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OPINION	:	No. 13-1202
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THE HONORABLE KIMBERLY KIRCHMEYER, EXECUTIVE DIRECTOR, MEDICAL BOARD OF CALIFORNIA, and THE HONORABLE STEPHANIE NUNEZ, EXECUTIVE OFFICER, RESPIRATORY CARE BOARD OF CALIFORNIA, have requested an opinion on the following question:

May a medical assistant lawfully perform spirometric pulmonary function testing?

CONCLUSION

A medical assistant may lawfully perform spirometric pulmonary function testing if the test is a usual and customary part of the medical practice where the medical assistant is employed, and the requirements for training, competency, authorization, and supervision are satisfied.

ANALYSIS

Spirometric testing (or “spirometry”) is the most common type of pulmonary (lung) function testing. The test requires a patient to breathe into a tube connected to a medical device called a spirometer, which produces readings for a physician to interpret. We are asked whether medical assistants—persons with limited training who are permitted to perform certain technical supportive services in a physician’s office under appropriate medical supervision—may lawfully perform this test on patients. For the reasons that follow, we conclude that a medical assistant may perform spirometry in a medical practice where it is customarily performed, as long as the training, competency, authorization, and supervision requirements in the medical-assistant statutes and regulations are satisfied.

In California, a physician’s and surgeon’s certificate to practice medicine authorizes the holder to “sever or penetrate the tissues of human beings” and “use any and all other methods in the treatment of diseases, injuries, deformities, and other physical and mental conditions.”¹ Any person who practices medicine without such a certificate is guilty of a criminal offense.² This criminal prohibition includes diagnosing, prescribing for, or treating any physical or mental condition without a certificate.³

In their practices, physicians, surgeons, and podiatrists (collectively referred to here as physicians) may utilize the services of medical assistants.⁴ A medical assistant is “a person who may be unlicensed, who performs basic administrative, clerical, and technical supportive services” and who has had the minimum amount of training required by the Medical Board of California (Medical Board).⁵ “Technical supportive services” are defined, in turn, as “simple routine medical tasks and procedures that may be safely performed by a medical assistant who has limited training and who functions under the supervision of a licensed physician and surgeon or a licensed podiatrist”⁶

¹ Bus. & Prof. Code, § 2051.

² Bus. & Prof. Code, § 2052, subd. (a); 92 Ops.Cal.Atty.Gen. 56, 57 (2009).

³ Bus. & Prof. Code, § 2052, subd. (a).

⁴ Bus. & Prof. Code, § 2069.

⁵ Bus. & Prof. Code, § 2069, subd. (b)(1).

⁶ Bus. & Prof. Code, § 2069, subd. (b)(4); see also Bus. & Prof. Code, § 2069, subds. (a)(2), (b)(3), (b)(4) (under specified conditions, a physician may delegate the supervision of a procedure performed by a medical assistant to a nurse practitioner, certified nurse-midwife, or physician assistant).

The technical supportive services specifically authorized by statute are: administering medication by intradermal, subcutaneous, or intramuscular injection; performing venipuncture or skin puncture to withdraw blood; and doing skin tests.⁷ The Legislature also allows medical assistants to perform unspecified “additional technical supportive services,”⁸ and has directed the Medical Board to “adopt and administer regulations that establish standards for technical supportive services that may be performed by a medical assistant.”⁹

The Medical Board has promulgated regulations that set forth a non-exclusive list of technical supportive services that may be performed by medical assistants, including administering medication by certain means; performing electrocardiogram (EKG), electroencephalogram (EEG), and plethysmography tests; applying and removing bandages; removing sutures and staples; performing ear lavage to remove impacted cerumen; collecting and preserving bodily fluids; assisting patients in ambulations; preparing patients for medical procedures; providing instructions to patients; collecting and recording patient data; performing simple laboratory and screening tests customarily performed in a medical office; cutting patients’ nails; and fitting prescription lenses.¹⁰

For a medical assistant to perform an additional technical supportive service, the service must not be prohibited by law and must be “a usual and customary part of the medical or podiatric practice where the medical assistant is employed.”¹¹ Further, the medical assistant must complete the required training and show competence in performing the service, and a record must be made of each service performed.¹² Additionally, the supervising physician must authorize the medical assistant to perform the service and be responsible for the patient’s treatment and care.¹³ Also, the medical assistant must be supervised onsite by the supervising physician unless supervision is delegated to a physician assistant, nurse practitioner, or nurse-midwife according to standardized procedures in written instructions from the supervising physician.¹⁴

⁷ Bus. & Prof. Code, §§ 2069, subd. (a)(1), 2070.

