



AMERICAN OPTOMETRIC ASSOCIATION

COMMISSION ON PARAOPTOMETRIC CERTIFICATION

Year in Review

2022



Commission on
Paraoptometric Certification

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Background

The Commission on Paraoptometric Certification (CPC) was established in 2000 by the American Optometric Association. This program replaced the National Paraoptometric Registry, which was established by the American Optometric Association in 1978. Certification focuses specifically on the individual and is an indication of current proficiency in a specialized field. Certification is highly valued and provides formal acknowledgement of knowledge and skills in a particular area of practice.

The CPC offers four certification examinations for optometric staff. Each program requires successful completion of an examination prepared and administered by the CPC with the assistance of Professional Testing Corporation (PTC). The purpose of the examinations is to assure a level of knowledge to perform the functions necessary to each certified designation. Recipients must participate in continuing education activities and renew their certification every three years to maintain a current certification. Paraoptometric certification provides a formal declaration of education and skill achievement in the profession of optometric assisting by:

- Recognizing formally those individuals who meet all requirements of the Commission on Paraoptometric Certification of the American Optometric Association.
- Encouraging continued professional growth of the paraoptometric.
- Establishing and measuring the level of knowledge required for certification of paraoptometrics.
- Promoting a standard of requisite knowledge required for certification; thereby, assisting the employer, public, and members of the health professions in the assessment of paraoptometrics.

The National Commission for Certifying Agencies (NCCA) accredits the CPO™, CPOA™, and CPOT™ examinations. NCCA accreditation serves as a benchmark on how organizations should conduct certification and clearly distinguishes the excellence and value of CPC certification. To receive this accreditation, the CPC completed an application for each certification program demonstrating compliance with the NCCA's Standards for the Accreditation of Certification Programs, which were the first standards for professional certification programs developed by the industry. NCCA uses a peer review process to:

- establish accreditation standards.
- evaluate compliance with the standards.
- recognize organizations/ programs that demonstrate compliance.
- serve as a resource on quality certification.

The accreditation of these three programs was renewed by NCCA for another five years in 2022. The CPC is a member of the Institute for Credentialing Excellence, or I.C.E., a professional membership association that provides education, networking and other resources for organizations and individuals who work in and serve the credentialing industry. I.C.E. is a leading developer of standards for both certification and certificate programs and is both a provider of and a clearing house for information on trends in certification, test development and delivery, assessment-based certificate programs and other information relevant to the credentialing industry.

Executive Summary

The Commission on Paraoptometric Certification (CPC) continues to offer the only certification available for paraoptometrics and seeks to make this experience valuable and desirable for all interested participants. During 2022, nearly 6,400 paraoptometrics held or earned a new paraoptometric certification. The CPC continues to improve the quality and integrity of the program to maintain the positive perception of certification within the optometric community. New forms of the CPO, CPOA and CPOT examinations that were based on the results of the 2019 Job Task Analysis survey were released in February 2021. Basic knowledge areas and skills that survey respondents deemed necessary for each certification level were indicated in the content outline. Subsequently, a portion of the items covering these basic knowledge areas and skills were removed from the examinations to make room for new topics that had been identified through the job task analysis and additional content was included in certain domains. All forms of the examination are reviewed annually by the CPC Test Development and Review Committee.

Mission Statement

The Commission on Paraoptometric Certification serves the public by developing, maintaining, and promoting a certification process which reflects current modes of optometric practice and grants certification to those candidates who satisfy the set requirements throughout the world.

Program Overview

The certified paraoptometric examinations are developed and administered by the CPC with the assistance of Professional Testing Corporation. These proctored computer-based examinations are administered by Prometric staff. The purpose of the examinations is to ensure a level of knowledge to perform the functions of a certified paraoptometric at each appropriate level. Those who have successfully completed the appropriate examination(s) will be certified with the Commission on Paraoptometric Certification as a Certified Paraoptometric (CPO), Certified Paraoptometric Assistant (CPOA), Certified Paraoptometric Coder (CPOC), or Certified Paraoptometric Technician (CPOT).

The passing score for the examinations is set for each new form developed following a job task analysis; future forms are upheld to the standard by using equating methodology. The new form is reviewed for relevance, appropriateness, and accuracy by the examination work groups responsible for examination development. During the process, this committee meets with a testing vendor who serves to guide committee deliberations and ensures psychometric soundness of the decisions reached.

The primary consideration in the examination review process is to ensure representation of the basic body of knowledge required for practice. A second consideration is to maintain the equivalent difficulty level of successive examinations. Based on Standard 4.21 of the AERA, APA, and NCME Standards for Educational and Psychological Testing, the passing scores are established so that the test review committee can bring their knowledge and experience to bear in a reasonable way.

Executive Summary

Objectives

The purpose of this Year-in-Review report is two-fold. First, it assures that the examinations are compliant with NCCA standards and assists the Commission on Paraoptometric Certification in identifying trends, targeting audiences, and ensuring that the examinations are reliable. Second, these metrics are valuable to stakeholders as they identify potential training opportunities that are lacking; personal development needs that are not being met; and identify target demographic audiences for marketing purposes. The information in this report is derived from compiled candidate responses on the examination applications and the stringent review of score reports. All documentation regarding these reports is kept on file for five (5) years. Only through extensive task analysis studies can the CPC determine the body of knowledge. Task analyses assess how a task is accomplished, including a detailed description of both manual and mental activities, task and element durations, frequency, allocation, complexity, necessary equipment and precautions, and any other unique factors involved in or required for one or more people to perform a given task. The CPC conducts these analyses every three to five years, the latest having been performed in 2019. In between these studies, test reviews and item performance reviews are conducted annually. Test specifications are updated frequently according to the environmental scan of the optometric practice.

