

Transcript of a chat session with Dr. Mark Wilkinson 12/19/98

(Edited for clarity and length.)

DAN: Dr. Mark Wilkinson is Director of the Low Vision Service at the University of Iowa Center for MD, and of the Vision Rehabilitation Institute at Genesis Medical Center in Davenport IA. Mark, thank you for being here today. Please begin by describing your duties and main areas of interest at the University and at Genesis.

DR. WILKINSON: My primary duty is to provide low vision evaluations. I also teach residents in the department of ophthalmology about low vision and do a little training of medical students. My interests include visually impaired drivers and literacy for visually impaired children. I also do some work with individuals who have experienced a neurological incident that has affected their vision, such as strokes and traumatic brain injury.

DAN: Much has been discussed about driving with low vision, and you are doing some research in that area. Would you please tell us about the work you are doing with that?

DR. WILKINSON: I have been an advocate for individuals with visual impairment, who have reasonably good residual vision, to help them maintain the privilege to drive. There has been a test called the useful field of view (UFOV) test that has been primarily a research test for the past 12 years that appears to be much more predictive for those individuals who are more likely to have an accident than any of the tests that are currently used to determine who should and should not drive. Visual acuity has been shown for a long time to be a poor predictor of driving performance. To date, the UFOV test has not been used for many individuals with vision loss. I will be doing a study after the first of the year that will look at the effectiveness of UFOV for individuals with less than 20/40 acuity, the normal cut off for an unrestricted license.

DAN: I spoke with a lady last week who has just lost her driving privileges at the age of 67. She feels that the state's test was not quite fair, and that she could have done better under more natural circumstances than the testing conditions. Do you agree with her?

DR. WILKINSON: Yes, I feel that we should not have a system that only looks at visual acuity as the determining factor for who should and should not drive, and the literature has supported this for years. The standards that are used today were established in 1945 and really have not been updated much. Some states do allow an individual the opportunity to appeal the decision of the local licencing office; however, they tend to not let people know this is an option.

DAN: Do you feel that depth of field is an important measurement to consider? Many of us have unilateral vision with reasonably good acuity.

DR. WILKINSON: Judging depth can be done by individuals with one eye without a lot of difficulty. We use relative size, color, shadow, etc. to judge depth with one eye very efficiently. Monocular status has not been shown to have a strong correlation with accident risk.

DAVE: How is the UFOV that you use different from the testing administered by Dr. Goode at Ohio State University in the Bioptic Driving program?

DR. WILKINSON: I do not know what Dr. Goode is doing at OSU. UFOV is not a test for use with a bioptic telescope.

DAVE: But there is extensive field of vision testing administered before a person can qualify for the Bioptic Driving program. Are these tests that check the peripheral vision the same test?

DR. WILKINSON: No, let me explain what UFOV is. UFOV is a test of the perceptual window. It looks at how much information you can take in at one time, as the target you are looking at becomes more complicated. The standard visual field test is important, but, it is a static test, and UFOV is a dynamic test. UFOV is much smaller for everyone than a standard field test, and it gets smaller as we get older. It really looks more at your reaction time and your ability to sort out what is important to see in the environment, versus what is distracting in the environment.

DAVE: That sounds very similar to the testing that I went through at OSO, at the Vision Center, and with my own optometrist.

DR. WILKINSON: It could be. UFOV has only recently become available to practitioners out of the research field, and I have not been told by the manufacturer and primary researchers that it is being used at OSU.

DAN: Mark, do you think this method of testing will be difficult to integrate into the system?

DR. WILKINSON: That is what we are doing to attempt to find out. We know that this test is helpful for predicting who is more likely to have an accident, with normal vision. We do not know yet if this test will be helpful for those with less than normal vision.

DAN: We have some people here with RP. What percentage of visual field would you say is minimum for safe driving with that condition?

DR. WILKINSON: Minimum visual field requirements vary from state to state. Minimum is 60 degrees binocular. Many states are 105 monocular to 140 binocular. That is not to say that someone with less field cannot drive safely. This is why we need to look at each person individually, not just as a number.

ARMANDO: I heard that there is a device to help our field vision. What kind of devices are there?

