

**Modular Primary Eyecare
Examination Forms
for the
Ferris State University Optometry
Clinic: 1994-1996**

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Abstract

The Clinic of the Ferris State University College of Optometry (FSUCO) required a new primary eyecare examination form. The author and Dr. Nancy Peterson-Klein set to work to design and produce the form to the specifications established by the clinical faculty and relevant professional practice guidelines. The new form was introduced, after a continuous process of review and development, during the Summer of 1994. The new form was fine-tuned in the clinic in the Fall of 1994 and has remained in use -- unchanged -- to February 1996.

Because the modular approach used in the development of the new "Primary Eyecare Exam" form lends itself easily to modification, the new form has been instrumental in the development of a new "Progress Notes" form and "Master Problem List". The new form will serve as the nucleus of a new generation of examination forms at FSUCO.

Introduction

The Ferris State University College of Optometry in Big Rapids, Michigan graduates thirty-two Doctors of Optometry every year. Besides training new optometrists, the FSU Optometry Clinic is a major eyecare provider in Mecosta County, MI, performing over 3,300 comprehensive primary eyecare examinations annually. In the Spring of 1994, Dr. Nancy Peterson-Klein and I began the process of defining the Clinic's primary eyecare examination and form requirements.

The clinic requirement involved producing a form that was useful for all aspects of primary eyecare; thus serving as a template for interns' exams and providing adequate space for recording data collected from additional problem-directed objective testing.

The primary goal of the new form was to provide a template and guide for collection of the minimum examination data set required for a basic primary eyecare examination. These requirements were based upon AOA Quality Assurance (QA) guidelines,⁴ AOA Comprehensive Adult Eye and Vision Examination recommendations,¹ American Academy of Ophthalmology Preferred Practice Patterns,⁵ clinico-legal and administrative requirements of the College,⁷ and the clinical instruction requirements of FSUCO.⁶ The new form was to be professionally rendered in a flexible format, lending itself to modifications as requirements changed in the setting of the FSUCO Clinic. The new form would serve as the basis for future eyecare examination form designs.

Areas for recording data were to be ordered and organized for efficient and effective recording of data. The format of the new form would also provide a backbone structure to guide interns through the collection of examination data. The new form layout would be based on a SOAP format.⁴

The *current primary eyecare examination form* consists of two double-sided 8½ x 11 inch pages. The form is photocopied from a typed and manually-ruled original. Production values are low and examination form organization includes allocation of space for specific testing not required as part of the minimum data collection set for the primary eyecare examination as defined by FSUCO. The format of the current form is inadequate for efficient recording of examination data. Because of the space allocated for large numbers of procedures, the testing is not in a coherent order within the four-sided form. The patient questionnaire is brief and one single-sided page in length: production values are similar to the examination form.

One of the objectives of the new primary eyecare examination form is to produce a single page, two-sided form which would provide a comprehensive patient questionnaire on one side and an effective, professional, streamlined primary eyecare examination format on the other side.

A single page examination form would decrease the paper requirements by two-thirds, thereby decreasing costs. Effective diagnosis and management would be facilitated by the proximate location of all elements of the subjective history and objective data. Future benefits would include: faster and more effective review of patient files and management of cases; and decreased stress on the FSUCO clinic filing system.

The new primary eyecare examination form would also have the potential to become the center-piece of a generation of forms that would replace forms currently used in specialty clinics within the FSU Optometry Clinic. Using the principle of modular design, the new computer-designed form would incorporate modular elements, the manipulation of which would result in the creation of specialty forms for instruction or clinic use upon demand -- *a forms system*. Apart from the convenience of modular design, *common modules* throughout a forms system would facilitate users' orientation to new forms and assist in transition from one form to others within the system.

The organization of the form would make it more amenable to quality assurance audits. This is a major concern within the constantly evolving US health care system where there is increasing emphasis on quality, cost control, and meeting the requirements of third-party payment programs.

Critical analyses of the *administrative* and *encounter* elements of primary eyecare examinations by the FSUCO clinical faculty and staff will be used to develop the new form. This process ensures that the new form will meet the needs of the Clinic. It also ensures that the new form could be used in the future as a prototype template for automated data collection. Although this is not an immediate requirement of the design project, an immediate benefit will be seen in any future manual survey or collection of group examination data and the QA program (as noted earlier).

The enhanced production value and contrast of the new form would make the examination form more readable in a darkened exam room -- the usual haunt of fledgling interns. A by-product of the "facelift" in production value would be image-enhancement: the patient fills out an extensive, well-rendered questionnaire and is able to preview a professionally designed examination form on the other side. In today's health care marketplace, a professional image is

always an effective marketing tool: a well-designed form does not guarantee professional care but it does imply professionalism and attention to detail.

Methods

Initial prototype modules were constructed and blocked-out on Lotus 123 v2.3 WYSIWYG[®] software running on an IBM PC[®] clone with an AMD 386DX40 microprocessor. As the project progressed, modules were constructed and pasted into Microsoft Draw[®] within Microsoft Word for Windows[®] v2.2, running on the same hardware. Throughout development, graphics were produced on Microsoft Draw and CorelDRAW![®] release 2.01. Additional graphics (pre-production) were provided by Paul Laxon of Tabula Rasa Magazine³ -- these graphics were not used in the final versions of the FSU Optometry Clinic primary eyecare examination form.

Camera-ready forms were produced on Weyerhaeuser First Choice[®] premium laser paper using a Hewlett Packard DeskJet 500[®] printer.

Specifications for the primary eyecare examination form were provided by the Clinical Faculty of the FSU College of Optometry. These specifications were reached through the process of consensus decision-making with Dr. Nancy Peterson-Klein as facilitator. The same process was used for modification and approval of prototype and production forms during the development, trial, and implementation phases of this project. Valuable input was provided by the administrative staff of The Clinic. Fourth year optometry interns "pilot-tested" the new form in-clinic with appropriate feedback as to design and function of the form in patient care experiences. As well, the form design was guided by the Problem-Oriented Medical Record system developed by Lawrence Weed, MD.,⁴ the AOA "Optometric Clinical Practice Guidelines",¹ American Academy of Ophthalmology "Preferred Practice Patterns",⁵ and the "Uniform Ambulatory Medical Care Minimum Data Set" recommended by the National Committee on Vital and Health Statistics.⁴

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Part I

The Primary Eyecare Examination Form

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General Design Considerations

The new primary eyecare examination form is a double-sided form. The first side contains: *administrative* and *encounter* data (filled-in by the patient); the patient questionnaire (filled-in by the patient); and space for additional case history and chief complaint. The second side contains: the defined examination data (including space for additional problem-directed testing), diagnosis, and management plan for the patient. The second side is oriented head-to-tail with the first side so that it can be read right-side-up when turned over in a flip chart (anchored at the top of the form).

The Gill Sans font is used throughout the form in regular, bold, and italic iterations. The font is *sans serif* (without serif) and offers enhanced readability with reduced clutter. The smallest print size used in this form is 10-point; however, the acknowledgment clauses at the end of the patient questionnaire are printed in 8-point text. (Visually impaired patients will require assistance to complete the questionnaire.)

Leveling requirements for Medicare billing have been integrated into this form: History, Examination, and Decision can be evaluated right on the form to facilitate the leveling process. The leveling and coding of primary eyecare examinations will not be discussed in depth in this paper.

Administrative and Encounter Data

According to the "Uniform Ambulatory Medical Care Minimum Data Set" recommended by the National Committee on Vital and Health Statistics,⁴ a medical record must contain sufficient information to positively identify the patient, support the diagnoses, justify the treatment, and record the results accurately. To provide this information effectively, the primary eyecare examination form is divided into two major sections: *administrative data* and *encounter data*.

Administrative data identifies the patient and provider. Recommended *patient data items* include: personal identification, such as name(s) and numerical identifiers (SSN); residence; date of birth; sex; and racial and ethnic background. Recommended *provider data items* include: provider identifiers, including name and any numeric identifiers; location and address; type of practice; and profession.

Name, patient number, residence address, telephone number, date of birth, age, and sex are provided on the patient routing slip. The routing slip is produced at check-in and attached to the examination form. Despite the duplication, it was decided to have the patient write in their name and age on the examination form itself to assist in positive identification of the patient in situations where the exam form might be separated from the patient file. As well, it was determined that occupation and employer information were essential patient data for the new form. Race and ethnic background were not determined to be essential administrative data in this setting.

The routing slip also contains the name of the clinical faculty in charge of providing services to the patient. The exam form is clearly titled, "Ferris State University College of Optometry" -- thus naming the provider, the provider's profession, and type of practice (as well as satisfying the recommended provider location/address requirements).

The administrative data is collected on the top of the first page of the new form. The patient or patient's guardian fills in the shaded boxes with the appropriate data. See item number 1 in figure 1 or Appendix A for relevant portions of the new primary eyecare examination form.