⁸ Bus. & Prof. Code, § 2069, subd. (a)(1).

⁹ Bus. & Prof. Code, § 2071; see Bus. & Prof. Code, § 2002.

¹⁰ Cal. Code Regs., tit. 16, § 1366, subds. (b), (f).

¹¹ Cal. Code Regs., tit. 16, § 1366, subd. (a)(1).

¹² Cal. Code Regs., tit. 16, §§ 1366, subds. (a)(3), (a)(4), 1366.1, 1366.2, 1366.3.

¹³ Bus. & Prof. Code, § 2069, subds. (a), (b)(2); Cal. Code Regs., tit. 16, § 1366, subds. (a)(1), (a)(5).

¹⁴ Bus. & Prof. Code, § 2069, subds. (a)(1), (2), (b)(3), (b)(4).

To resolve the question whether medical assistants may lawfully perform spirometric testing under these provisions, it is necessary to have a basic understanding of both spirometry and pulmonary function testing in general. Pulmonary function testing is a “term used to indicate a battery of studies or maneuvers that may be performed using standardized equipment to measure lung function [and] can include simple screening spirometry, formal lung volume measurement, diffusing capacity for carbon monoxide, and arterial blood gases.”¹⁵ These tests “measure how well the lungs take in and release air and how well they move gases such as oxygen from the atmosphere into the body’s circulation.”¹⁶ “The tests can determine the cause of shortness of breath and may help confirm the presence of lung diseases, such as asthma, bronchitis or emphysema.”¹⁷

The most common type of pulmonary function test is spirometry, which uses a device called a spirometer.¹⁸ “The spirometer is an instrument that measures the amount of air breathed in and/or out and how quickly the air is inhaled and expelled from the lungs while breathing through a mouthpiece. The measurements are recorded on a device called a spirograph.”¹⁹ For some of these measurements, the patient may “breathe normally and quietly,” but for others, the patient must force “inhalation or exhalation after a deep breath.”²⁰ In one common spirometry test, a clip is placed over the patient’s nose, and the patient breathes through the mouth into a tube connected to the spirometer. “First the patient breathes in deeply, and then exhales as quickly and forcefully as possible into the tube. The exhale must last at least six seconds for the machine to work properly. Usually the patient repeats this test three times, and the best of the three results is considered to be the measure of the lung function.”²¹

¹⁵ Cleveland Clinic, Center for Continuing Education, Thomas R. Gildea, M.D. & Kevin McCarthy, Pulmonary Function Testing, at <http://www.clevelandclinicmeded.com/medicalpubs/diseasemanagement/pulmonary/pulmonary-function-testing/>.

¹⁶ MedlinePlus, Pulmonary Function Tests, at <http://www.nlm.nih.gov/medlineplus/ency/article/003853.htm>.

¹⁷ The Free Dictionary, Pulmonary Function Test, at <http://medical-dictionary.thefreedictionary.com/pulmonary+function+test>.

¹⁸ WebMD, Lung Function Tests, at <http://www.webmd.com/lung/lung-function-tests>.

¹⁹ Johns Hopkins Medicine Health Library, Pulmonary Function Tests, at http://www.hopkinsmedicine.org/healthlibrary/test_procedures/pulmonary/pulmonary_function_tests_92,P07759/.

²⁰ UCSF Medical Center, Pulmonary Function Tests, at <http://www.ucsfhealth.org/tests/003853.html>.

²¹ The Free Dictionary, Pulmonary Function Test, at <http://medical-dictionary.thefreedictionary.com/pulmonary+function+test>.

