

COFFEY CAKE

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ABSTRACT

"Coffey Cake" is a vision therapy analysis and database program for the MacIntosh computer that offers the behavioral optometrist numerous features for direct management of vision therapy patients. It provides a listing of deviant findings, suggests therapy procedures, and allows optometrists at all levels of expertise to appropriately manage their patients. This program is a major first step in the utilization of computers for patients with dysfunctions of the binocular vision system.

KEY WORDS

computer, MacIntosh, binocular vision, vision therapy, insurance, patient management

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f you had a program that was easy to use, would allow you to input patient data, assisted in the diagnosis and treatment of binocular vision disorders and wrote a simple report that also outlined specific office and home vision therapy procedures, would you use it? "Coffey Cake"¹ was designed to aid the practicing optometrist in developing and incorporating vision therapy into (his/her) busy practice. After the user enters the examination data, the program analyzes this data and generates a list of deviant findings. It then suggests therapy procedures and identifies appropriate insurance codes for billing purposes.

"Coffey Cake" requires a MacIntosh Plus or newer model with 1 meg of RAM (Random Access Memory), the MacIntosh Hypercard program (this is supplied by Apple Computer when you buy the Mac), an 800K disk drive or hard drive for storage, and the "Coffey Cake" master disk. I reviewed this program using a Mac SE with a 40 meg hard drive and a Mac SuperDrive (floppy disk drive). The finder was version 6.1.5, Systems disk version 6.0.5, and Hypercard version 1.2.5. I strongly recommend that you have a hard drive and use the most current version of the Mac Systems disk and Hypercard program. When I used a Mac with only a floppy drive, I was constantly exchanging disks (which was quite tiresome) and if I

was using an earlier version of the Systems disk or Hypercard, the program just wouldn't load.

In today's computer environment it is inexcusable if a program requires an extended learning process. If I cannot be productive within 60 minutes without an extensive review of the manual, the program is not worth the effort. So I turned on my Mac, booted up Hypercard, loaded the "Coffey Cake" stack, and started working ... never once looking at the manual. (This approach to learning new programs is NOT recommended for the novice computer user. New users of computers should ALWAYS carefully read the manuals!) If you are familiar with the Windows environment on DOS machines or the point and click interface made famous by Apple, you will be able to use this program fairly quickly. You will also need a basic understanding of the Hypercard program as well.

The first screen (Figure 1) allows you to perform several functions. If you point and click on the icon (picture) of the computer in the lower left hand corner of the screen, you will be returned to the finder (the original screen the Mac shows); if you click on the icon of the house, you will be returned to the Hypercard home stack (the original screen that appears when you boot the Hypercard program). You may also click on the boxes labeled "Add New

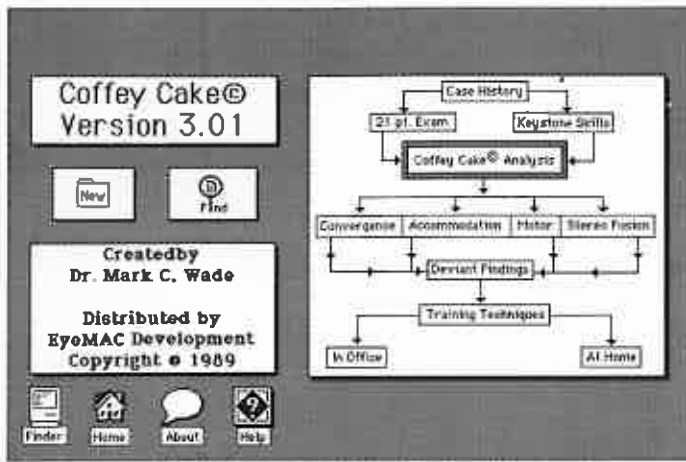


Figure 1. The first Coffey Cake screen allows you to Add New Patients or Find patients previously entered. The right portion of the screen graphically depicts the program

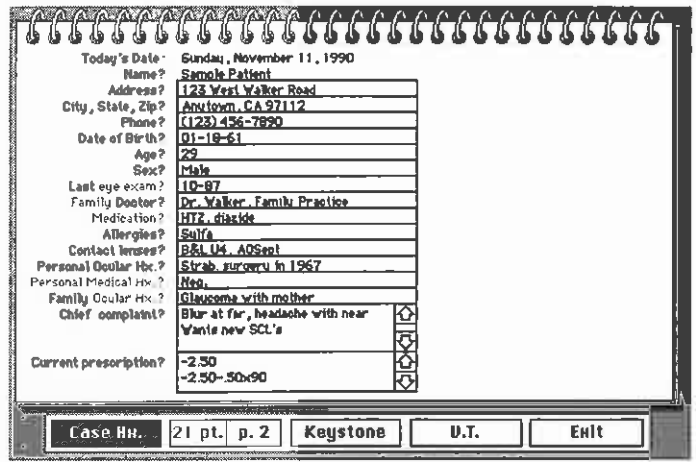


Figure 2. The patient data screen allows you to input appropriate demographic and case history information. The vertical arrows on the Chief Complaint box lets you "scroll" so you can easily add more information.

