Prevention Research Matters:
Using Telemedicine to Screen for Diabetic Eye Disease in Rural Areas

[Announcer] This program is presented by the Centers for Disease Control and Prevention.

[Latoya Simmons] The leading cause of blindness among working age adults is eye disease related to poorly managed diabetes. Today, I'm talking with Gordon Barker, a Research Associate from an eye institute that worked closely with the Oregon Health and Science University's Prevention Research Center, or PRC. The research center is one of 26 academic research centers across the country that study how people and communities can avoid or counter the risks of chronic illnesses, such as diabetes, obesity, heart disease, and cancer. This study was led by Dr. Steve Mansberger, at the Oregon Health and Science University's PRC. Welcome, Gordon.

[Gordon Barker] Hello Latoya. Thank you for having me.

[Latoya Simmons] Gordon, the number of people with diabetes is expected to jump 83 percent—to 44 million people—by 2034. That's a *significant* increase. Your research on using telemedicine to screen for diabetic eye disease in rural areas shows that it can be an important tool. Tell us about that.

[Gordon Barker] The key to helping prevent blindness in people with poorly managed diabetes is early diagnosis through screening and treatment. In fact, screening and treatment is 90 percent effective in preventing blindness. In this study, we recruited over 500 diabetic patients, including American Indian and Alaskan natives. They were assigned to either a telemedicine screening group at their local health clinic or were referred to a traditional eye care provider. It's important to note that American Indian and Alaska Natives are *two* times more likely to have diabetes than non-Hispanic whites.

[Latoya Simmons] What exactly is telemedicine?

[Gordon Barker] Telemedicine uses electronic information to support and promote clinical health care and public health-related education… long distance.

[Latoya Simmons] What were the results of your study?

[Gordon Barker] While diabetic patients participating in the study were at their local health clinic, technicians used a specially designed digital camera to take pictures of both eyes. Next, the telemedicine system automatically created and e-emailed an evaluation report to clinic staff. Images of the participants' eyes were sent to a local eye clinic and reviewed by two of its doctors. We learned that 94 percent of people got screened using telemedicine at their local health clinic, but only 56 percent got screened when they were referred to a traditional eye care provider.

[Latoya Simmons] So, people really did take advantage of the opportunity to get screened using telemedicine at their local health clinic. What do you think made the difference?

[Gordon Barker] Our research showed that, in many communities, it's easier for people to get to their local health clinic than to get to an eye care provider. There may be a lack of public transportation or no

health insurance, or there may not be an eye care provider in the area, or financial burdens, such as co-pays associated with the cost of an eye exam.

[Latoya Simmons] Where can listeners go to get more information about using telemedicine to screen for diabetic eye disease?

[Gordon Barker] Listeners can go to BIT.LY/OregonPRC.

[Latoya Simmons] Thanks, Gordon. I've been talking today with Gordon Barker from an eye institute that worked closely with the Oregon Health and Science University's Prevention Research Center about using telemedicine to screen for diabetic eye disease in rural areas.

Preventing and controlling chronic diseases is *why* Prevention Research Matters.

[Announcer] For the most accurate health information, visit cdc.gov or call 1-800-CDC-INFO.