Spirometry measurements may include peak expiratory flow rate (airflow during forced expirations),²² forced vital capacity (maximum amount of air exhaled after a deep breath), forced expiratory volume in one second (amount of air exhaled in one second), and maximum voluntary volume (maximum amount of air inhaled and exhaled in one minute).²³ Spirometry is frequently performed as a screening procedure to diagnose lung disease.²⁴

With this basic understanding of spirometric testing, we next set forth the standards for determining whether the applicable statutes and regulations permit medical assistants to perform such testing.²⁵ Our principal tasks are to determine the Legislature's intent in enacting the statutes and the Medical Board's intent in promulgating the implementing regulations.²⁶ To discern these intents, we look first to

²² Peak flow is also measurable with a peak flow meter, which is a portable, handheld device that people—even children as young as four or five—may reliably operate themselves. (WebMD, Melinda Ratini, D.O., Asthma and the Peak Flow Meter, at <http://www.webmd.com/asthma/guide/peak-flow-meter>.) It is undisputed that medical assistants are legally permitted to perform pulmonary function testing using a peak flow meter.

²³ Encyclopedia of Children's Health, Emphysema vs. COPD, at <http://www.healthofchildren.com/P/Pulmonary-Function-Tests.html>.

²⁴ Santos, Manual of Pulmonary Function Testing (9th ed. 2008) (Santos) ch. 1, p. 2. Spirometry may also be used to measure occupational exposure, quantify the severity of lung disease, evaluate the efficacy of bronchodilators, assess the potential effects of therapy, and determine the risk of surgical procedures to lung function. (Santos, *supra*, ch. 1, p. 8; Wilkins, et al., Egan's Fundamentals of Respiratory Care (Wilkins) (9th ed. 2009) ch. 19, p. 405; Encyclopedia of Surgery, Spirometry Tests, at <http://www.surgeryencyclopedia.com/Pa-St/Spirometry-Tests.html>.)

²⁵ In this opinion, we do not consider whether other pulmonary function tests besides spirometry are simple and routine medical tasks and procedures that may be safely performed by a medical assistant with limited training. Other pulmonary function tests typically measure different aspects of lung function and employ different procedures than spirometry. (Santos, *supra*, ch. 1, p. 2.) A separate analysis would be required in order to determine whether a given test may be properly performed by a medical assistant.

²⁶ See *Freedom Newspapers, Inc. v. Orange County Employees Retirement System* (1993) 6 Cal.4th 821, 826; *Guerrero v. Superior Court* (2013) 213 Cal.App.4th 912, 955 (“Generally, the same rules of construction and interpretation which apply to statutes govern the construction and interpretation of rules and regulations of administrative agencies,” quoting *California Drive-In Restaurant Assn. v. Clark* (1943) 22 Cal.2d 287, 292).

the usual and ordinary meaning of the words used in the laws.²⁷ We give “significance, if possible, to every word, phrase, and sentence,”²⁸ avoiding a construction “that would render related provisions unnecessary or redundant.”²⁹ Where the definitions of words are not specialized, we “give them their usual, ordinary meaning, which in turn may be obtained by referring to a dictionary.”³⁰ Generally, the plain meaning of the statutory or regulatory provision governs.³¹ But where the plain meaning alone does not conclusively resolve the question, we may examine extrinsic aids including the statute’s legislative history or the regulation’s rulemaking file to assist us in our interpretation.³²

With these principles at hand, we initially observe that neither pulmonary function testing generally, nor spirometry specifically, is named by statute or regulation as a technical supportive service that medical assistants may perform. At the same time, no statute or regulation restricts technical supportive services to those expressly allowed, so long as the services are not specifically prohibited.³³ It therefore must be determined whether spirometry is an “additional” technical supportive service permitted by law.³⁴ As noted above, the Legislature has defined technical supportive services as “simple routine medical tasks and procedures that may be safely performed by a medical assistant who has limited training and who functions under the supervision of a licensed physician”³⁵ And, by regulation, additional technical supportive services include the performance of “simple laboratory and screening tests customarily performed in a medical office.”³⁶ Spirometry has been variously described by medical authorities and by one federal appellate court as a simple, routine, quick, safe, painless, and easy-to-perform

²⁷ *Hunt v. Superior Court* (1999) 21 Cal.4th 984, 1000; *Dyna-Med, Inc. v. Fair Employment & Housing Com.* (1987) 43 Cal.3d 1379, 1386-1387.

²⁸ *Dyna-Med, Inc. v. Fair Empl. & Hous. Com.*, *supra*, 43 Cal.3d at pp. 1386-1387.