DR. WILKINSON: There has been a lens out for many years called an amorphic lens. It is designed to expand the horizontal field between 1 and 2 times. Reverse telescopes can do the same thing, only they affect the horizontal and vertical field. I have never had much luck with these devices.

DON: Could you comment on the surgery that was done recently in Scotland that involved moving, or folding, the retina?

DR. WILKINSON: This surgery was first done at Wilmer in Baltimore. It involves moving the retina away from an area of neovascularization with the hopes of preserving the macular. It has only been done a few times and has complications associated with it. I do not think this will be a useful procedure for the vast majority of people with the wet form of AMD. Also, it would be good to know just what the persons pre and post operative vision was, and how well they do over time.

DAN: This procedure gained quite a bit of attention after being broadcast on the BBC. What is your opinion on use of the media to announce such work?

DR. WILKINSON: Unfortunately, it is done all the time I suppose it is a good way to increase your research donations. All too often the media blows the report way out of proportion. We can all probably remember a few different cures for AMD that we have heard over the years: zinc, spinach, interferon, and even--back in the early 80's--laser surgery. It is important to remember just how complicated the eye is. The eye is about an inch in length and has approximately 140,000,000 rods and cones in it. The problem is that anything that affects this delicate meshwork of retinal tissue has a devastating effect on vision, and we have no way of repairing the retina once it has been damaged like it does in AMD and RP, to name a few conditions.

DAN: Most professionals seem to think a cure will come in the field of genetics, and that the most promising treatment at this time is photodynamic therapy. What is your opinion?

DR. WILKINSON: I think that photodynamic therapy has some potential for the 15% of amd people who have the wet form. At the UI Center for Macular

Degeneration, Drs. Stone and Hageman and their teams are working on finding the genetic component to AMD and many of the other inherited eye conditions. It is felt that AMD is 12-20 different genetic conditions that all look about the same. Once the genetic mutations can be sorted out, then gene directed therapy can be used to give a specific therapy for the different forms of AMD. We all probably know a person or two who swears that zinc or something else has stabilized, or even improved their vision. Unfortunately for many others, they do not see any benefit and, in fact, have seen their vision get worse. This is because maybe only 5-10% of the AMD people benefit from zinc, and the other 90-95% need something else.

DAN: This touches upon the debate over alternative medicine and nutrition. Do you see any benefits to the nutritionist approach?

DR. WILKINSON: For a select few, I think that it is beneficial. Unfortunately, for the vast majority of people it will not help. And yet, the people selling these things will make you feel like you are making your condition worse if you do not spend hundreds of dollars per year on their product.

JOAN: I have been to ODs, ophthalmologist/retinal specialists, and one low-vision OD. No one has done more than the Snellen chart and a reading card for testing. Where can I get more appropriate testing?

DR. WILKINSON: Before we talk about additional testing, we need to know what you think you need to be tested for.

JOAN: My vision is seriously distorted, possibly due to lots of thin spots and drusen on my retinas. I would like to have help reading. My maculas are, so far, fairly healthy. My daughter says gene therapy is hoping to restore damaged cells in the retina; but there are a lot of caveats.

DR. WILKINSON: Your daughter is correct, the genetic people I work with do not talk about this as an option. Did the low vision evaluation help you to read better?

JOAN: The low vision exam cost \$125.00 and produced not one device that was useful to me, nor any corrections to my lenses, nor any help with light sensitivity.

DR. WILKINSON: Have you tried a CCTV for reading, corning CPF lenses for light sensitivity? Often spectacles are not the answer for seeing better.

JOAN: I went back to the regular OD who listened and finessed both distance and near vision lenses for me. For the light sensitivity, I tried contact lenses with a tinted center. They are the only thing that limited light from all directions.

DR. WILKINSON: You may need to try a different low vision provider.

JOAN: I can't wear them long enough, though.

DR. WILKINSON: Then you need to look for another option.

JOAN: For reading, magnification makes the distortions worse, and I don't know what to do about that.

DAN: Can you tell us about the new V-Max which is coming out? Also, we would like your opinions on any other low-vision devices which would be of benefit. Perhaps some of these devices would help Joan.