Encounter data includes all the information from the examination. Certain elements of the encounter are not products of the actual examination: date of encounter, place of encounter, method of payment, and total charges. Total charges and their applicable procedure codes are written on the patient routing slip. The place of encounter is implied in the title of the form. The remaining two

encounter items are included with the administrative data for the patient to fill in before the exam. Total charges are shown on the routing slip. *See item number 1 in figure 1 for encounter data.*

It was also decided that the patient should sign and date an acknowledgment of responsibility for payment for services rendered. Optionally, the patient can sign a limited release to use patient information for research or educational purposes. Both of these clauses are found near the bottom of the first page. *See item number 13 in figure 1 for patient acknowledgment and information release clauses.*

Subjective Data: Patient Questionnaire and Case History

The questionnaire assists the patient in providing useful information to be reviewed by interns before the examination. The questionnaire does not replace the case history but is a framework for the general case history performed by the intern. This questionnaire provides all the essential information and cues for a more detailed, problem-directed history-taking process.

All AOA-recommended items¹ are included in the questionnaire and case history: nature of presenting problem (chief complaint), visual and ocular history, general health history, medications, allergies, family eye and medical history, and vocational or avocational vision requirements.

The questionnaire dominates the first page -- from the questionnaire instructions (below the administrative data) to the double lines. Most items are multiple choice or "yes/no" with patient responses in the shaded boxes. Multiple choice items only require positive patient responses. Several items require single word or short answers; underlined spaces or boxes are provided for patient responses to these questions. Where possible, spaces for responses are located close to the questions; this enhances user utility but can have a negative impact on layout on occasion.

There is space below the double line for the clinician to note additional history and reiterate the chief complaint. *See figure 1 or Appendix A to view the entire first page of the exam form when required.*

Occupation, avocation, and environmental questions appear first. Besides providing valuable information on the needs of the patient, answers to these questions give the intern a valuable information base for building patient rapport. *See item number 2 in figure 1 for occupational, avocational, and environmental history.*

The next section of the questionnaire asks for the patient's history of eyecare and general health examinations. Space to record other health care providers is also provided. *See item number 3 in figure 1 for health care history.*

The next section of the questionnaire allows the patient to express their chief complaint(s). The patient is provided with twelve major symptoms or categories of symptoms. These major symptoms were specified by the FSUCO clinical faculty. In situations where the patient chooses an option with multiple symptoms, the intern reinforces the chief complaint with directed questions aimed at defining and expanding on the complaint. The intern circles which symptom(s)

-- of the chosen set of symptoms -- exists or is emphasized by the patient. (The chief complaint is addressed again towards the end of the page.) An option to list an "other" complaint is provided. See item number 4 in figure 1 chief complaint.

Ferris State University College of Optometry **Patient Information**

Name (last, first)	Age	Today's Date
Occupation	Employer	Payment: <input type="checkbox"/> Insurance <input type="checkbox"/> Cash <input type="checkbox"/> Credit Card <input type="checkbox"/> Check <input type="checkbox"/>

Please answer the following health questions as far as the double line. Thank you.

1 Does your occupation require the use of safety eyewear? Y N Do you use a computer at work or at home? Y N

2 List your hobbies: _____
 Do you use safety eyewear for any of your hobbies? Y N
 How would you rate your daily exposure to sunlight? Low Medium High

3 When was your last complete eye exam? _____ Who was the Eye Doctor? Dr. _____
 When was your last complete physical exam? _____ Who is your Primary Care Physician? Dr. _____
 List any other Health Care Providers you are seeing currently: _____

4 **Main reason(s) for today's appointment:**

<input type="checkbox"/> Eyes are Tired or Ache (Eye Strain)	<input type="checkbox"/> Contact Lenses	<input type="checkbox"/> Double Vision
<input type="checkbox"/> Eyes are Red or Itch	<input type="checkbox"/> Broken Glasses	<input type="checkbox"/> Eye Injury or Pain
<input type="checkbox"/> Sandy or Dry Eyes	<input type="checkbox"/> Blurred Vision	<input type="checkbox"/> Learning Disability
<input type="checkbox"/> Excessive Tears (Watery Eyes)	<input type="checkbox"/> Light or Glare Sensitivity	<input type="checkbox"/> Other _____
	<input type="checkbox"/> Vision Disturbances (Spots, Halos, Light Flashes, etc.)	

5 Do you wear glasses? Y N If yes, how old are the glasses? _____ When do you wear them? _____
 Do you wear contact lenses? Y N If yes, what type of lenses? Gas Permeable Soft Disposable Frequent Replacement
 If yes, how old are the contact lenses? _____ What disinfection system do you use? _____

6 **Do you have ("now") or have you had ("past") ANY of the following health conditions?**

<input type="checkbox"/> High or Low Blood Pressure	<input type="checkbox"/> Diabetes	<input type="checkbox"/> Neuromuscular Disorders
<input type="checkbox"/> Heart Disease or High Blood Cholesterol	<input type="checkbox"/> Thyroid Problems	<input type="checkbox"/> Cancer
<input type="checkbox"/> Rheumatoid Arthritis or other Arthritis	<input type="checkbox"/> Stroke	<input type="checkbox"/> Tuberculosis Infection
<input type="checkbox"/> Migraines or other Headaches	<input type="checkbox"/> Asthma or Breathing Problems	<input type="checkbox"/> Hepatitis or HIV Infection
<input type="checkbox"/> Allergies or Sinus Problems	<input type="checkbox"/> Psychological Disorders	

7 **Have you ever had an allergic reaction to ANY medication or ANY other environmental cause?** Y N
 If yes, please list: _____

8 **Are you currently taking ANY drugs or medications? (prescription or non-prescription)** Y N
 If yes, please list: _____

9 Are you pregnant? Y N

10 Have you ever had an eye injury, eye surgery, or been treated for any eye disease? Y N
 Have you ever had surgery to remove cataracts? Y N If yes, who was your surgeon? Dr. _____
 Date: _____ City/State: _____

11 Is there ANY history of high blood pressure, heart disease, diabetes, or glaucoma in your family? Y N
 Has anyone in your family had eye surgery or been treated for any eye disease? Y N
 Have you ever had your pupils dilated during an eye examination? Y N If yes, were there any problems with dilation? Y N

12 Were you referred to our clinic? Y N If yes, who referred you to our clinic? _____

13 I acknowledge that I am responsible for payment at the time of each visit for all services rendered by Ferris State University College of Optometry not covered by an insurer or Agency authorization. I authorize Ferris State University College of Optometry to use photographs or information concerning my case in the interest of education or research; I understand that I will not be identified by name.

signature of patient or person authorized to sign for patient _____ date _____ signature of patient or person authorized to sign for patient _____ date _____

Additional History:

14 _____

15 C/C: _____

16 I have reviewed and agree with the above statements concerning patient history. Dr. _____ History: P E D C

Figure 1: the first side of the modular primary eyecare examination form.

Following the chief complaint(s), are questions about spectacle and contact lens wear. *See item number 5 in figure 1 for spectacle and contact lens history.*

The questionnaire addresses current and past systemic health conditions using a multiple choice format. Fourteen relevant categories of disorders are listed. Half of these categories require further clarification by the clinician as they encompass more than one option. For example, the option "Heart Disease or High Blood Cholesterol" represents a choice of related disorders that must be differentiated with directed questions from the intern. Another example, "Hepatitis or HIV Infection", provides valuable information for patient management and leads to further directed questions. *See item number 6 in figure 1 for systemic health history.*

Any response in this section should become a focus of directed questions anyway as all of these fourteen options -- when chosen by the patient -- could have an impact on examination procedures used, differential diagnoses and management of ocular conditions.

The questionnaire asks the patient to list any medication or environmental allergies. Prescription or non-prescription medications taken are also listed in the same manner. Interns must ask questions directed at uncovering prescription and OTC medication usage: history of any systemic or ocular health conditions will direct the intern in this task. The space provided is adequate for most patients but additional information can be written below the double line. *See items number 7 and 8 in figure 1 for allergies and medications.*

The next question is in its own category: "Are you pregnant?" There is plenty of room beside this question to elaborate on the details of the pregnancy, as appropriate. *See item number 9 in figure 1.*

The questionnaire asks the patient whether they have had any eye injuries, surgeries (including cataracts), and diseases. Any positive responses should be followed with directed questions by the clinician. *See item number 10 in figure 1 for eye health history.*

The same section asks about family general and ocular health history. Positive responses must be investigated. *See item number 10 in figure 1 for family eye and general health history.*

Since dilation is an appropriate diagnostic procedure in all primary eyecare examinations at FSUCO,^{6,7} the questionnaire incorporates items designed to elicit dilation history. It is up to the intern to gather further information if the patient

experienced problems related to a previous dilation. *See item number 11 in figure 1 for dilation history.*

The last segment of the questionnaire investigates patient referral sources. A positive response (depending upon the referral source) may indicate: further investigation of the reasons for referral; or, possibly, a requirement for a letter in response to the referral. It is also possible that referral sources may be monitored by the Clinic in the future. *See item number 12 in figure 1 referral history.*

Below the double line, the intern continues taking the case history. Within this space is a specific line devoted to reiteration of the chief complaint(s) -- "C/C". The clinical faculty responsible for care should sign in the space provided to acknowledge the completeness of the case history. This signature is important for quality assurance audit and third party payment plans such as Medicare. The history is evaluated in the bottom right corner for Medicare leveling purposes: *P*, *E*, *D*, and *C* stand for *problem-focused*, *expanded problem-focused*, *detailed*, and *comprehensive*.² *See item number 14, 15, and 16 in figure 1 for additional history, signature, and leveling.*

Problem-focused histories involve: the chief complaint and a brief history of present illness(es) or problem(s). *Expanded problem-focused* histories add a problem-pertinent system review -- including other eye problems. *Detailed* histories include: the chief complaint; extended history of present illness(es); extended system review; and pertinent past, family, and social history. *Comprehensive* histories add to *detailed* histories with: a complete system review and complete past, family, and social history.