²⁹ *Kleffman v. Vonage Holdings Corp.* (2010) 49 Cal.4th 334, 345.

³⁰ *Smith v. Selma Community Hosp.* (2010) 188 Cal.App.4th 1, 30.

³¹ *Coalition of Concerned Communities, Inc. v. City of Los Angeles* (2004) 34 Cal.4th 733, 737.

³² *MacIsaac v. Waste Management Collection and Recycling, Inc.* (2005) 134 Cal.App.4th 1076, 1083-1084; see *Friends of Sierra Madre v. City of Sierra Madre* (2001) 25 Cal.4th 165, 186-188 & fn. 15.

³³ Bus. & Prof. Code, § 2069, subd. (a)(1); Cal. Code Regs., tit. 16, § 1366, subds. (a)(1), (b).

³⁴ Cal. Code Regs., tit. 16, §§ 1366, subds. (a)(1), (b), 1366.2.

³⁵ Bus. & Prof. Code, § 2069, subd. (b)(4); see Bus. & Prof. Code, § 2069, subds. (a)(2), (b)(2), (3).

³⁶ Cal. Code Regs., tit. 16, § 1366, subd. (b)(11).

screening test that may be performed in a physician's office to diagnose lung diseases.³⁷ Spirometry therefore comes within both the general definition of technical supportive services and the specified example of simple screening tests as an additional technical supportive service.

Moreover, the procedures involved in spirometry appear comparable in complexity to other "additional technical supportive services" that medical assistants may perform by regulation, "such as" EKGs and EEGs.³⁸ To perform an EKG, "[t]en electrodes are needed to produce 12 electrical views of the heart. An electrode lead, or patch, is placed on each arm and leg, and six are placed across the chest wall. The signals received from each electrode are recorded. The printed view of these recordings is the electrocardiogram."³⁹ To perform an EEG, the administrator positions the patient on a padded bed or table, or comfortable chair, and then measures the brain's electrical activity by "attach[ing] 16 to 20 electrodes to the scalp. . . . To improve the conduction of these impulses to the electrodes, a gel will be applied to them. Then a temporary glue

³⁷ *Mikes v. Straus* (2d Cir. 2001) 274 F.3d 687, 694 (spirometry is "an easy-to-perform pulmonary function test"); Cleveland Clinic, Center for Continuing Education, Thomas R. Gildea & Kevin McCarthy, Pulmonary Function Testing, at <http://www.clevelandclinicmeded.com/medicalpubs/diseasemanagement/pulmonary/pulmonary-function-testing/> ("simple screening spirometry" may be performed "in the ambulatory setting, physician's office, emergency department, or inpatient setting"); American Lung Association, COPD – Helping the Missing Millions, at <http://www.lung.org/about-us/our-impact/top-stories/copd-helping-the-missing.html> ("Luckily, the test, called spirometry, is simple and quick"); KidsHealth, Yamini Durani, M.D., Spirometry, at <http://kidshealth.org/parent/system/medical/spirometry.html#> ("Spirometry is a quick, painless test" and a "safe procedure with little risk"); WebMD, Lung Function Tests, at <http://www.webmd.com/lung/lung-function-tests> ("Spirometry is the first and most commonly done lung function test"); Levy, et al., *Diagnostic Spirometry in Primary Care* (2009) vol. 18, No. 3, *Prim. Care Respir. J.* 130, 135 ("Spirometry is safe"); Royal Brompton & Harefield NHS Foundation Trust, at <http://www.rbht.nhs.uk/patients/condition/lung-function-tests/> (spirometry is a "[r]outine" pulmonary function test).

³⁸ Cal. Code Regs., tit. 16, § 1366, subd. (b)(2); see *Shaddox v. Bertani* (2003) 110 Cal.App.4th 1406, 1414 (in statutory construction, "[t]he phrase 'such as' is not a phrase of strict limitation, but is a phrase of general similitude indicating that there are includable other matters of the same kind which are not specifically enumerated," internal citations and quotation marks omitted).

