and sensitive manner when appropriate.

Tseng and colleagues have done a great service in revealing the extent of potential overtreatment in patients with diabetes in the VHA who are at high risk for adverse hypoglycemic events and stand to benefit little from intensive glycemic control. This risk of overtreatment must be in the forefront of the minds of all health care professionals who care for elderly patients with diabetes. Physicians are given the license to prescribe with the license to practice; it is important to know when the best practice is not to prescribe. Accordingly, health systems have the responsibility to monitor such overtreatment in their quality programs, just as they monitor optimal treatment, and enable the processes to minimize harmful practice.

**REFERENCES**