Objective Data: Examination

The second side of the modular primary eyecare examination form contains space for the objective data, assessment (diagnoses), and plan of action (management). Space for recording the results of objective testing performed during the examination is organized on the form with specific allocations for the minimum data set. Additional space is available for problem-specific testing and for any drawings required. *See figure 2 or appendix A for an overview of the second side of the new form.*

As determined by the FSUCO clinical faculty, the minimum data set for objective data consists of: distance and near aided and unaided visual acuities; distance and near cover test; visual field screening; pupil evaluation; Goldmann tonometry; stereopsis; versions; near point of convergence; blood pressure; habitual prescription; objective and subjective refraction; keratometry; slit lamp biomicroscopy; and direct and indirect ophthalmoscopy.

Organization of the minimum data set on the form enhances examination efficiency and optimizes the available space. Space is the most restrictive of these two criteria: examination flow does not always exactly match the organization of the examination form. The sequence of testing within the intern primary eyecare examination will not be extensively discussed. However, the organization of objective data within the examination form as it relates to analysis of examination results will be addressed.

Entering visual acuities are written in the upper left corner of side two of the examination form. Visual acuities are required: aided and unaided, distance and near, and with right, left, and both eyes together. The method should be marked underneath: the choices are listed as "Snellen" and "Other" with enough space to write which "Other" method is used (e.g., Allen, tumbling E, etc.). Pinhole acuities are considered problem-directed testing: results can be written in the open space on the right side of the page. *See item number 1 in figure 2 for Visual Acuities.*

The habitual prescription -- through which the acuities are tested -- should be written down. On the examination form, it is written to the right of the visual acuities and directly above the refractive sequence. *See item 2 in figure 2 for Habitual Rx.*

The refractive sequence is below the Habitual Rx in the center column of the top third of the examination form. It consists of: the objective refraction, subjective refraction (BVA), and bifocal addition. The objective refraction segment contains

space for the results, right and left visual acuities (mandatory to assess the accuracy of the intern's retinoscopy), and space to check the method used (retinoscopy or autorefractor, where appropriate). The subjective refraction (BVA) represents the refraction after balancing and end-point determination. Space is available for acuities (right, left, and both eyes together). The bifocal addition determination follows: space is available for the add power, acuities (both eyes together), and the range of clear vision through the add. Additional testing relating to the determination of the bifocal addition (such as amplitude of accommodation) may be written in the open space to the right. *See item number 11 in figure 2 for the refractive sequence.*

Keratometry appears below the refractive sequence -- in the center of the top third of the examination form. This procedure is optional depending upon the clinic instructor and the level of proficiency of the intern. It is located below the refractive sequence because of its predictive value for the cylinder and axis of astigmatism in the refraction. Its placement also represents the most effective use of available space. *See item number 12 in figure 2 for Keratometry.*

The unilateral and alternating cover tests are mandatory in the primary eyecare examination at the Ferris State University Optometry Clinic. The results of these tests aided and unaided and at distance and near are recorded on the left side of the upper third of the examination form, below visual acuities. Standard abbreviations -- as have been approved for use in The Clinic -- should be used for recording the results of these tests. If additional space is required for more in-depth analysis of ocular alignment, this space is available on the right side of the upper third of the form. *See item number 3 in figure 2 for Cover Test.*

"Field Screening" is beside "Cover Test" on the examination form. The two basic field screeners used are Amsler Grid and Confrontation Fields. For both tests, each eye is tested separately. A normal or non-pathological result is "-". A questionable or pathological result is "+". Additional details of "+" results can be noted in the additional space on the right of the top third of the form. *See item 4 in figure 2 for Field Screening.*

Pupil evaluation results are located below cover test results. Each pupil's size and reactions are evaluated. The presence or absence of afferent pupillary defects are also noted. As with Field Screening, normal or non-pathological results are "-". Questionable or pathological results are "+". Additional details of a "+" APD result or further investigation of anisocoria, etc., can be written in the additional space provided on the right of the upper third of the form. *See item 5 in figure 2 for Pupils.*

Aided Acuity		Unaided Acuity		Habitual Rx					
Distance	Near	Distance	Near	Sphere	Cylinder	Axis	Prism	Base	Add
1	OD			2					
	OS								
	OU								
Method			Snellen	Other:					
3	Cover Test		Field Screening		Objective Refraction				
	Distance	Near	Amsler	Conf	Ret	Auto			
4	sRx		OD	- + - +	11	20/			
	cRx		OS	- + - +		20/			
5	Pupils		APD	- +	Subjective Refraction (BVA)				
	Size	Reactions	mmHg	Time	OD	20/			
6	OD		OS		OS	20/			
7	Stereopsis		Habitual Rx		Y/N		Versions		
	Method	Result	Test Dist	WNL	NPC		BP		
	Van Herick			Other	Arm		L R		
8	9	10	11	12	13	14			
Biomicroscopy									
Lids / Lashes									
Tears									
Conjunctiva									
Sclera									
Cornea									
Anterior Chamber									
Iris									
Lens									
Posterior Chamber									
Ophthalmoscopy									
Direct MIO BIO Indirect Fundus Biomicroscopy									
Drugs administered / Dose:									
I have been informed of the importance of this test and I refuse it. (patient)									
15	16	17	18	19	20	21	22	23	
OD		WNL		WNL		not WNL		OS	
not WNL		not WNL		not WNL		not WNL		not WNL	
A/V Ratio		ε s		A/V Ratio		ε s		A/V Ratio	
Dx									
ICD									
Recommended Rx									
Expires									
Sphere Cylinder Axis Prism Base Add									
Exam: P E D C I									
Management Plan (include advice and whether written or verbal)									
Referral Dr./Date: Follow-up: Recall:									
Optometric Intern: Dr. Decision: S L M H									

Figure 2: the second side of the modular primary eyecare examination form.

Goldmann tonometry is mandatory in The Clinic. Since this information is reported separately from slit lamp biomicroscopy (the point in the examination where this data is generated), and coherent presentation of this information requires a different format from that used for slit lamp biomicroscopy results

(covered later), Goldmann tonometry results are separated from those of slit lamp biomicroscopy. Space constraints force Goldmann tonometry results to be located to the right of "Pupils" and below "Field Screening" on the examination form. *See item 6 in figure 2 for Goldmann Tonometry.*

Goldmann tonometry is reported for the right and left eye (in mmHg). Record the time of day as "a.m." or "p.m."

Stereopsis testing is mandatory for some patients -- as determined by The Clinic -- and is a problem-specific test for other patients. Stereopsis is the best single indicator of the overall function of both the sensory and motor aspects of the visual system.⁸ The section for writing stereopsis results is located under the "Pupils" section on the left of the upper third of the examination form. Record the results of this test with the method used and test distance. Note the use of an habitual Rx -- "Y" or "N". *See item number 7 in figure 2 for Stereopsis.*

Versions are recorded beside "Stereopsis" and below "Goldmann Tonometry". If there is normal (full) range of motion, check the "WNL" box. Otherwise, check "Other" and follow up this finding with binocular or monocular problem-oriented testing or explanation using the additional space provided at the right side of the upper third of the form. *See item number 8 in figure 2 for Versions.*

Near Point of Convergence (NPC) or Convergence Near Point is recorded in the center column of the upper third of the examination form beside "Versions" and underneath keratometry and the refractive sequence. *See item number 9 in figure 2 for NPC.*

Blood pressure is part of the minimum data set for patients in The Clinic. Recording space is located to the right of "NPC" under keratometry and the refractive sequence. The location of this test on the examination form is dictated by the space available on the form. Record the blood pressure reading and the arm used ("L" or "R") in the appropriate space.

Additional space for problem-directed testing is located on the right of the upper third of the examination form. *See item number 13 in figure 2 for additional space.*

Space for recording slit lamp biomicroscopy and ophthalmoscopy findings occupies the remainder of the objective data section of side two of the new primary eyecare examination form. Both of these sections have structures listed down the center and space for recording data on either side: right eye on the left and left eye on the right (the intern's viewpoint of the patient). On either side of the structures listed in these two sections, there are boxes marked, "WNL". The

intern marks these boxes if the structure is healthy or normal. Otherwise, there are spaces beside the boxes to record any abnormal or pathological findings. Space is available to the outside of these spaces for any drawings required to document examination findings.

