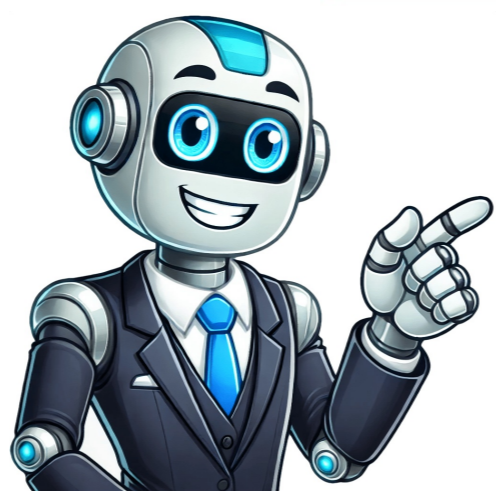


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## Eye exam photo

Imagine being able to jot down medical notes electronically using a specialized shorthand system. We've taken a standard ophthalmic record and turned it into an electronic shorthand language called Eye Shorthand or "oculi". This shorthand method lets you enter all findings in one text field, which automatically fills out the EMR fields. Traditional paper vs. electronic health records (EHRs): You likely know what RUL: 2mm ptosis means. However, with a typical EHR, you'd need to click on each specific field, type your findings, and move on to the next one. If this is how you document, consider using the TEXT method with our form instead. Let's look at another example: Right C/D 0.6Vx0.4H with inferior notch, left C/D 0.5? In a standard EHR, you'd have to click on the right cup field, enter the correct text (0.6Vx0.4H with inferior notch), tab or click to the next field, and type 0.5. We can speed up this process by using Eye Exam Shorthand based on a simple structure: Field.text;Field.text;Field.text rcup:0.6Vx0.4H w/ inf notch;lcup:0.5 Simply type this shorthand text into the Keyboard Entry area in the form, and the fields will be automatically filled. Even slower typists can significantly reduce EHR documentation time with Eye Exam Shorthand. The system is easy to learn and works just like handwritten shorthand. You type an abbreviation for a clinical field followed by your findings and a colon, similar to our handwritten notation. You can customize your own unique style of shorthand by adding it to /forms/eye\_mag/js/my\_base.js Consider sharing your shorthand with the community so others can benefit from it too. The explanation below focuses on four lines of typing that cover normal findings and over 40 different clinical issues. It's a lot to document in one patient! Documenting this many findings would take some time on paper but an eternity in an EHR. With openEMR Shorthand, the average typist can complete it in under a minute. Go ahead and paste the lines below into a test patient's chart: Fiddle with them: d:bl;+2 meibomitis;rl;frank ect, 7x6mm lid margin bcc lat.a;bul:2mm ptosis;ru;+3 dermato.a; bc:+2 inj;bk;med pter;rk;mod endo gut.a;bac:+1 fc, +1 pig cells; bd:+2 bowtie pallor;rcup:0.6Vx0.4H w/ inf notch;lcup:0.5;rmac:+2 BDR,+CSME;lmac:flat, tr BDR.v,+PPDR,+venous beading;rp;ht 1 o,no vh; scDist;5:6ix 1 rht;4:10ix;6:6ix;2:15xt;8:5ix;ccDist;4:5ix;5:ortho;6:ortho For more details, check the instructions within openEMR's Eye Exam section. Try it out on a dummy patient to see how simple and fast this shorthand technique is. Key point: Only use "D;" once at the start, as it tells Eye Exam to erase every field and replace them with default values. In /eye\_mag/js/my\_base.js, D; will replace everything with its default value. Use DEXT; to replace all the External Exam fields with default values. Use DAS; to replace all the Anterior Segment fields with default values. Use PAS; to replace all the Posterior Segment fields with default values. Usage: field;text(a,()) where Field is the shorthand term for the clinical field and text is the complete or shorthand data to enter into this field. The trailing ".a" is optional, allowing appending of the text to the existing data in the field instead of replacement. Semi-colons are used to divide multiple entries simultaneously. Given article text here Values D or d; D; All fields with defined default values are erased and filled with default values. Fields without defined default values are not affected. Default Ant Seg valuesDAS or das das; DAS; All Anterior Segment fields with defined default values are erased and filled with default values. Anterior Segment fields without defined default values are not affected. ConjunctivaRight = rcLeft = lcBoth = bc or c rc:+1 inj c:med pter "+1 injection" (right conj only)"medial pterygium" (both right and left fields are filled). CorneaRight = rcLeft = lcBoth = bk or k rk:+3 spk k:+2 end gut; rk:+1 str edema.a "+3 SPK" (right cornea only)+2 endothelial guttae" (both cornea fields) AND "+1 stromal edema" (appended to Right cornea field). Anterior ChamberRight = racLeft = lacBoth = bac or ac rac:+1 fc ac:+2 flare "+1 flare/cell" (right A/C field only)+2 flare" (both A/C fields). LensRight = rlLeft = llBoth = bl or l RL:+2 NS ll:+2 NS; l:+3 ant cort spokes.a "+2 NS" (right lens only)+2 NS" (both lens fields) AND "+3 anterior cortical spokes" (appended to both lenses). IrisRight = rlLeft = llBoth = bi or l bi:12 0 iridotomy ri:+2 TI defects.a; ll:round "12 o'clock iridotomy" (both iris fields)", +2 TI defects" (right iris field AND "round" (left iris field only). GonioRight = rgLeft = lgBoth = bg or g rg:ss 360 lg:3.5 o angle rec SS 360;3-5 o angle rec SS 360;3-5 o'clock angle recession. Schirmer lRight = rschlLeft = lschlBoth = bsch1 or sch1 rsch1:5mm sch1> 10mm/5 minutes "5mm" (right field only)> 10mm/5 minutes" (both fields). Schirmer llRight = rschl2Left = lsch2Both = bsch2 or sch2 rsch2:9 mm sch2:> 10mm/5 minutes "9 mm" (right field only)> 10mm/5 