

## The Ongoing Challenge of Managing Diabetic Eye Disease

Maria Shepherd • Data Decision Group

The field of ophthalmology continues to expand with exciting new treatments for patients with eye disease. At the Hawaiian Eye and Retina 2015 meetings, held Jan. 17-23 in Maui, Hawaii, 1,200 ophthalmologists, nurses, health professionals and administrators dedicated to the treatment of eye disease met to discuss trends in ocular surgery, macular degeneration, and the management of diabetic eye disease in the rapidly changing field of ophthalmology. The program was a rapid-fire mix of scientific and clinical presentations, along with dynamic panel discussions and question and answer sessions.

### Why It's Important

Managing diabetic eye disease is critical to reducing severe vision impairment. As the epidemic of diabetes grows, so does the challenge of managing diabetic eye disease. In a continuing medical education seminar at the Hawaiian Eye and Retina 2015 meeting, a panel examined new treatments for diabetic eye disease, a broad term that refers to multiple vision impairing disorders that patients face as a complication of diabetes.<sup>1</sup> Each can result in severe vision loss or blindness.

Diabetic eye disease includes diabetic retinopathy, early on-

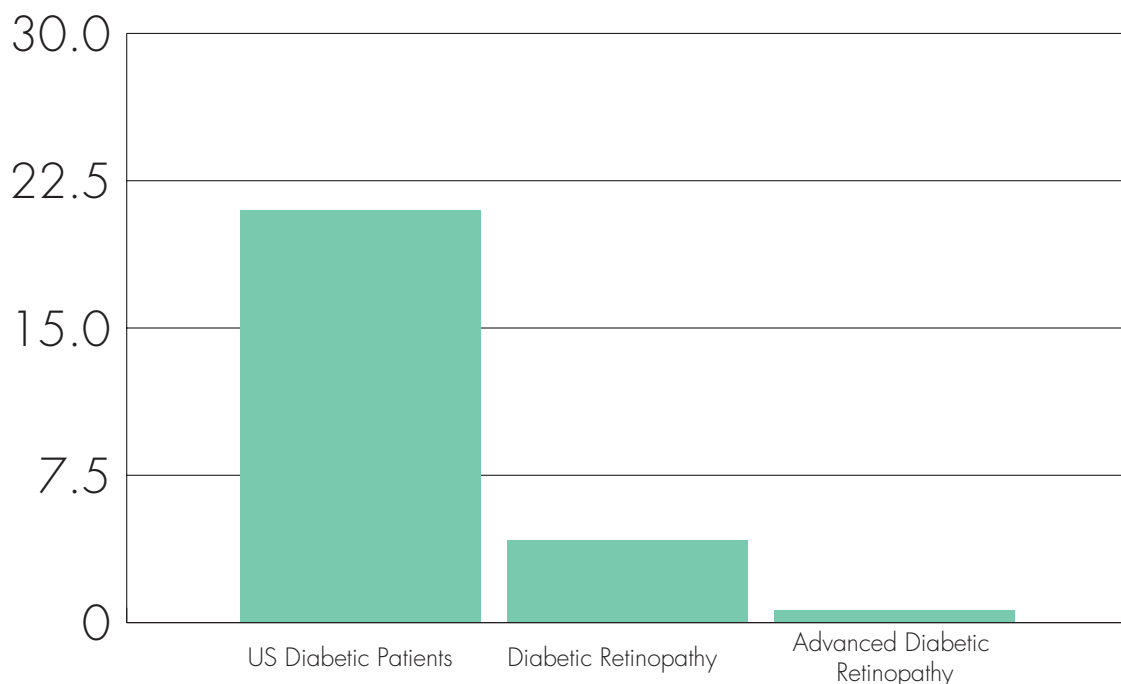
set of cataracts and glaucoma. Diabetic retinopathy damages the blood vessels in the retina. Early onset of cataracts, the clouding of the lens of the eye, is seen at an earlier age in diabetic patients. Glaucoma causes optic nerve damage due to an increase in the pressure in the eye. Diabetic patients are much more likely to get glaucoma than the non-diabetic patient population.<sup>2</sup>

The leading cause of newly diagnosed vision loss in the United States is diabetic retinopathy and macular edema, both primary contributors to diabetic induced loss of sight.<sup>3</sup> Of the 21 million Americans diagnosed with diabetes, 4.2 million have diabetic retinopathy. Almost 700,000 patients (4.4 percent) have advanced diabetic retinopathy, defined as severe macular edema and/or proliferative diabetic retinopathy (Chart 1). Proliferative diabetic retinopathy is the fourth and most severe stage of diabetic retinopathy. It is in this stage that new growth of abnormal and fragile blood vessels can leak blood, causing severe vision loss and blindness.

