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Dr. Kass

Case Study: AVerVision Document Cameras Enhance Care for Diabetes

Diabetes Mellitus is a common disease affecting millions of people worldwide. Elevated blood sugar associated with diabetes damages blood vessels and nerve tissue placing individuals at greater risk for heart disease, stroke, and skin infections. If not recognized early, these skin infections can lead to amputation of extremities.

David Kass, M.D., of Portage Health System, is a family practice physician and certified diabetes specialist. Dr. Kass notes that proper education of both patients and healthcare providers is essential for diabetic care. Because most problems leading to infections occur on the soles of feet and many diabetics have poor eyesight, early foot problems are often difficult for patients to see.

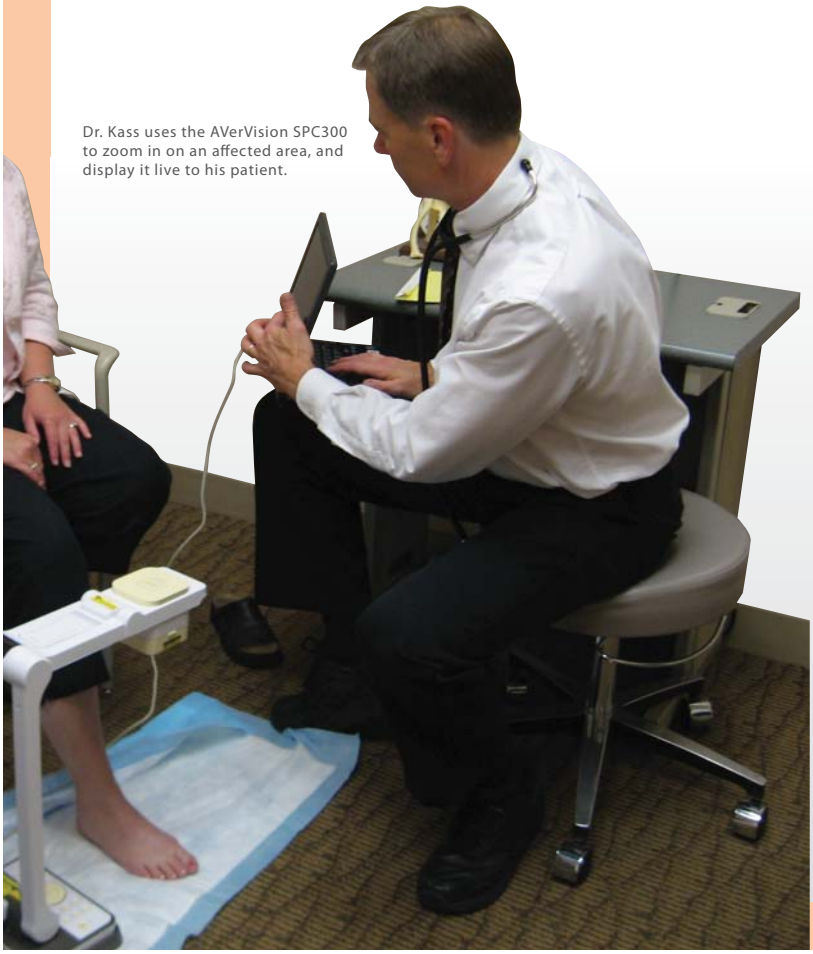
Once Dr. Kass obtained an AVerVision SPC300 Document Camera from AVerMedia, he quickly realized the benefits of being able to display real-time images of a patient's foot. The camera enabled him to view a diabetic patient's foot in detail and to show and explain areas of concern in a large, clear manner.

Poorly controlled diabetes can ultimately lead to foot ulceration and amputation; therefore foot examinations are critical. Healthcare providers inspect feet of diabetes patients, looking for loss of sensation, redness, ulceration, peeling, calluses, nail changes, and arthritic changes. By using the SPC300 Document Camera, Dr. Kass looked to accomplish three main objectives:

1.Demonstrating the importance of examining feet of a diabetic patient and the effects diabetes can have on the foot.

2.Documenting changes between examinations to track progress, preventing complications and educating health care providers of the importance of carefully examining and treating early foot complications of diabetic patients.