The slit lamp biomicroscopy section of the examination addresses the health of the adnexa and anterior segment of each eye. The following structures are evaluated: lids, lashes, conjunctiva, sclera, cornea, anterior chamber, iris, lens, and posterior chamber. These structures are listed in the order in which they are efficiently examined. This is generally the limit of examination without the use of contact or non-contact fundus lenses. Anterior chamber angles are estimated by the Van Herick method: space is available to record this data at the extreme upper left and right corners of this section. Open space is available on the extreme left or right sides of this section for drawings or gonioscopy results. Additional space may be found in the upper right section of the form reserved for problem-specific testing. *See item number 14 in figure 2 for Biomicroscopy.*

Goldmann tonometry is performed after the slit lamp biomicroscope examination. Findings are recorded as mentioned previously. *See item number 6 in figure 2 for Goldmann Tonometry.*

Posterior segment findings are recorded below "Biomicroscopy" in the section labeled "Ophthalmoscopy". Check the method(s) used beside the heading, "Ophthalmoscopy": direct, monocular indirect, binocular indirect, and/or indirect fundus biomicroscopy. This section has a similar structure to the Biomicroscopy section. The following structures are evaluated: disc margins, neuroretinal rim, cup-to-disc ratio, presence or absence of lamina cribrosa, venous pulsation, artery-vein ratio, vasculature, retina, choroid, macular pigment, foveal reflex, peripheral fundus, vitreous, lens. Diagrams for documenting fundus and optic nerve head findings are located at the extreme left and right side of the section. Additional space may be found in the upper right section of the form reserved for problem-specific testing. *See item number 17 in figure 2 for Ophthalmoscopy.*

The dosages and diagnostic pharmaceuticals instilled for dilation and/or cycloplegia must be recorded. Space is provided underneath the heading, "Ophthalmoscopy". As well, since it is a policy to dilate all patients presenting to The Clinic for primary eyecare examinations, it is important to make the patient aware of the importance of the dilated fundus examination. To protect the clinic, refusal of dilation must be documented effectively. Below the space for listing instilled pharmaceuticals, is a space where the patient signs an acknowledgment of refusal of dilation. *See item number 15 and 16 in figure 2 for drugs instilled and acknowledgment of refusal of dilation.*

The extent of patient examination is evaluated -- for Medicare leveling requirements -- near the bottom of the second page of the examination form. *P*, *E*, *D*, and *C* stand for *problem-focused*, *expanded problem-focused*, *detailed*, and *comprehensive* as they did for evaluation of the extent of patient history taken.² See item number 19 in figure 2.

Problem-focused examinations involve: an examination limited to the affected body area or organ system. *Expanded problem-focused* examinations add examination of other symptomatic or related organ system(s). *Detailed* examinations involve extended examination of affected body areas and other symptomatic or related organ systems. Complete primary eyecare examinations at the FSU Optometry Clinic are usually considered to be *Detailed* examinations for purposes of leveling. *Comprehensive* examinations are complete single system specialty examinations or complete multi-system examinations.

Assessment (Diagnoses)

A major goal of clinical instruction at the Ferris State University Optometry Clinic is to marry the interns' examination and diagnostic skills to produce effective clinicians. Mechanical examination skills and techniques must be used effectively in the examination of patients. Apart from collecting the minimum data set required by The Clinic, the intern must be able to synthesize the collected data, results of problem-directed testing, and the patient history to produce a diagnosis and management plan. By assisting the intern in collecting the data required for managing the patient, the new examination form allows: the intern to collect data effectively; have the data arranged in a meaningful pattern for analysis; and assist in the diagnostic process.

From the point where the intern begins taking the patient history, the process of diagnosis begins. Patient symptoms should lead to the formulation of tentative diagnoses. Examination data should be analyzed as it is collected: tentative diagnoses are ruled-out and more are added as the examination continues. Additional history should be elicited throughout the examination to further narrow the potential field of diagnoses. By the end of the data collection process (and after research, if required), a diagnosis is proposed.

The format of the new examination form lends itself to effective analysis of collected data. With all the examination findings on one well-organized page, analysis is easier.

When optometric technicians are available, they generally perform: Amsler Grid, stereopsis, color vision, sphygmomanometry, neutralization of the habitual spectacle Rx, and autorefraction, as indicated. These results are written into the appropriate spaces in the examination form before the patient is seen by the intern. Color vision testing results are written at the top of the space for additional testing while autorefractor print-outs are stapled in that corner or written into the space reserved for "Objective Refraction" within the refractive sequence: check the box marked "Auto" within this section. *See items number 13 and 11 in figure 2 to view the spaces for additional testing and the refractive sequence, respectively.*

When the intern begins the objective examination, the first test is visual acuity. This test is also the first space on the examination form. Visual acuity is analyzed in relation to age, the history or chief complaint and other objective test findings: habitual Rx; objective and subjective refraction results (and respective visual acuities); bifocal addition; possibly keratometry; binocular status (cover test, etc.); and anterior or posterior segment findings. To facilitate analysis, most of these objective elements are close to visual acuities on the form. *See figure 3 for an*

overview of the location of relevant data on the form; more detail can be seen in figure 2.

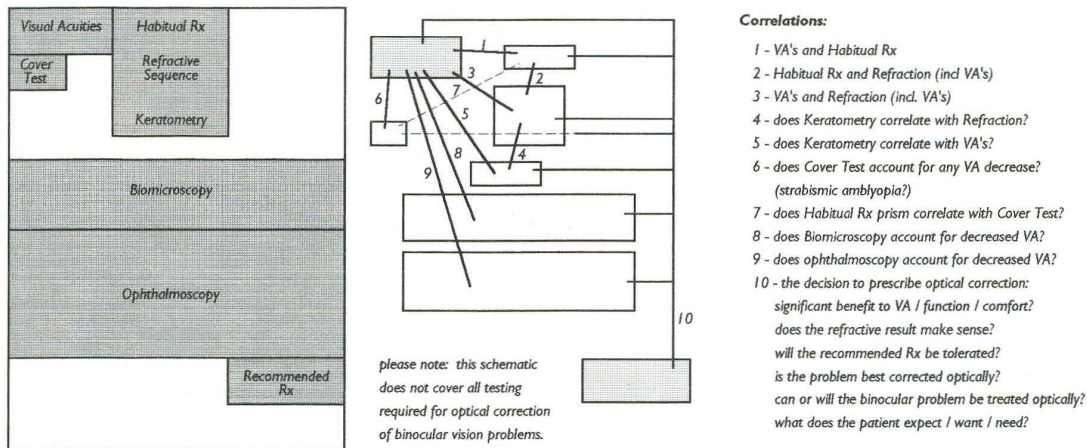


Figure 3: analytic schematic of relevant objective data for recommending optical correction with visual acuity as the starting point.

The balance of objective testing shown in the upper third of the examination form consists of tests that have less (or more peripheral) bearing on analysis of the need for optical correction: pupil evaluation, field screening, stereopsis, versions, near point of convergence, Goldmann tonometry, and blood pressure. These data can influence decisions to prescribe but are also useful in analysis of ocular and visual system health and investigating binocular problems. Space is provided on the right for additional problem-directed testing (as required). See figure 4 for a diagram of relevant objective data for binocular vision assessment. See figure 5 for a diagram of relevant objective data for ocular health assessment.

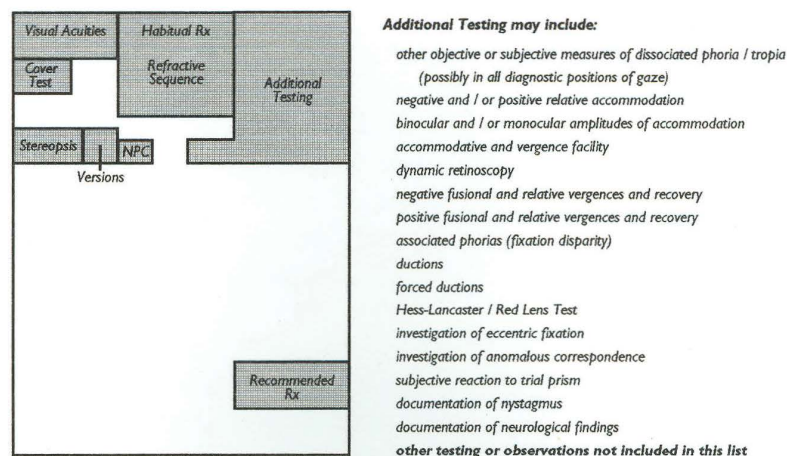


Figure 4: relevant objective data for binocular vision analysis.

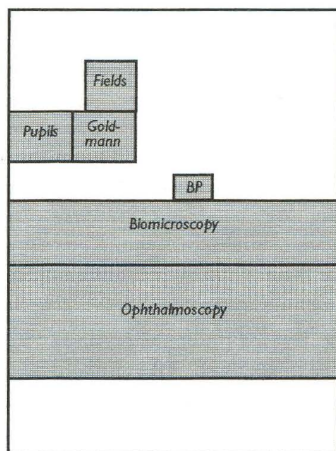


Figure 5: relevant objective data for ocular and visual health assessment.

After analyzing the objective findings in relation to the subjective history, the diagnosis (diagnoses) is (are) made. Space is available for listing diagnoses below the objective data in the section labeled "Dx". The FSU Optometry Clinic requires a primary and secondary diagnosis for the patient routing slip. On the routing slip, the diagnoses must be coded using the ICD-9 coding system so space is made beside the diagnoses for ICD-coding. See item number 18 in figure 2 for Diagnosis and ICD-coding.

Plan of Action (Management/Treatment)

According to the Uniform Ambulatory Medical Care Minimum Data Set as recommended by the National Committee on Vital and Health Statistics⁴ and Problem Oriented Medical Record (POMR), the plan of action encompasses: the treatment plan, preventive services provided (including patient education), disposition of the patient (including follow-up and referral), and additional testing required at the next encounter.