³⁹ Emedicinehealth, Benjamin Wedro, M.D., Electrocardiogram (ECG, EKG), at http://www.emedicinehealth.com/electrocardiogram_ecg/article_em.htm.

will be used to attach them to the skin.” The EEG administrator “may tell the patient to breathe slowly or quickly and may use visual stimuli such as flashing lights to see what happens in the brain when the patient sees these things. The brain’s electrical activity is recorded continuously throughout the exam on special EEG paper.”⁴⁰

Like EKGs and EEGs, spirometric testing involves giving instructions to the patient, using an apparatus connected to a medical device, and obtaining readings or results from the device for the physician to interpret. In the case of an EEG, the administrator coaches the patient’s pace of breathing, as may also be done with spirometry. These basic similarities between spirometry, and EKGs and EEGs, which are identified by law as additional technical supportive services, further demonstrate that spirometry also is a simple and routine medical procedure that may be safely performed by a medical assistant with limited training.⁴¹

It is nonetheless contended that, under the Respiratory Care Practice Act (RCPA),⁴² spirometry constitutes the practice of respiratory care, which (beyond licensed physicians) only respiratory care practitioners (RCPs) and other enumerated, licensed health care providers—but not medical assistants—may engage in. Although we agree that medical assistants may not engage in the practice of respiratory care under the RCPA, we do not agree that simply conducting spirometric testing necessarily constitutes the practice of respiratory care.

According to the RCPA, no non-physician shall practice respiratory care, respiratory therapy, or inhalation therapy, nor may any person represent himself or herself as an RCP, unless the person is licensed as an RCP.⁴³ An RCP’s practice involves much more than administering spirometry: it is “a health care profession employed under

⁴⁰ Emedicinehealth, Diamond Vrocher III, M.D., & Mark J. Lowell, M.D., Electroencephalography, at http://www.emedicinehealth.com/electroencephalography_eeg/page4_em.htm.

⁴¹ We also observe that the Medical Board, which promulgated the medical-assistant regulations, believes that spirometry is an additional technical supportive service. (Kimberly Kirchmeyer, Executive Dir., Medical Bd. of Cal., letter to Supv. Dep. Atty. Gen. Susan Lee, Dec. 5, 2013, pp. 2-4.) This view bolsters our conclusion that medical assistants may perform spirometry, as we give great weight to an agency’s interpretation of its own regulations. (*Carmona v. Division of Industrial Safety* (1975) 13 Cal.3d 303, 310; *Industrial Indemnity Co. v. City and County of San Francisco* (1990) 218 Cal.App.3d 999, 1009; 80 Ops.Cal.Atty.Gen. 283, 289 (1997).)

⁴² Bus. & Prof. Code, §§ 3700-3779.

⁴³ Bus. & Prof. Code, §§ 3760, 3761.

the supervision of a medical director in the therapy, management, rehabilitation, diagnostic evaluation, and care of patients with deficiencies and abnormalities which affect the pulmonary system and associated aspects of cardiopulmonary and other systems functions”⁴⁴ “The scope of [an RCP’s] practice ranges from delivering temporary relief to persons with asthma, pulmonary edema, or emphysema, to providing emergency treatment for asphyxiation, heart failure, stroke, drowning, or shock.”⁴⁵

A helpful distinction between practicing as a licensed health care professional and performing technical supportive services as a medical assistant was explained in the case of *PM & R Associates v. Workers’ Compensation Appeals Board* (2000) 80 Cal.App.4th 357. There, the Court of Appeal concluded that physicians may employ and supervise medical assistants to perform technical supportive services involving physical-therapy tasks without employing licensed physical therapists.⁴⁶ In doing so, the appellate court instructed that “the term ‘practice’ is a term of art.”⁴⁷ The court explained that “‘practicing’ a particular profession—independently exercising discretion and specialized training to prescribe and implement a course of action—is significantly different from providing adjunctive services to a practice, and they are substantially different in scope, with the latter being far less encompassing than the former.”⁴⁸

Like physical therapists, RCPs must satisfy substantial educational, training, and licensing requirements for their profession.⁴⁹ But the RCPA itself recognizes that there are “overlapping functions” between “physicians and surgeons” and “respiratory care practitioners” as well as “additional sharing of functions within organized health care systems.”⁵⁰ And the RCPA itself states that nothing in the RCPA “is intended to limit, preclude, or otherwise interfere with the practices of other licensed personnel in carrying out authorized and customary duties and functions.”⁵¹ Thus, although medical assistants are prohibited from engaging in the “practice” of respiratory care, the RCPA does not

⁴⁴ Bus. & Prof. Code, § 3702.

