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COMMONWEALTH OF KENTUCKY BOARD OF OPTOMETRIC EXAMINERS 100 Consumer Lane Frankfort, Kentucky 40601 (502) 234-2114

Christi LeMay EXECUTIVE DIRECTOR

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Question:	"[Are] Transcranial Doppler (TCD) ultrasound procedures within a Kentucky-licensed optometrist's scope of practice?"
Answer:	Qualified yes; TCD ultrasound procedures are included within a Kentucky-licensed optometrist's scope of practice in certain circumstances.
Statute(s) construed:	KRS 320.210(2)

Legal Basis for Opinion of the Kentucky Board of Optometric Examiners

KRS 320.240(7); Ky. OAG 24-10

Pursuant to KRS 320.240(7),¹ the Kentucky Board of Optometric Examiners ("KBOE") "shall have the sole authority to determine what constitutes the practice of optometry..." This exclusive statutory authority has been further scrutinized by Kentucky's Office of the Attorney General, which has confirmed that the KBOE "has the sole authority to determine what constitutes the practice of optometry, constrained only by statutory limitations."²

KRS 320.240(7) also expressly authorizes the KBOE to "issue advisory opinions…related to [KRS] chapter [320]." This Advisory Opinion is therefore being issued in response to the following inquiry, which was recently submitted to the KBOE:

"[Are] Transcranial Doppler (TCD) ultrasound procedures within a Kentucky-licensed optometrist's scope of practice?"

Opinion of the Kentucky Board of Optometric Examiners

Legal authority:

¹ Attached hereto as Exhibit A.

² Attached hereto as Exhibit B.

Based on the KBOE's analysis and assessment, TCD ultrasound procedures are within a Kentuckylicensed optometrist's scope of practice, on a conditional basis. Although the KBOE acknowledges that it is "constrained...by statutory limitations [of KRS Chapter 320]"—as the Office of the Attorney General noted in OAG 24-10—an examination of that Chapter's plain language reveals that TCD ultrasound procedures do not fall within any of its prohibitions.

First, a TCD ultrasound is a procedure used "to investigate the intracranial vasculature for various purposes."³ This procedure "is a non-invasive, painless ultrasound technique that uses high-frequency sound waves to measure the rate and direction of blood flow inside vessels."⁴ While the test can serve a variety of purposes,⁵ one such use allows optometrists to assess blood flow to the optic nerve and eye.⁶

A TCD ultrasound, however, is only appropriate when first indicated to be necessary by an ophthalmic biometry procedure, which demonstrates a lack of adequate blood flow to the optic nerve.⁷ Further, an ophthalmic biometry procedure should not be performed as a general screening measure, but instead, should only be performed if there is an underlying vascular disease present. Thus, the TCD ultrasound procedure only constitutes a valid method of optometric "evaluation" or "diagnosis," as contemplated by the statute,⁸ if the above-referenced conditions are satisfied.

Specific optometric scope of practice exclusions are itemized in KRS 320.210(2)(b).⁹ While the Kentucky General Assembly has explicitly excluded a "nonlaser surgical procedure that does not provide for the correction and relief of ocular abnormalities,"¹⁰ this exclusion does not apply to TCD ultrasounds (and nor do any of the others).

To reach that conclusion, we first need to review the Cambridge Dictionary definition of "surgical," which is set out as a technique or item "used for medical operations."¹¹ A TCD ultrasound is not considered as "surgical" because it is not a medical operation.¹² A medical operation is defined as "an occasion when a doctor cuts a body for medical reasons in order to

³ Alexander L. Loomis & Matthew N. Chakko, *Doppler Trans-Cranial Assements, Protcol, and Interpretations*, NATIONAL LIBRARY OF MEDICINE (Aug. 21, 2023), <u>Doppler Trans-Cranial Assessment, Protocols, and Interpretation</u> - <u>StatPearls - NCBI Bookshelf</u>.

⁴ About Transcranial Doppler (TCD), JOHNS HOPKINS MEDICINE, <u>About Transcranial Doppler | Johns Hopkins</u> <u>Neurovascular Laboratory</u> (last visited Apr. 4, 2025).

⁵ See id.