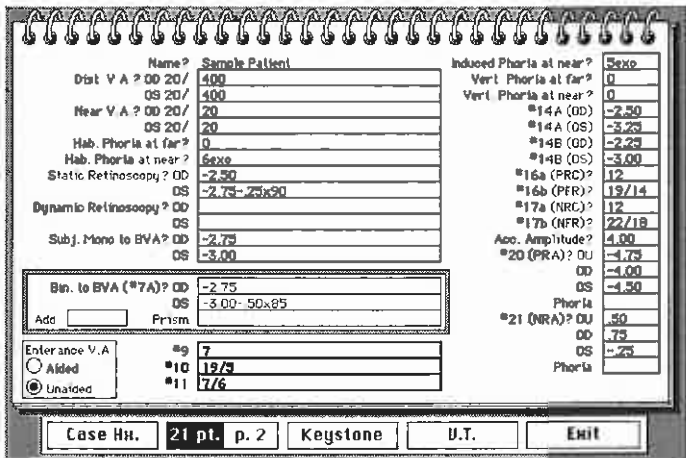


Figure 3. Patient examination data is entered following the OEP 21-point format. You must enter data as recommended or the computer may "freeze up" and refuse to continue.

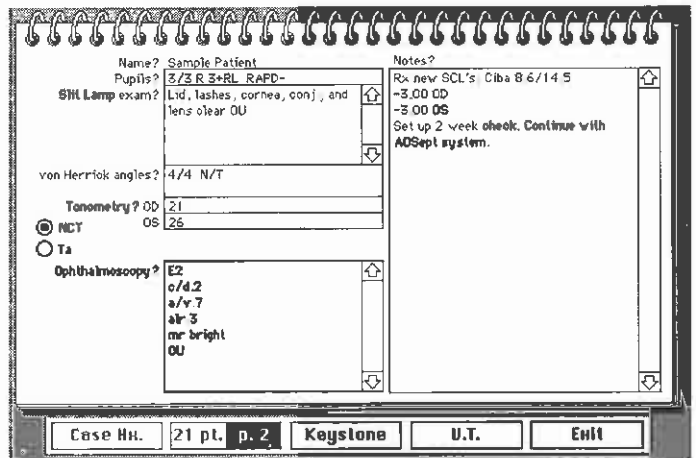


Figure 4. Page 2 of the data entry card allows you to enter findings concerning the ocular health of the patient.

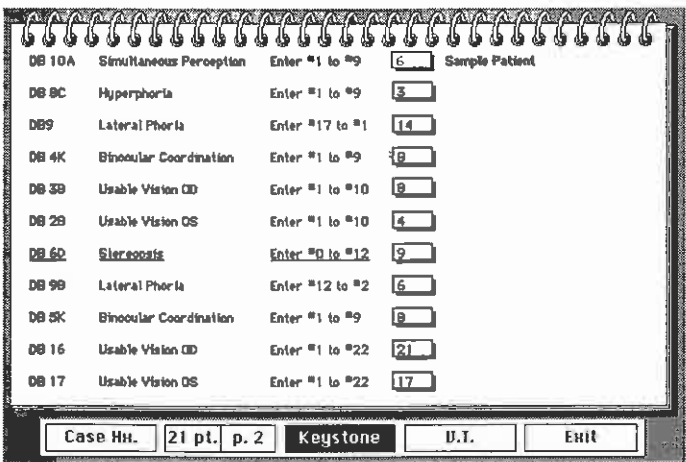


Figure 5. Keystone Visual Skill findings are entered on this card.