minutes" (both fields). Tear Break-up TimeRight = RTBUTLeft = LTBUTBoth = BTBUT or thut thut:> 10 secondsRTbut:5 secs;ltbut:9 seconds; "10 seconds" (both fields)"5 seconds" (right) AND "9 seconds" (left)\*case insensitive\*\* The default action is to replace the field with the new text. Adding ".a" at the end of a text section will append the current text instead of replacing it. For example, entering "bk:+2 str scarring.a" will append "+2 stromal scarring" to both the right (rc) and left cornea fields (lc). External Shorthand Abbreviations: The following terms will be expanded from their shorthand to full expression in the EMR fields: Enter this:Get this: infinferior supsuperior nasnasal temptemporal medmedial latlateral dermatodematochalasis w/with laclaceration lacrlacralimal dcrDCR bccBCC sccSCC sebcasebaceous cell trtrace Clinical FieldShorthand\* FieldExample Keyboard Entry\*\*EMR: Field text Default valuesD or d; D; All fields with defined default values are erased and filled with default values.Fields without defined default values are not affected. Disc Right = rdLeft = ldBoth = bd or d rd:temp pallor, PPAbd:NVD at 5 o "temporal pallor," NVD at 5 o'clock cup rcup lcup bcup rcup:0.5 w/ inf notchcup:temp scalloping, 0.5.a; 0.5 with inferior notch temporal scalloping, 0.5 MaculaRight rmacLeft lmacBoth bmac rmac:central scar 500ummac:soft drusen, - heme.a "central scar 500um" (right macular field only)"soft drusen, - heme" (appended to both macular fields) VesselsRight rvLeft lvBoth by RV:1.2, +2 BDR.v,+CSME w/ hard exudate sup to fovea (300um);v:narrow arterioles, 1.2.a; "1-2, +2 BDR" (right vessels only)+CSME with hard exudate superior to fovea (300um)" narrow arterioles, 1.2 PeripheryRight rpLeft lpBoth bp rp:12 0 ht, no heme, amenable to bubble;bp:1 clock hour of lattice 2 o.a, "12 o'clock horseshoe tear, no heme, amenable to bubble" (right periphery field)"1 clock hour of lattice 2 o'clock" (appended to both periphery fields) Central Macular ThicknessRight rcmLeft lcmBoth bcm rcm:254cmt:flat 254 (right CMT only)lat (both CMT fields)\*case insensitive bk:+2 stromal scarring.a can be appended to both cornea fields (rc and lc) as an example of replacing text. Shorthand terms like Strabismus, Exophoria, Intermittent Esotropia, and Hyperphoria will expand to full expressions in the EMR fields. A Side Panel displays PMSFH and ROS data and can be toggled open or closed via the menu or icon. Full Screen Mode is available by clicking the "plus" icon, but pop-up blockers must be disabled for reliable functionality. The Chief Complaint and History of Present Illness sections allow documentation of up to three complaints with corresponding HPIs. To reach a higher coding level in the US, detailed HPIs are required, which can include documenting chronic problems or four HPI elements. The Eye Form displays common visual acuities in the Vitals section, with options to document refractions, contact lens measurements, and additional measurements like keratometry and biometry. Clicking on a section opens the panel, which remembers preferences for subsequent patients. You can customize the exam form to suit your needs. For instance, you can click on "Vision" to hide refraction panels when they're not clinically relevant, leaving the form uncluttered. Similarly, clicking on "Acuity" will cycle the display through different types of visual acuities. The Current RXs panel displays two of the four Current RXs sections and allows you to use comments to distinguish between them. The Additional RX tab opens the third and fourth Current RX panels if needed. You can also perform various tasks using the icons in the top right corner, such as listing previous prescriptions or printing/dispersing a new prescription. The IOP/Amsler/CVF/Pupils section allows you to document intraocular pressure, Amsler findings, and visual fields. The IOP panel has three measurement types, and you can edit it to use other methods if needed. For Amsler images, clicking on the image cycles through six pictures representing increasingly severe central scotomas. For pupillary exams, clicking or tapping in a quadrant "blackens" that area, allowing you to mark abnormalities. You can also clear fields by tapping again or using the full-to-count-fingers box. External images can be uploaded into openEMR through the documents interface or faxscan, with configurable options for patients and administration. Each section of the Eye Form includes links to upload new images or view current ones. Upon first use, multiple Imaging categories are automatically created; these can be edited or added to using the Administration link. The image viewer allows navigation through patient files, with a file size limit set during installation. The Impression Plan can be entered manually or by builder, which extracts potential diagnoses from medical history and physical exam findings. The Impression/Plan Builder also utilizes codes like ICD-10 and CPT for accurate billing. Printable reports can be stored or printed as PDFs, including drawings, clinical findings, practice logo, and electronic signature of the provider.