⁴⁵ USCF Center for the Health Professions, Nona Kocher, et al., *Respiratory Care in California* (Kocher), p. 1, at http://www.rcb.ca.gov/forms_pubs/ucsf.pdf.

⁴⁶ *PM & R Associates v. Workers’ Comp. Appeals Bd.*, *supra*, 80 Cal.App.4th at pp. 364, 369.

⁴⁷ *Id.* at p. 368.

⁴⁸ *Ibid.*

⁴⁹ Bus. & Prof. Code, §§ 2620, 2630, 2650, 3735, 3740, 3760, 3761, 3775; Cal. Code Regs., tit. 16, §§ 1399.349, 1399.350, 1399.350.5.

⁵⁰ Bus. & Prof. Code, § 3701.

⁵¹ Bus. & Prof. Code, § 3762.

prevent licensed physicians in their practices from employing medical assistants to perform a technical supportive service—such as spirometry—that relates to respiratory care.

A related objection is that the training required of medical assistants falls far short of the training that RCPs undergo for their profession, and that there is no regulatory process to prevent incompetent or negligent medical assistants from working. To be sure, a person must satisfy broad educational requirements, pass a national examination, and receive continuing education in order to become a licensed RCP.⁵² But this does not mean that a physician, “who has significantly more training than [an RCP], and who is authorized to perform [respiratory care],” is prohibited in his or her practice from using a medical assistant to perform technical supportive services relating to respiratory care.⁵³ It is the physician who is ultimately responsible for the medical assistant’s performance of these services, and it is the physician who is ultimately subject to discipline for any negligence or incompetence by the medical assistant.⁵⁴

Still, it is also argued that medical assistants may not administer bronchodilator medication by inhalation, as a component of spirometric testing,⁵⁵ based on the regulation that states that medical assistants may “[a]dminister medication by inhalation if the medications are patient-specific and have been or will be routinely and repetitively administered to that patient.”⁵⁶ With reference to this phrasing, it is argued that a medical assistant’s use of bronchodilators during spirometry is impermissible to the extent that the stated conditions for administering medication by inhalation are not fulfilled. On balance, however, we do not think that the regulation’s wording forecloses medical assistants from lawfully administering medication by inhalation in every other circumstance. As discussed, the regulation merely gives illustrations of additional

⁵² See fn. 49, *ante*; Kocher, *supra*, at pp. 3-5.

⁵³ *PM & R Associates v. Workers’ Comp. Appeals Bd.*, *supra*, 80 Cal.App.4th at p. 366.

⁵⁴ See *Landau v. Superior Court* (1998) 81 Cal.App.4th 191, 221-222.

⁵⁵ Spirometry is sometimes used to evaluate whether medication will widen the narrowed airways resulting from conditions like asthma or chronic obstructive pulmonary disease. As part of this testing, a bronchodilator medication may be given to open up the airways to determine whether normal spirometry results are achievable from medication. (See Patient.co.uk, Dr. Tim Kenny and Dr. Colin Tidy, Spirometry, at <http://www.patient.co.uk/health/spirometry-leaflet>; WebMD, Roy Benaroch, M.D., Lung Function Tests for Asthma, at <http://www.webmd.com/asthma/guide/lung-function-tests-asthma>.)

⁵⁶ Cal. Code Regs., tit. 16, § 1366, subd. (b)(1).

technical supportive services that medical assistants may perform and was not meant to limit “the wide range of services which the physician may assign to a medical assistant.”⁵⁷ By comparison, medical assistants are permitted to administer medication by seemingly more intrusive means than inhalation—“by intradermal, subcutaneous, or intramuscular injections”⁵⁸ and “vaginally or rectally.”⁵⁹

We also find it persuasive that in both the Initial and Final Statements of Reasons for the medical-assistant regulations, the Medical Board determined that inhalation was “less hazardous” than injection and that “this route of administration is similar in complexity to administration by injection and venipuncture.”⁶⁰ The fact that patients may be instructed to self-administer bronchodilators during spirometry also is probative of a lack of complexity.⁶¹ Indeed, “[s]elf-care by the patient” is permitted under the RCPA,⁶² and “providing a single dose [of medication] to a patient for immediate self-administration” is permitted under the medical-assistant regulations.⁶³

We draw additional support for our conclusion from the safety checks that appear in the medical-assistant regulations for administering medication by inhalation. Specifically, a medical assistant must receive at least 10 hours of training in administering medication by inhalation before he or she is allowed to demonstrate proficiency in this task.⁶⁴ This training must include instruction and demonstration about pertinent anatomy and physiology, equipment, proper technique, hazards and

⁵⁷ *PM & R Associates v. Workers’ Comp. Appeals Bd.*, *supra*, 80 Cal.App.4th at p. 894.