The plan of action in the new primary eyecare examination form is labeled "Management Plan". The space available below the title is used for writing: the treatment plan, patient education, and additional testing requirements. *See item number 20 in figure 2 for Management Plan.*

Space is available to write out the recommended spectacle Rx. This space is located above the management plan on the right side of the form. "Recommended Rx" contains the following information: sphere, cylinder, axis, prism, base, bifocal addition, and expiry date. Additional recommendations for addition type, materials, tints, and coatings can be written into the management plan. *See item number 21 in figure 2 for Recommended Rx. See item number 9 in figure 3 for the Analytic Schematic for arriving at the Recommended Rx.*

Below the space for management plan is space for a referral (Doctor and date), follow-up date, and recall period. As well, at the bottom of the page is space for the intern and the clinical faculty to sign the examination form acknowledging the correctness and completion of the examination. *See item number 22 in figure 2 for referral, follow-up, recall, and signatures.*

Just as the history and the examination of the patient were evaluated, the complexity of optometric decision-making must be evaluated for Medicare leveling requirements. Decision-making levels refer to the complexity of establishing diagnoses and selecting management options. Space for the result of this evaluation is located at the bottom right corner of the second side of the primary eyecare examination form. *S, L, M, and H stand for straightforward, low complexity, moderate complexity, and high complexity.² See item number 23 in figure 2 for evaluation of optometric decision-making.*

Straightforward optometric decisions involve: minimal diagnoses and management options; minimal or no data amounts and/or complexity for review; and minimal risk of complications, morbidity, or mortality. *Low complexity* decisions involve: limited numbers of diagnoses or management options; limited data amounts and/or complexity for review; and low risk of complications, morbidity, or mortality. *Moderate complexity* decisions involve: multiple

diagnoses or management options; moderate data amounts and/or complexity for review; and moderate risk of complications, morbidity, or mortality. *High complexity* decisions involve: extensive diagnoses or management options; extensive data amounts and/or complexity for review; and high risk of complications, morbidity, or mortality.

Please note that although there is a system for rating the nature of the presenting problem for leveling, this examination parameter is not evaluated within the new primary eyecare examination form. As well, time spent coordinating care or counseling patients is not a factor in Medicare leveling at the FSU Optometry Clinic as this never comprises more than fifty percent of the time required for a complete primary eyecare examination.

Part 2

The Progress Notes Form

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General Design Considerations

The Ferris State University Optometry Clinic required a form that could be used for return visits to the clinic and for emergencies. This form would follow the SOAP format of the Problem-Oriented Medical Records (POMR) system.⁴

The progress notes form was generated from the new primary eyecare examination form. Modules of the primary eyecare examination form were manipulated to form some of the elements of the progress notes form although new modules were generated specifically for this form.

The new progress notes form is used for eyecare emergencies or for follow-up procedures or examination completions. Progress notes are meant to follow completed primary eyecare examinations where additional data is collected or procedures performed. As an acute eyecare emergency form, it can be used for a problem-directed examination instead of the primary eyecare examination form.

The new progress notes form is a double-sided form. The first side contains: *administrative* and *encounter* data (filled-in by the intern or patient); the reason for referral or visit; space for patient history; and space for the results of objective problem-directed testing. The second side contains: more space for objective problem-directed testing; diagnosis; and management plan for the patient. The second side is oriented head-to-tail with the first side so that it can be read right-side-up when turned over in a flip chart (anchored at the top of the form).

As with the primary eyecare examination form, the Gill Sans font is used throughout the form in regular, bold, and italic iterations. The font is *sans serif* (without serif) and offers enhanced readability with reduced clutter. The smallest print size used in this form is 10-point: however, the acknowledgment clauses at the top of the first page are printed in 8-point text.

As before, *leveling requirements for Medicare billing* have been integrated into this form: History, Examination, and Decision can be evaluated at the end of the second side to facilitate the leveling process.

Administrative and Encounter Data

According to the "Uniform Ambulatory Medical Care Minimum Data Set" recommended by the National Committee on Vital and Health Statistics,⁴ a medical record must contain sufficient information to positively identify the patient, support the diagnoses, justify the treatment, and record the results accurately. To provide this information effectively, the progress notes form contains two major types of data: *administrative data* and *encounter data*.

Administrative data identifies the patient and provider. Items such as: name, patient number, residence address, telephone number, date of birth; age; and sex are provided on the patient "Routing Slip" -- produced at check-in and attached to the exam form. The patient or intern can write the patient name, age, occupation, and employer in the shaded boxes at the top of the first side of the form. Race and ethnic background were not determined to be essential administrative data in the setting of the FSU Optometry Clinic. *See item number 1 in figure 6 or Appendix A for relevant portions of the new progress notes form.*

The name, profession, and location of the eyecare provider are implied by the title of the form, "Ferris State University College of Optometry" although the patient routing slip shows which clinical faculty is responsible for care of the patient.

Encounter data includes all the information from the examination. Certain elements of the encounter data are not products of the actual examination: date of encounter, place of encounter, method of payment, and total charges. Total charges and their applicable procedure codes are calculated and shown on the patient routing slip. The place of encounter is implied in the title of the form. The remaining two encounter items are included with the administrative data for the patient or intern to fill in before the examination begins. Total charges are shown on the routing slip. *See item number 1 in figure 6 for encounter data.*

The patient is directed to sign and date an acknowledgment of responsibility for payment for services rendered. The patient is given the option to sign a limited release to use examination information for research or educational purposes. Both of these clauses are found between the administrative data and the double lines on the first side of the progress notes form. *See item number 2 in figure 6 for patient acknowledgment and information release clauses.*

Subjective Data: Case History

Unlike the new primary eyecare examination form, there is no questionnaire for the patient to fill out in the progress notes form. In most situations, this form is used for follow-up visits and a detailed patient questionnaire is already on file. In emergency situations, like trauma, a problem-directed history is taken by the intern.

Before the chief complaint or reason for examination is addressed, referral sources are listed. The patient could be referred from the FSU Optometry Clinic, the FSU Health Center, or possibly another source. This information helps track referral sources. *See item number 3 in figure 6 for referral sources.*

As the progress notes form is used primarily for return visits to specialty clinics, specialty clinics are listed to classify the encounter. The first choice is *vision*. This is chosen when the form is used for examination completions, spectacle remakes, or dispensing. *Medical* is chosen for follow-ups for treatment of ocular pathology or monitoring the progress of a therapeutic treatment regimen. *Contact lenses* may be chosen for return visits for dispensing or contact lens follow-up. *Pediatrics*, *low vision*, or *electrodiagnostics* are chosen for follow-ups within their respective specialty clinics. *Comanagement* may be chosen if the Clinic is comanaging a patient with another Clinic or other health professional. Post-surgical care, administration of another health professional's treatment regimen, or performing additional diagnostic tests by request of another health professional are all considered examples of comanagement. *See item number 4 in figure 6 for qualifying the return visit.*

Under the heading, "Subjective Data", there is space to list the specifics of the chief complaint and/or the reason for the examination. Below this space is an open area for taking a problem-directed history. For example, if the reason for examination is "*RTC for 4 month IOP check*", the pertinent history might include: any change in patient health status and vision; previous diagnosis (e.g., "*POAG OD>OS with possible 2° angle recession component OD*"); the patient IOP history (pre- and post-treatment); the C/D ratios at last DFE; results of the last gonioscopy; previous visual field results; contraindications to any medications; compliance history; and details of the current medications (including drug, dose, frequency of instillation, and when last taken). Note that much of this history is obtained from analysis of the patient medical records. Also note that using appropriate abbreviations are encouraged: abbreviations represent efficient and effective communication. *See item number 5 in figure 6 for subjective data.*

Ferris State University College of Optometry

Progress Notes

①

Name (last, first)		Age	Today's Date			
Occupation	Employer	Payment	Insurance <input type="checkbox"/>	Cash <input type="checkbox"/>	Credit Card <input type="checkbox"/>	Check <input type="checkbox"/>

Please complete this form as far as the double line. Thank you.

②

I acknowledge that I am responsible for payment at the time of each visit for all services rendered by Ferris State University College of Optometry not covered by an Insurer or Agency authorization.

I authorize Ferris State University College of Optometry to use photographs or information concerning my case in the interest of education or research; I understand that I will not be identified by name.

signature of patient or person authorized to sign for patient date

signature of patient or person authorized to sign for patient date

③ Patient referred by:

<input type="checkbox"/> Optometry Clinic	<input type="checkbox"/> Health Center	<input type="checkbox"/> Self	<input type="checkbox"/> Other (please describe):
---	--	-------------------------------	---

④ Patient returning for:

Vision Medical Contact Lenses Pediatrics Low Vision Comanagement Electrodiagnostics

Subjective Data

Chief Complaint / Reason for Exam:

⑤ Pertinent History:

Objective Data

⑥

Distance Acuity

	Aided	Unaided	Pinhole
OD			
OS			
OU			

Method

⑦

Figure 6: the first side of the modular progress notes form.

The history is evaluated for Medicare leveling purposes near the bottom of the second side of the progress notes form: *P, E, D, and C* stand for *problem-focused*,

*expanded problem-focused, detailed, and comprehensive.*² See item number 3 in figure 7 for history leveling.