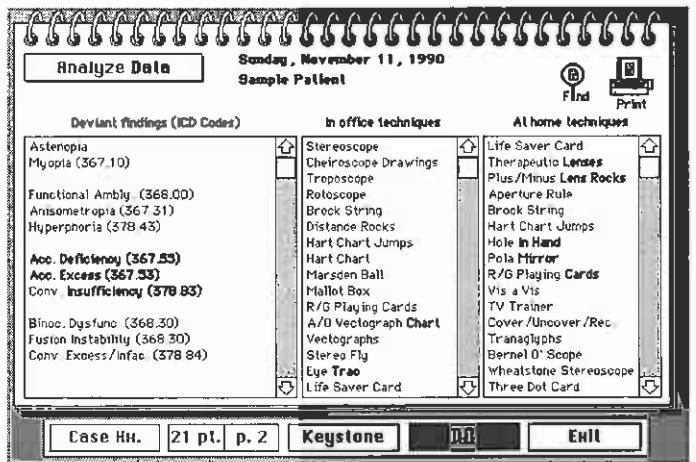


Figure 6. The Visual Therapy card allows you to review all your findings and to print a hard copy for your patient's file.

Patient" or "Find." The "Add New Patient" box allows you to enter new patient data while the "Find" box locates the data on a former patient.

When you open the "Add New Patient" box, the program loads all the "cards" you will need to enter new data (see Figures 2 - 6). These include the case history card (Figure 2) exam cards (Figures 3, 4), Keystone Visual Skills Series^b (Figure 5) and visual therapy card (Figure 6). You then enter the data as indicated. The case history card has enough room to enter all pertinent information by allowing you to scroll into more lines of text than are initially seen on the screen. Various words may be flagged by the computer and used later when reports are generated (e.g. blur, headache). After completing the case history you click on the "21-pt." tab at the bottom of the screen to start entering patient examination data.

The manual states that if a test is not performed, you should enter a "0" (zero). When you enter phoria findings, "6exo" (without a space) or a "0" (zero) if orthophoria is present. Ductions should be entered as "break/recovery" (in fraction format). Blur findings are entered separately as indicated (Figure 3) in accordance with the OEP 21-point case analysis system.¹ Negative and positive relative accommodation results are entered as the *total lens power* in the phoropter at first blur. Vertical phorias are entered, using BD or BU (i.e., 8BD or 4BU) with no space between the number and the base designation. Positive values cannot be entered using a "+" sign, but negative values must be entered using a "-" sign. Pay close attention to these data entry hints. If you do not enter the data as indicated, strange results will occur or the computer may "freeze up."

When your examination data is completely entered, click on the Keystone Visual Skills^a tab (Figure 5) and enter the information obtained. Next you move the mouse pointer to the Visual Therapy Card and click on the Analyze Data box (Figure 6-- left side of screen). This will provide you with a list of deviant findings, appropriate diagnostic codes for insurance purposes, and suggestions for office and home therapy procedures. A listing of deviant findings can be printed for inclusion in your patient's record. Other

available stacks include an Index Card that allows you to obtain help while online and the Exit Card which takes you back to the finder. Additional features include a Tests Card which provides a listing of all tests and techniques used and the International Diagnosis Codes Card which is not locked so the user can make changes on it. The VT Help Stack offers brief explanations of the various therapy procedures suggested for patient care. All findings are analyzed using the OEP clinical expecteds.¹

DISCUSSION

This program is an excellent first step in using computers for direct management of the patient requiring vision therapy. It is relatively easy to use and provides appropriate information for the optometrist and optometric assistant. There are some areas of concern that future versions of the program should address. The 20-page manual needs to anticipate user questions and address these appropriately. It should briefly review the basics of how to use Hypercard and include figures of each of the main screens. The addition of an index would be helpful as well. The data input system does not allow the user to make mistakes, which sometimes results in the MacIntosh freezing up. Better error management would decrease the likelihood of this happening. I would also suggest that the report be developed into something more than a listing of findings. Currently the program will tell you that your patient has a problem with adduction, but will not compare/analyze the findings for a diagnosis of convergence insufficiency.

"Coffey Cake" not only provides assistance in the direct management of patients, but may also be considered as a learning tool for the optometrist new to the concepts of functional optometry. The seasoned behavioral optometrist, on the other hand, will appreciate its systematic organization, ease of use, and the immediate access to diagnostic/procedural codes for insurance reports.

User support was outstanding. Any time I had a question, I called the program's author and received a timely response. He has also established a computer bulletin board to address user con-

cerns. You do not receive this type of support when purchasing other computer programs. My overall rating of this program is quite high. With future revisions, "Coffey Cake" should become a welcome addition for all optometric offices providing vision therapy services for their patients.

Sources

- a. Mark C. Wade, O.D., 611 Menlo Park Road, Greenbay, WI 54302
- b. VisionExtension, 2912 South Daimler St., Santa Ana, CA 91705

References

1. Skeffington AM. (Hendrickson H, Ed.) Practical applied optometry. Optom Extension Prog. 1991.

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