⁵⁸ Bus. & Prof. Code, § 2069, subd. (a)(1).

⁵⁹ Cal. Code Regs., tit. 16, § 1366, subd. (b)(1).

⁶⁰ See Bus. & Prof. Code, § 2070 (allowing medical assistants to perform venipuncture); *Yamaha Corp. of America v. State Bd. of Equalization* (1998) 19 Cal.4th 1, 12-13.

⁶¹ National Lung Health, Education Program, Thomas L. Petty, M.D. & Paul L. Enright, M.D., Simple Office Spirometry for Primary Care Practitioners, p. 9, at www.nlhep.org/documents/simple_office_spirometry.pdf; see also Medicine.net.com, Bronchodilator-Aerosol Oral Inhaler, at http://www.medicinenet.com/bronchodilator-aerosol_oral_inhaler/article.htm (directing the user how to self-administer a bronchodilator during treatment).

⁶² Bus. & Prof. Code, § 3765, subd. (b).

⁶³ Cal. Code Regs., tit. 16, § 1366, subd. (b)(1).

⁶⁴ Cal. Code Regs., tit. 16, § 1366.1, subd. (d).

complications, patient care following testing, and emergency procedures.⁶⁵ In addition, a physician or other authorized person must verify the correct medication and dosage before a medical assistant may administer such medication by inhalation.⁶⁶

Finally, it is argued that a medical assistant may not perform spirometry because it would impermissibly require the medical assistant to interpret test results when assessing whether the patient's effort is sufficient to obtain accurate measurements. We reject this argument, which conflates the administration of testing with the assessment of test results. Unless otherwise provided by law, only a physician may diagnose a medical condition.⁶⁷ And medical assistants are not permitted "to interpret test findings and results."⁶⁸ But in our view, assessing whether spirometric testing procedures and devices are yielding reliable results does not amount to diagnosing a lung disease or interpreting the results actually obtained. Otherwise, the regulations could not specifically permit a medical assistant to perform tests such as EKGs, EEGs, or plethysmography,⁶⁹ which also require the administrator to determine whether the medical equipment and procedures are giving valid results for the physician to interpret.⁷⁰

We therefore conclude that a medical assistant may lawfully perform spirometric pulmonary function testing if the test is a usual and customary part of the medical practice where the medical assistant is employed, and the requirements for training, competency, authorization, and supervision are satisfied.⁷¹

⁶⁵ Cal. Code Regs., tit. 16, § 1366.1, subd. (e).

⁶⁶ Cal. Code Regs., tit. 16, § 1366, subd. (b)(1).

⁶⁷ Bus. & Prof. Code, § 2052, subd. (a).

⁶⁸ Cal. Code Regs., tit. 16, § 1366, subd. (b)(2).

⁶⁹ See Cal. Code Regs., tit. 16, § 1366, subd. (b)(2).

⁷⁰ See Mayo Clinic, Electrocardiogram (ECG or EKG), What You Can Expect, at <http://www.mayoclinic.org/tests-procedures/electrocardiogram/basics/what-you-can-expect/prc-20014152> (procedures for EKG testing); MedlinePlus, Luc Jasmin, M.D., EEG, at <http://www.nlm.nih.gov/medlineplus/ency/article/003931.htm> (procedures for EEG testing); HealthCommunities.com, Plethysmography, Simeon Margolis, M.D., at <http://www.healthcommunities.com/heart-tests/plethysmography.shtml> (procedures for plethysmography testing).

⁷¹ This means, for example, that it might be permissible for medical assistants to perform spirometry in a pulmonologist's or primary care physician's office but not in a cardiologist's or dermatologist's office, depending on whether spirometry is a usual and customary part of the particular office's practice.