See the case history leveling discussion for the primary eyecare examination form (Part I -- Subjective Data: Case History) for definitions of the different levels of history-taking. Because the progress notes are used for emergency and follow-up office visits, the history taken is often more problem-directed and less extensive than that taken during the primary eyecare examination.

Objective Data: Examination

The bottom half of the first side and the top half of the second side of the modular progress notes form contains space for the objective examination data.

Any time a patient is seen in the Ferris State University Optometry Clinic, there is a universal requirement to take visual acuities at distance. This is the only objective data required at each follow-up and/or emergency visit to the Clinic. Distance visual acuities are taken through the habitual Rx (if available). If visual acuities are not corrected to Snellen 20/20, they must be taken again through a pinhole and the results recorded. Pinhole acuities are used to rule-out patient loss of vision secondary to refractive error. *See item number 6 in figure 6 for visual acuities.*

Additional space is available for problem-directed testing and for any drawings required. This space occupies most of the bottom of the first side and the top half of the second page of the progress notes form. *See item number 7 in figure 6 and item number 1 in figure 7 for additional space for problem-directed testing.*

As with the primary eyecare examination, the extent of patient examination is evaluated -- for Medicare leveling requirements -- near the bottom of the second page of the progress notes form. *P, E, D, and C* stand for *problem-focused, expanded problem-focused, detailed, and comprehensive* as they did for evaluation of the extent of patient history taken.² *See item number 4 in figure 2 for evaluation of the examination.*

See the examination leveling discussion for the primary eyecare examination form (Part I -- Objective Data: Examination) for definitions of the different levels of patient examination.

1

Assessment			ICD
2	3	4	
Plan			
Treatment			
History: P E D C			Exam: P E D C
			Decision: S L M H
6			
Patient Education			
7			
Procedures for Follow-Up			
8			
9			
Referral Dr./Date: _____		Follow-up: _____	
Optometric Intern _____		Dr. _____	
Recall: _____			

Figure 7: the second side of the modular progress notes form.

Assessment

After analyzing the objective findings in relation to the subjective history, the diagnosis (diagnoses) is (are) made. Space is available for listing diagnoses below the objective data on the second side of the progress notes form in the section labeled "Assessment". The FSU Optometry Clinic requires a primary and secondary diagnosis for the patient routing slip. On the routing slip, the diagnoses must be coded using the ICD-9 coding system so space is made beside the diagnoses for ICD-coding. *See item number 2 in figure 7 for Diagnosis and ICD-coding.*

Plan of Action (Management/Treatment)

As discussed for the primary eyecare examination form, the plan of action encompasses: the treatment plan, preventive services provided (including patient education), disposition of the patient (including follow-up and referral), and additional testing required at the next encounter.

In the modular progress notes form, the plan of action is divided into three sections: *treatment*, *patient education*, and *procedures for follow-up*. *Treatment* describes the measures taken to treat the diagnosed condition(s). *Patient education* describes counseling and education efforts undertaken regarding the diagnoses and/or treatment regimen. *Procedures for follow-up* is used to ensure that proper management of the patient on successive office visits. See item numbers 6, 7, and 8 in figure 7 for plan of action.

Below the space for management plan is space for a referral (Doctor and date), follow-up date, and recall period. As well, at the bottom of the page is space for the intern and the clinical faculty to sign the examination form acknowledging the correctness and completion of the examination. See item number 9 in figure 7 for referral, follow-up, recall, and signatures.

Just as the progress notes history and the examination of the patient were evaluated, the complexity of optometric decision-making must be evaluated for Medicare leveling requirements. Decision-making levels refer to the complexity of establishing diagnoses and selecting management options. Space for the result of this evaluation is located across from the title "Plan" on the second side of the progress notes form. *S*, *L*, *M*, and *H* stand for *straightforward*, *low complexity*, *moderate complexity*, and *high complexity* as they did for the primary eyecare examination form.² See item number 5 in figure 7 for evaluation of optometric decision-making.

See the optometric management decision leveling discussion for the primary eyecare examination form (Part I -- Plan of Action (Management/Treatment) for definitions of the different levels of optometric decision-making.

As with the primary eyecare examination form, the nature of the presenting problem is not evaluated within the new progress notes form. As well, time spent coordinating care or counseling patients is not a factor in Medicare leveling at the FSU Optometry Clinic as this almost never comprises more than fifty percent of the time required for a follow-up or emergency office visit.

Conclusions and Future Forms

The modular primary eyecare examination and progress notes forms were introduced in late 1994 and are currently in use in the Ferris State University Optometry Clinic. The final versions of these forms were approved by consensus of the clinical faculty of the Ferris State University College of Optometry.

The primary goal of the introduction of these forms was to provide templates for the collection of examination data and the analysis of this data to arrive at diagnoses and management plans for patients. The new forms represent a significant upgrade in: efficient collection of data; effective analysis of data; production value; and paper management for The Clinic. Ultimately, the new forms assist the Ferris State University College of Optometry in developing new optometrists.

The individual modules developed for this forms system can be manipulated and arranged to fit any requirement for new forms. Individual modules can also be enlarged or reduced in size (horizontally and/or vertically). This flexibility has resulted in the production of forms to suit the needs of several optometric practices in the United States of America and Canada. Other forms may be designed for the Ferris State University Optometry Clinic. *See Appendix A for copies of the Ferris State University College of Optometry primary care examination forms, progress notes forms, and selected forms developed for private practices. (Note that the rights to use these forms reside with FSUCO, the author, and the individual private practices, respectively.)*

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Appendix A

FSUCO: Primary Eyecare Examination Form (2-sided)

•

FSUCO: Progress Notes Form (2-sided)

•

Private Practice: Primary Eyecare Examination Form (2-sided)

•

Private Practice: Primary Eyecare Examination Form (3-sided)
(the questionnaire stands alone)

•

Private Practice: Progress Notes / Contact Lens Progress Notes
(2-sided)

•

Private Practice: Progress Notes / Contact Lens Progress Notes
(2-sided)

Ferris State University College of Optometry

Patient Information

Name (last, first)		Age	Today's Date			
Occupation	Employer	Payment	Insurance <input type="checkbox"/>	Cash <input type="checkbox"/>	Credit Card <input type="checkbox"/>	Check <input type="checkbox"/>

Please answer the following health questions as far as the double line. Thank you.

Does your occupation require the use of safety eyewear? Y N Do you use a computer at work or at home? Y N

List your hobbies: _____

Do you use safety eyewear for any of your hobbies? Y N

How would you rate your daily exposure to sunlight? Low Medium High

When was your last complete eye exam? _____ Who was the Eye Doctor? Dr. _____

When was your last complete physical exam? _____ Who is your Primary Care Physician? Dr. _____

List any other Health Care Providers you are seeing currently: _____

Main reason(s) for today's appointment:

<input type="checkbox"/> Eyes are Tired or Ache (Eye Strain)	<input type="checkbox"/> Contact Lenses	<input type="checkbox"/> Double Vision
<input type="checkbox"/> Eyes are Red or Itch	<input type="checkbox"/> Broken Glasses	<input type="checkbox"/> Eye Injury or Pain
<input type="checkbox"/> Sandy or Dry Eyes	<input type="checkbox"/> Blurred Vision	<input type="checkbox"/> Learning Disability
<input type="checkbox"/> Excessive Tears (Watery Eyes)	<input type="checkbox"/> Light or Glare Sensitivity	<input type="checkbox"/> Other _____
	<input type="checkbox"/> Vision Disturbances (Spots, Haloes, Light Flashes, etc.)	

Do you wear glasses? Y N If yes, how old are the glasses? _____ When do you wear them? _____

Do you wear contact lenses? Y N If yes, what type of lenses? Gas Permeable Soft Disposable Frequent Replacement
If yes, how old are the contact lenses? _____ What disinfection system do you use? _____

Do you have ("now") or have you had ("past") ANY of the following health conditions?

<input type="checkbox"/> <input type="checkbox"/> High or Low Blood Pressure	<input type="checkbox"/> <input type="checkbox"/> Diabetes	<input type="checkbox"/> <input type="checkbox"/> Neuromuscular Disorders
<input type="checkbox"/> <input type="checkbox"/> Heart Disease or High Blood Cholesterol	<input type="checkbox"/> <input type="checkbox"/> Thyroid Problems	<input type="checkbox"/> <input type="checkbox"/> Cancer
<input type="checkbox"/> <input type="checkbox"/> Rheumatoid Arthritis or other Arthritis	<input type="checkbox"/> <input type="checkbox"/> Stroke	<input type="checkbox"/> <input type="checkbox"/> Tuberculosis Infection
<input type="checkbox"/> <input type="checkbox"/> Migraines or other Headaches	<input type="checkbox"/> <input type="checkbox"/> Asthma or Breathing Problems	<input type="checkbox"/> <input type="checkbox"/> Hepatitis or HIV Infection
<input type="checkbox"/> <input type="checkbox"/> Allergies or Sinus Problems	<input type="checkbox"/> <input type="checkbox"/> Psychological Disorders	

Have you ever had an allergic reaction to ANY medication or ANY other environmental cause? Y N

If yes, please list: _____

Are you currently taking ANY drugs or medications? (prescription or non-prescription) Y N

If yes, please list: _____

Are you pregnant? Y N

Have you ever had an eye injury, eye surgery, or been treated for any eye disease? Y N

Have you ever had surgery to remove cataracts? Y N If yes, who was your surgeon? Dr. _____

Date: _____ City/State: _____

Is there ANY history of high blood pressure, heart disease, diabetes, or glaucoma in your family? Y N

Has anyone in your family had eye surgery or been treated for any eye disease? Y N

Have you ever had your pupils dilated during an eye examination? Y N If yes, were there any problems with dilation? Y N

Were you referred to our clinic? Y N If yes, who referred you to our clinic? _____

I acknowledge that I am responsible for payment at the time of each visit for all services rendered by Ferris State University College of Optometry not covered by an insurer or Agency authorization.