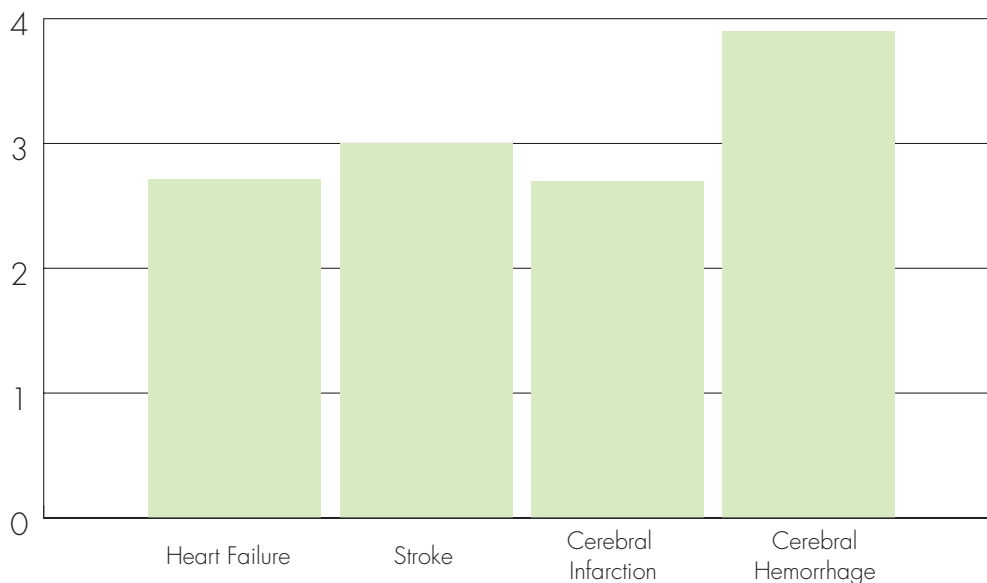
Diabetic retinopathy may signal microvascular complications in other organ structures.<sup>4</sup> For example, in a study assessing the association of diabetic retinopathy with heart failure, patients with diabetic retinopathy had a hazard ratio of 2.71 when as-

Chart 1

### U.S. Patients with Diabetic Retinopathy (000,000)



## Chart 2

Hazard Ratios for Organ Dysfunction  
in the Presence of Diabetic Retinopathy

Hazard Ratios for Organ Dysfunction in the Presence of Diabetic Retinopathy

sessing risk of developing heart failure than those patients who did not have diabetic retinopathy.<sup>5</sup> In another study, the hazard ratios for stroke, cerebral infarction, and cerebral hemorrhage in the presence of severe diabetic retinopathy were 3.0, 2.7, and 3.9, respectively.<sup>6</sup>

### Can We Decrease the Rates of Diabetes & Related Vision Loss?

Yes. Almost two decades ago, clinical studies determined that prompt identification and treatment of diabetic eye disorders reduces the incidence of blindness, and that early recognition of diabetic retinopathy combined with routine follow up is cost-effective and efficacious.<sup>7,8</sup> According to the Hawaiian Eye and Retina meeting expert panel, new technologies for routine screening of patients with diabetic retinopathy is improving rapidly.

However, the best way to reduce blindness caused by diabetic retinopathy is to reduce the incidence of diabetic disease altogether. For those of you working in this space, how is your company assisting the healthcare system in improving diabetic treatment efficiencies and lower costs? There is profit in providing improved financial outcomes in healthcare. How will you identify those opportunities? ❖

#### References

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*Editor's note: Readers are invited to submit market data and trend questions to Maria Shepherd. Periodically, selected questions will be presented in this column, with answers from Maria.*

*Maria Shepherd has 20 years of leadership experience in medical device/life-science marketing in small startups and top-tier companies. Following a career including roles as vice president of marketing for Oridion Medical (acquired by Covidien), director of marketing for Philips Medical and senior management roles at Boston Scientific Inc., she founded Data Decision Group. Shepherd recently was appointed to the board of the ALIGO Healthcare Investment Committee. She can be reached at (617) 548-9892, [mshpherd@dddecisiongroup.com](mailto:mshpherd@dddecisiongroup.com), [www.dddecisiongroup.com](http://www.dddecisiongroup.com), or followed on Twitter @MedTechResearch.*