DR. WILKINSON: The new V-Max should be out in the next several months. It will be significantly lighter, and the camera will be placed closer to eye level, which should be easier to use. The manufacturer of V-Max also makes Max, a hand-held closed circuit TV system that is quite nice for use on the user's own TV.

DAN: Is that comparable to Magnicam?

DR. WILKINSON: It is similar to Magnicam, only less expensive.

DAN: Joan's vision is similar to trying to read through a rippling pool of water. Is there any device that you know of which could help this?

JOAN: Wet screen door, dripping wet. :)

DR. WILKINSON: This is where a CCTV can be helpful, because it makes things both bigger and brighter. We must always remember that bigger is not always the answer for seeing better. Contrast is as important, if not more important.

DON: Mark, you mentioned the Corning CPF filter lenses. I had three pairs of these before my cataract surgery, but my optometrist says he can't get the Corning lenses anymore, so he got me some cheap substitutes. I'm not satisfied with the substitutes. Can you tell me where to get the real Corning CPF filter lenses now?

DR. WILKINSON: Corning is still making the CPF lenses. I would call around to see who can get them for you. We must always remember that seeing better for distance or reading is only part of the difficulties that are faced by someone with low vision. A low-vision practitioner should be able to get them. They only come directly from Corning Optics.

DAN: Mark, would you please describe some of the rehabilitation approaches which

you have found to be successful in your line of work?

DR. WILKINSON: Seeing better for reading is not the only problem people with reduced vision have. We need to find out what other difficulties they are having, such as independant travel, which an orientation and mobility specialist could help with. Personal grooming, meal preparation, and other activities of daily living can be helped by an occupational therapy approach; and educationally or vocationally, technology including our favorite computers, text to speech synthesizers, screen enlarging, and document reading programs can also be helpful. And I should not forget driving instructors.

DAN: Also psychological and emotional difficulties in relation to decreased social interaction, loss of confidence, depression, etc. Do you think enough is being done in these areas?

DR. WILKINSON: Definitely not. This is an excellent point. We cannot really help until we get through the depression, and get to acceptance and acknowledgement of the condition.

DAN: John Hull's book, "On Sight And Insight," provides a good look at these aspects from a very personal viewpoint. This is an area which we try to deal with every day on MDList.

TOM: Mark, have you had any experience with a device called Maculens?

DR. WILKINSON: No, describe it.

TOM: Some others may do that better than I. As I recall the post, it is a device that refocuses to a different part of the retina.

DR. WILKINSON: I thought that was probably what it was.

TOM: It sounded somewhat like the Ocutech.

DR. WILKINSON: Let's talk about these lenses for a minute. This is not like Ocutech, since the early 80's there have been a number of people who have invented various approaches to move the image onto a peripheral retina point. These lenses are designed to teach people how to eccentrically view. Most of the time, this can be taught without the expense of a lens. We must remember that the peripheral retina does not have the resolving ability of the macula, and so, as you move away from center, your resolution ability goes down. It is a prismatic lens.

DR. DILLON: I would like to thank Dr. Wilkinson for his help and answers. One of

the questions had to do with the difficulty in passing the driver's license test. Remember, when you take the test at DMV, these are administered by people who operate a screening device only, and can only judge pass or fail. If you do not pass, sometimes you can have your eye doctor fill out your forms. Not everyone does well on screening devices.

DR. WILKINSON: Good point. Screening devices do not tell us how someone is actually functioning visually. I am sure that many of you feel you function much better than your acuity might indicate. Remember that we live in a world that is fixated on 20/20. Very few people know what 20/40 or 20/100 actually means from a functional standpoint, and it varies from person to person.

DAN: Dr. Wilkinson, thank you for a good session. You have covered areas which we have not discussed here in the past, and that is how we continue to learn and accept our condition. I hope that you will come back and update us in the future.

DR. WILKINSON: I would be happy to. Thanks to everyone who participated, and to you, Dan, for having me.

DAN: The transcript of this session will appear on the web site tomorrow. Thank you, everyone, for attending, and best wishes for the holiday season.