I authorize Ferris State University College of Optometry to use photographs or information concerning my case in the interest of education or research; I understand that I will not be identified by name.

signature of patient or person authorized to sign for patient _____ date _____ signature of patient or person authorized to sign for patient _____ date _____

Additional History: _____

C/C: _____

I have reviewed and agree with the above statements concerning patient history. Dr. _____ **History: P E D C**

Aided Acuity		Unaided Acuity	
Distance	Near	Distance	Near
OD			
OS			
OU			

Habitual Rx					
Sphere	Cylinder	Axis	Prism	Base	Add

Method Snellen Other: _____

Objective Refraction		Ret	Auto
OD		20/	
OS		20/	

Cover Test		Field Screening	
Distance	Near	Amsler	Conf
rRx		OD - + - +	
rRx		OS - + - +	

Subjective Refraction (BVA)		
OD	20/	20/
OS	20/	20/

Pupils		APD	-	+	Goldmann Tonometry	
Size	Reactions				mmHg	Time
OD						
OS						am pm

Add		Range of Clear Vision	
OU	20/		

Stereopsis		Habitual Rx		Versions	
Method	Result	Y	N	WNL	Other

Keratometry		
OD	@	@
OS	@	@

NPC BP
 Arm L R

Van Herick

OD not WNL WNL OS

Van Herick

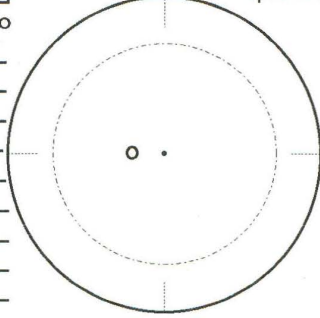
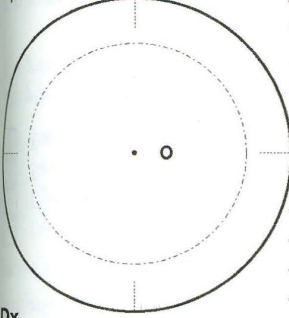
Biomicroscopy	
<input type="checkbox"/>	Lids / Lashes
<input type="checkbox"/>	Tears
<input type="checkbox"/>	Conjunctiva
<input type="checkbox"/>	Sclera
<input type="checkbox"/>	Cornea
<input type="checkbox"/>	Anterior Chamber
<input type="checkbox"/>	Iris
<input type="checkbox"/>	Lens
<input type="checkbox"/>	Posterior Chamber

Ophthalmoscopy Direct MIO BIO Indirect Fundus Biomicroscopy

Drugs administered / Dose: _____

I have been informed of the importance of this test and I refuse it. _____ (patient)

OD		not WNL		WNL		not WNL		OS	
<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>	
	Disc Margins								
	Neuroretinal Rim								
	C/D Ratio	/	/			/	/		
	Lamina Cribrosa								
	Venous Pulsation								
	Vasculature								
	Retina								
	Choroid								
	Macular Pigment								
	Foveal Reflex								
	Peripheral Fundus								
	Vitreous								
	Lens								



Dx		ICD	

Recommended Rx						Expires
Sphere	Cylinder	Axis	Prism	Base	Add	

Management Plan (include advice and whether written or verbal)

Exam: P E D C

Referral Dr./Date: _____ Follow-up: _____ Recall: _____
 Optometric Intern _____ Dr. _____ Decision: S L M H

Ferris State University College of Optometry

Progress Notes

Name (last, first)		Age	Today's Date			
Occupation	Employer	Payment	Insurance <input type="checkbox"/>	Cash <input type="checkbox"/>	Credit Card <input type="checkbox"/>	Check <input type="checkbox"/>

Please complete this form as far as the double line. Thank you.

I acknowledge that I am responsible for payment at the time of each visit for all services rendered by Ferris State University College of Optometry not covered by an insurer or Agency authorization.

I authorize Ferris State University College of Optometry to use photographs or information concerning my case in the interest of education or research; I understand that I will not be identified by name.

signature of patient or person authorized to sign for patient date signature of patient or person authorized to sign for patient date

Patient referred by: Optometry Clinic Health Center Self Other (please describe): _____

Patient returning for:
 Vision Medical Contact Lenses Pediatrics Low Vision Comanagement Electrodiagnostics

Subjective Data

Chief Complaint / Reason for Exam:

Pertinent History:

Objective Data

Distance Acuity			
	Aided	Unaided	Pinhole
OD			
OS			
OU			
Method			

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H
H
D
D
D
N
A
A
H
C
C
C

Assessment

ICD

Plan

History: P E D C

Exam: P E D C

Decision: S L M H

Treatment

Patient Education

Procedures for Follow-Up

Referral Dr./Date: _____ Follow-up: _____ Recall: _____
Optometric Intern _____ Dr. _____

Aided Acuity **Unaided Acuity**

Distance	Near	Distance	Near
OD			
OS			
OU			

Method Snellen Other: _____

Cover Test **Field Screening**

Distance	Near	Amsler	Conf
OD		-	+
OS		-	+

Pupils **Goldmann Tonometry**

APD	-	+	mmHg	Time
Size	Reactions	OD		
OS		OS		am pm

Stereopsis **Habitual Rx** **Versions**

Method	Result	Test Dist	Y	N

Habitual Rx

Sphere	Cylinder	Axis	Prism	Base	Add

Objective Refraction Ret Auto

OD	20/
OS	20/

Subjective Refraction (BVA)

OD	20/	20/
OS	20/	20/

Add **Range of Clear Vision**

OU	20/	
----	-----	--

Keratometry

OD	@	;	@
OS	@	;	@

Biomicroscopy **Van Herick** **OD** **not WNL** **WNL** **not WNL** **OS** **Van Herick**

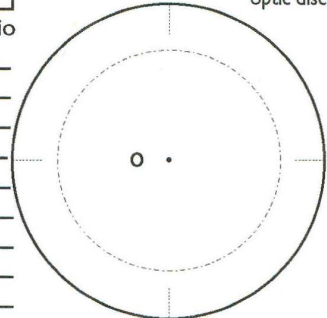
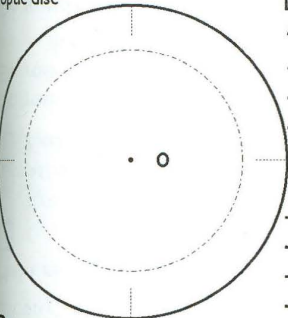
<input type="checkbox"/>									<input type="checkbox"/>

Ophthalmoscopy **Direct** **MIO** **BIO** **Indirect Fundus Biomicroscopy**

Drugs administered / Dose: _____

I have been informed of the importance of this test and I refuse it. _____ (patient)

OD **not WNL** **WNL** **not WNL** **OS**



/	/				
A/V Ratio	̄	̄	A/V Ratio		

Dx

Recommended Spectacle Rx (OD/OS)

Sphere	Cylinder	Axis	Prism	Base	Add	Matl	Tint	Coat

Recommended Contact Lens Rx (OD/OS)

Sphere	Cylinder	Axis	BC	Diam	OZ	IC	PC	CT	Mfr

Management Plan (include advice and whether written or verbal)

Dr. _____ Date: _____ Recall: _____

Dr. XXXXXXXXXXXXXXXX, O.D. xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx

Patient Information

Name (last, first)		Age	Today's Date
Occupation	Employer	Health Card No.	

Please answer the following health questions. Mark the appropriate box with an "X". Thank you.