⁶ Monkia Modrezejewska, *Guidelines for ultrasound examination in ophthalmology. Part III: Color Doppler ultrasonography*, NATIONAL CENTER FOR BIOTECHNOLOGY INFORMATION (June 28, 2019), <u>Guidelines for ultrasound examination in ophthalmology. Part III: Color Doppler ultrasonography - PMC</u>.

⁷ See Optical Biometry Explained, ZEISS.COM, <u>Optical Biometry Explained</u> (last visited Apr. 3, 2025) (defining optical biometry as a "highly accurate and non-invasive automated method for measuring the anatomical characteristics of the eye.").

⁸ KRS 320.210(2)(a).

⁹ KRS 320.210(2)(b).

¹⁰ KRS 320.210(2)(b)15.

¹¹ Surgical, CAMBRIDGE DICTIONARY, <u>SURGICAL</u> | definition in the Cambridge English Dictionary (last visited Apr. 3, 2025).

¹² *See id.*

repair, remove, or replace an unhealthy or damaged part."¹³ Because a TCD ultrasound is simply an imaging procedure, rather than an operative one, it would not fall under the excluded procedures set forth in KRS 320.210(2)(b)15.

In addition, TCD ultrasounds are not encompassed by any of the other excluded procedures found in KRS 320.210(2)(b). First, the procedure is not a surgery, nor does it require an incision, as stated above.¹⁴ Second, the procedure is not a retinal laser procedure—such as Lasik or PRK.¹⁵ Third, a TCD ultrasound does not require the administration of general anesthesia.¹⁶

In sum, a TCD ultrasound can fall within the basic statutory scope of the "practice of optometry," which KRS 320.210(2)(a) defines as the "evaluation, diagnosis, prevention, or surgical, nonsurgical, or related treatment of diseases, disorders, or conditions of the eye and its appendages..." Moreover, because a TCD ultrasound does not fall within any of the specific statutory exclusions listed in KRS 320.210(2)(b)—and because KRS 320.240(7) and Ky. OAG 24-10 unequivocally confirm that the KBOE "has the sole authority to determine what constitutes the practice of optometry, constrained only by statutory limitations"—the KBOE hereby advises that a TCD ultrasound is included within a Kentucky-licensed optometrist's scope of practice, subject to the limitations set forth above. The KBOE further recommends that licensed optometrists completing TCD ultrasounds first obtain certification through HealthxMD, or another similar organization for eyecare professionals, in order to remain consistent with best practices.

Finally, because the *interpretation* of TCD ultrasound images does *not* fall within the statutory scope of the "practice of optometry," the KBOE cautions any licensees performing TCD ultrasounds to carefully assess—and, if necessary, to consult with private counsel regarding—the legal requirements for billing and/or referring the reading or review of TCD ultrasound images or results.

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3, 2025) (defining the procedure as using soundwaves to examine organs inside of the body).

¹³ Operation, CAMBRIDGE DICTIONARY, <u>OPERATION | English meaning - Cambridge Dictionary</u> (last visited Apr. 3, 2025).

¹⁴ See generally KRS 320.210(b); See also Surgery, CAMBRIDGE DICTIONARY, <u>SURGERY | English meaning -</u> <u>Cambridge Dictionary</u> (last visited Apr. 3, 2025) (defined as a treatment that cuts open a body); *Incision*, CAMBRIDGE DICTIONARY, <u>INCISION | English meaning - Cambridge Dictionary</u> (last visited Apr. 3, 2025) (defined as an "opening made in [someone's body] with a sharp tool").

¹⁵ KRS 320.210(b)(1); *Compare Lasik*, CAMBRIDGE DICTIONARY, <u>LASIK | English meaning - Cambridge Dictionary</u> (last visited Apr. 3, 2025), *Photorefractive Keratectomy*, CAMBRIDGE DICTIONARY, <u>PHOTOREFRACTIVE</u> <u>KERATECTOMY - Cambridge English Dictionary</u> (defining both procedures as "medical operations"), *with Ultrasound*, CAMBRIDGE DICTIONARY, ULTRASOUND | English meaning - Cambridge Dictionary (last visited Apr.

¹⁶ See KRS 320.210(2)(b)17.