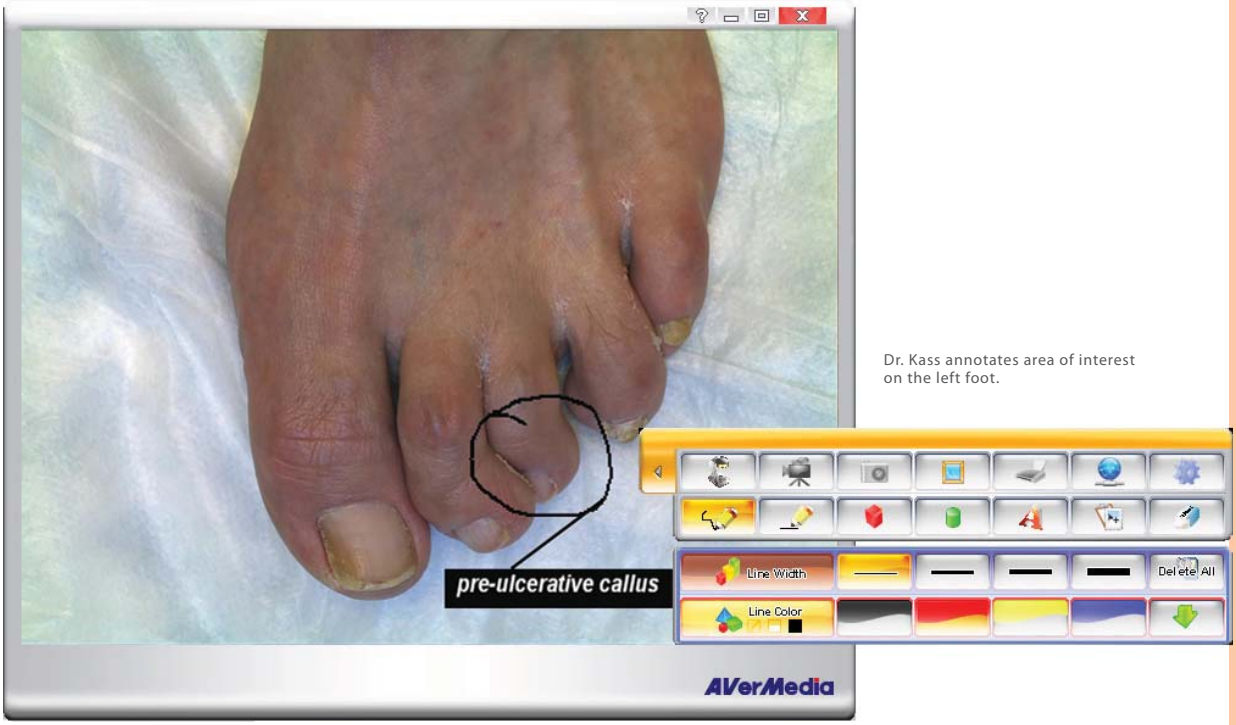
3.Utilizing the ability to focus on affected areas in real-time, quickly and clearly zooming in on detail and instantly showing the patient exactly what and where issues might be occurring.



Dr. Kass uses the AVerVision SPC300 to zoom in on an affected area, and display it live to his patient.

Prior to using the SPC300, Dr. Kass documented patient foot exams by using a standard digital camera. The digital camera proved helpful by providing education to patients by displaying still pictures of patients' feet. However, the digital camera had some drawbacks including poor image quality, difficulty in focusing up-close, flash distortion ("flash burn") in images taken at close range and the necessity of an additional person to assist in steadying the foot and capturing the image. Furthermore, digital camera images would need to be downloaded to a computer, displayed for the patent, and any annotations or notes would need to be made in a separate software program, all taking valuable time.

Now, Dr. Kass uses his document camera to closely examine the patient's foot looking for any suspicious traits while offering an interactive examination. He displays the real-time image on an LCD monitor or tablet PC in the examination room so the patient is able to view the live foot examination while he performs it. When an area of interest is discovered, Dr. Kass is able to use the high zoom capability of his document camera to further examine the details of the affected area. This is very important because he is able to make the standard examination into an interactive learning experience for the patient.



Dr. Kass annotates area of interest on the left foot.

Going one step further, with a laptop connected, Dr. Kass is able to make on-screen annotations with the included AVerVision software. This allows Dr. Kass to not only view the affected areas with the patient together, but he is also able to make notations, drawings and isolate particular areas of interest. In addition, he is able to capture still images, or even record video with audio to document the entire exam and use it for comparison during later examinations. This type of visual exam allows patients to clearly see affected areas, while Dr. Kass is able to explain causes, treatment and long term care assessment.

Finally, Dr. Kass uses his AVerMedia SPC300 document camera to help educate fellow healthcare providers on the topic of diabetes and the importance of proper foot examinations of diabetic patients. He displays real images and video of diabetic foot conditions captured with the SPC300 at continuing medical education sessions he conducts. He is also in the process of developing detailed videos of how to conduct proper examinations with diabetic patients.

Dr. Kass continues to find and apply important uses for the document camera within his practice. He has cited that the flexibility, ease-of-use, clear image quality and interactivity has allowed him to greatly increase the level of care he provides to his patients, while developing new and innovative ways to utilize document camera technology for medical needs.

About Dr. David Kass:
David Kass, M.D. is a 1992 graduate of the Michigan State University College of Medicine program. He has been practicing family health in Hancock, part of the rural portion of the Upper Peninsula of Michigan, for the past 13 years and also fulfills the role of continuing medical education director at Portage Health System. In addition, Dr. Kass has worked as an adjunct faculty for several Michigan universities as a preceptor for medical students. His love of medicine and medical education has helped him evolve into a favored, respected, and innovative practitioner within his community.

AVerVision **SPC300**