Does your occupation require the use of safety eyewear? Y N Do you use a computer at work or at home? Y N

List your hobbies: _____

Do you use safety eyewear for any of your hobbies? Y N

How would you rate your daily exposure to sunlight? Low Medium High

When was your last complete eye exam? _____ Who was the Eye Doctor? Dr. _____

When was your last complete physical exam? _____ Who is your Family Doctor? Dr. _____

List any other Health Care Providers you are seeing currently: _____

- Main reason(s) for today's appointment:**
- | | | |
|--|---|---|
| <input type="checkbox"/> Eyes are Tired or Ache (Eye Strain) | <input type="checkbox"/> Contact Lenses | <input type="checkbox"/> Double Vision |
| <input type="checkbox"/> Eyes are Red or Itch | <input type="checkbox"/> Broken Glasses | <input type="checkbox"/> Eye Injury or Pain |
| <input type="checkbox"/> Sandy or Dry Eyes | <input type="checkbox"/> Blurred Vision | <input type="checkbox"/> Other _____ |
| <input type="checkbox"/> Excessive Tears (Watery Eyes) | <input type="checkbox"/> Light or Glare Sensitivity | |
| | <input type="checkbox"/> Vision Disturbances (Spots, Haloes, Light Flashes, etc.) | |

Do you wear glasses? Y N If yes, how old are the glasses? _____ When do you wear them? _____

Do you wear contact lenses? Y N If yes, what type of lenses? Gas Permeable Soft Disposable Frequent Replacement
If yes, how old are the contact lenses? _____ What disinfection system do you use? _____

- Do you have ("now") or have you had ("past") ANY of the following health conditions?**
- | | | |
|---|--|--|
| <input type="checkbox"/> <input type="checkbox"/> High or Low Blood Pressure | <input type="checkbox"/> <input type="checkbox"/> Diabetes | <input type="checkbox"/> <input type="checkbox"/> Neuromuscular Disorders |
| <input type="checkbox"/> <input type="checkbox"/> Heart Disease or High Blood Cholesterol | <input type="checkbox"/> <input type="checkbox"/> Thyroid Problems | <input type="checkbox"/> <input type="checkbox"/> Cancer |
| <input type="checkbox"/> <input type="checkbox"/> Rheumatoid Arthritis or other Arthritis | <input type="checkbox"/> <input type="checkbox"/> Stroke | <input type="checkbox"/> <input type="checkbox"/> Tuberculosis Infection |
| <input type="checkbox"/> <input type="checkbox"/> Migraines or other Headaches | <input type="checkbox"/> <input type="checkbox"/> Asthma or Breathing Problems | <input type="checkbox"/> <input type="checkbox"/> Hepatitis or HIV Infection |
| <input type="checkbox"/> <input type="checkbox"/> Allergies or Sinus Problems | <input type="checkbox"/> <input type="checkbox"/> Psychological Disorders | |

Have you ever had an allergic reaction to ANY medication or ANY other environmental cause? Y N

If yes, please list: _____

Are you currently taking ANY drugs or medications? (prescription or non-prescription) Y N

If yes, please list: _____

Are you pregnant? Y N

Have you ever had an eye injury, eye surgery, or been treated for any eye disease? Y N

Have you ever had surgery to remove cataracts? Y N If yes, who was your surgeon? Dr. _____
Date: _____ City/Province: _____

Is there ANY history of high blood pressure, heart disease, diabetes, or glaucoma in your family? Y N

Has anyone in your family had eye surgery or been treated for any eye disease? Y N

Have you ever had your pupils dilated during an eye examination? Y N If yes, were there any problems with dilation? Y N

Were you referred to our office? Y N If yes, who referred you to our office? _____

Additional History:

C/C: _____

Van Herick

Van Herick

OD not WNL **WNL** **Biomicroscopy** **WNL** not WNL **OS**

<input type="checkbox"/>	Lids / Lashes	<input type="checkbox"/>
<input type="checkbox"/>	Tears	<input type="checkbox"/>
<input type="checkbox"/>	Conjunctiva	<input type="checkbox"/>
<input type="checkbox"/>	Sclera	<input type="checkbox"/>
<input type="checkbox"/>	Cornea	<input type="checkbox"/>
<input type="checkbox"/>	Anterior Chamber	<input type="checkbox"/>
<input type="checkbox"/>	Iris	<input type="checkbox"/>
<input type="checkbox"/>	Lens	<input type="checkbox"/>
<input type="checkbox"/>	Posterior Chamber	<input type="checkbox"/>

Ophthalmoscopy

Direct BIO Indirect Fundus Biomicroscopy

Drugs administered / Dose: _____

I have been informed of the importance of this test and I refuse it. _____ (patient)

OD not WNL **WNL** **OS** not WNL **WNL**

<input type="checkbox"/>	Disc Margins	<input type="checkbox"/>
<input type="checkbox"/>	Neuroretinal Rim	<input type="checkbox"/>
<input type="checkbox"/>	C/D Ratio	<input type="checkbox"/>
<input type="checkbox"/>	Lamina Cribrosa	<input type="checkbox"/>
<input type="checkbox"/>	Venous Pulsation	<input type="checkbox"/>
<input type="checkbox"/>	Vasculature	<input type="checkbox"/>
<input type="checkbox"/>	Retina	<input type="checkbox"/>
<input type="checkbox"/>	Choroid	<input type="checkbox"/>
<input type="checkbox"/>	Macular Pigment	<input type="checkbox"/>
<input type="checkbox"/>	Foveal Reflex	<input type="checkbox"/>
<input type="checkbox"/>	Peripheral Fundus	<input type="checkbox"/>
<input type="checkbox"/>	Vitreous	<input type="checkbox"/>
<input type="checkbox"/>	Lens	<input type="checkbox"/>

A/V Ratio /

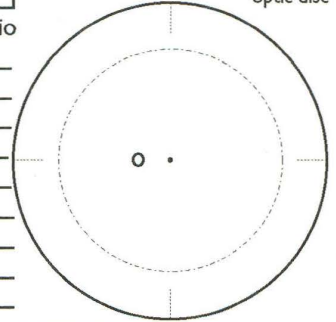
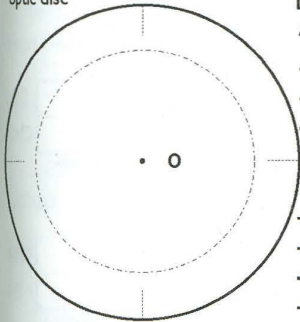
A/V Ratio /



optic disc



optic disc



Dx	ODC	OBC

Management Plan (include advice and whether written or verbal)

Recommended Spectacle Rx (OD/OS)									
Sphere	Cylinder	Axis	Prism	Base	Add	Matl	Tint	Coat	
Recommended Contact Lens Rx (OD/OS)									
Sphere	Cylinder	Axis	BC	Diam	OZ	IC	PC	CT	Mfr

Dr. _____ Date: _____ Recall: _____

Name (last, first)	Age	Today's Date
--------------------	-----	--------------

Entering Contact Lens Rx:

Sphere	Cyl	Axis	BC	Diam	OZ	IC	PC	CT	Mfr

Care System:

--

Wearing Schedule:

--

Replacement Schedule:

Yearly
 6 Months
 3 Months
 Monthly
 Bi-weekly
 Weekly
 Daily

1 Date: _____

Distance Acuity

	Aided	Unaided
OD		
OS		
OU		

New Contact Lens Rx:

Sphere	Cyl	Axis	BC	Diam	OZ	IC	PC	CT	Mfr

Dr. _____ Recall: _____

2 Date: _____

Distance Acuity

	Aided	Unaided
OD		
OS		
OU		

New Contact Lens Rx:

Sphere	Cyl	Axis	BC	Diam	OZ	IC	PC	CT	Mfr

Dr. _____ Recall: _____

3 Date: _____

Distance Acuity

	Aided	Unaided
OD		
OS		
OU		

New Contact Lens Rx:

Sphere	Cyl	Axis	BC	Diam	OZ	IC	PC	CT	Mfr

Dr. _____ Recall: _____

4 Date: _____

Distance Acuity

	Aided	Unaided
OD		
OS		
OU		

New Contact Lens Rx:

Sphere	Cyl	Axis	BC	Diam	OZ	IC	PC	CT	Mfr

Dr. _____ Recall: _____

Dr. XXXXXXXXXXXXXXXX, O.D.

Progress Notes

Name (last, first)	Age	Today's Date
Patient returning for:		Health Card No.

Subjective Data

Chief Complaint / Reason for Exam:

Pertinent History:

Objective Data

Distance Acuity	Distance Acuity		
	Aided	Unaided	Pinhole
OD			
OS			
OU			
Method			

Large empty box for Objective Data

Assessment

	ODC	OBC

Plan

Large empty box for Plan

Dr. _____ Date: _____ Recall: _____

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N



Dr. XXXXXXXXXXXXXXX, O.D.

Contact Lens Progress Notes

Name (last, first)	Age	Today's Date
--------------------	-----	--------------

Entering Contact Lens Rx:

Sphere	Cyl	Axis	BC	Diam	OZ	IC	PC	CT	Mfr

Care System:

Wearing Schedule:

Replacement Schedule:

Yearly
 6 Months
 3 Months
 Monthly
 Bi-weekly
 Weekly
 Daily

1 Date: _____

Distance Acuity	
Aided	Unaided
OD	
OS	
OU	

New Contact Lens Rx:

Sphere	Cyl	Axis	BC	Diam	OZ	IC	PC	CT	Mfr

Dr. _____ Recall: _____

2 Date: _____

Distance Acuity	
Aided	Unaided
OD	
OS	
OU	

New Contact Lens Rx:

Sphere	Cyl	Axis	BC	Diam	OZ	IC	PC	CT	Mfr

Dr. _____ Recall: _____

3 Date: _____

Distance Acuity	
Aided	Unaided
OD	
OS	
OU	

New Contact Lens Rx:

Sphere	Cyl	Axis	BC	Diam	OZ	IC	PC	CT	Mfr

Dr. _____ Recall: _____

4 Date: _____

Distance Acuity	
Aided	Unaided
OD	
OS	
OU	

New Contact Lens Rx:

Sphere	Cyl	Axis	BC	Diam	OZ	IC	PC	CT	Mfr

Dr. _____ Recall: _____