Meet the Commission on Paraoptometric Certification (CPC)

Chair – Janet Millis, CPOT, ABOC (IL)

Vice-Chair – Beverly Roberts, CPOT, ABOC (MS)

Immediate Past Chair – Stacey Thibodeau, CPOT, CPOC (WI)

Member – Catherine Firman, CPOT (FL)

Member – Jennifer Smith, CPOT (NE)

Member – Katherine Ramsey, CPOT, OSC (MS)

Member – Elaine Thomas-Bush, CPOA (FL)

Member – Sasha Radford, OD (IL)

Member-at Large – vacant

Public Member – Al Suguitan, CAE (IL)

AOA Board Liaison Trustee – Steven Reed, OD (MS)

AOA Staff Liaison – Sharon Alderson, Manager of Paraoptometric Certification Programs

*Vacant as of December 2, 2022

Executive Summary

Highlights

The Commission on Paraoptometric Certification is pleased to report that another year of providing certification examinations to paraoptometric has been completed.

The examinations are developed in cooperation with Professional Testing Corporation (PTC), which provides professional organizations of all sizes with quality psychometric services. The CPO, CPOA, and CPOT programs are accredited by the National Commission for Certifying Agencies (NCCA). The NCCA helps to ensure the health, welfare, and safety of the public through the accreditation of a variety of certification programs/organizations that assess professional competency. Examinations are administered at Prometric testing facilities.

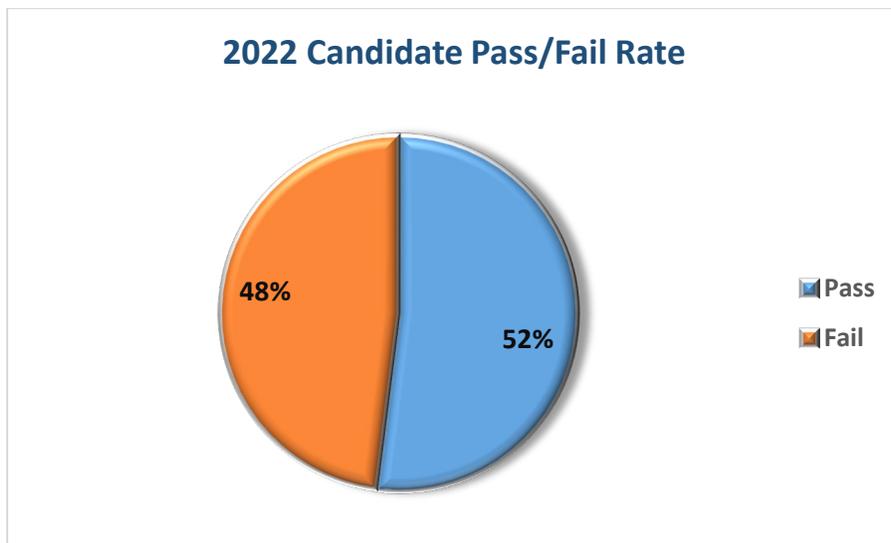
- **In 2022, a total of 1,450 candidates sat for a CPO, CPOA, CPOT, or CPOC examination.**
 - **At the end of December 2022, approximately 5,132 paraoptometrics maintained a current certification.** (After 1,264 paraoptometrics who did not renew their certification by December 31, 2022, were removed from the total count.)
 - **3,408 Certified Paraoptometrics (CPO)**
 - **1,068 Certified Paraoptometric Assistants (CPOA)**
 - **426 Certified Paraoptometric Technicians (CPOT)**
 - **202 Certified Paraoptometric Coders (CPOC)**
 - **Of the total certified, 161 held dual certifications (CPOC with a CPO, CPOA or CPOT)**

Year in Review

The CPO, CPOA and CPOC examinations administered in 2022 were computer-based and administered during four, two-week testing periods in February, May, August, and November at Prometric testing locations. The CPOT written and clinical examinations were offered during the May and November testing cycles only. Instant pass/fail scoring was eliminated in 2021 as the scoring method was changed from providing raw scores expressed as a percentage of correct answers to the equating scoring method to satisfy NCCA accreditation standards. Since every examination form is made up of a different mix of items, the difficulty level may vary slightly from form to form. Equating takes into consideration these small and unintended differences in difficulty among different examination forms by appropriately adjusting the passing point to ensure that a comparable level of knowledge on each form is required to pass the examination. Hand-scoring is performed when candidates score within 2-3 points of passing.

Overall Pass/Fail

Just over half of the 1,450 candidates who took an examination in 2022 (52%) passed, while combined statistics for all examinations revealed that 47% of repeat candidates in 2022 passed. While 9% of exams were hand-scored in 2021, 7.7% of exams were hand-scored in 2022. CPO (50.5%) and CPOT (46%) repeat candidates experienced higher pass rates than those retaking a CPOC (40%) or CPOA (30.7%) exam.

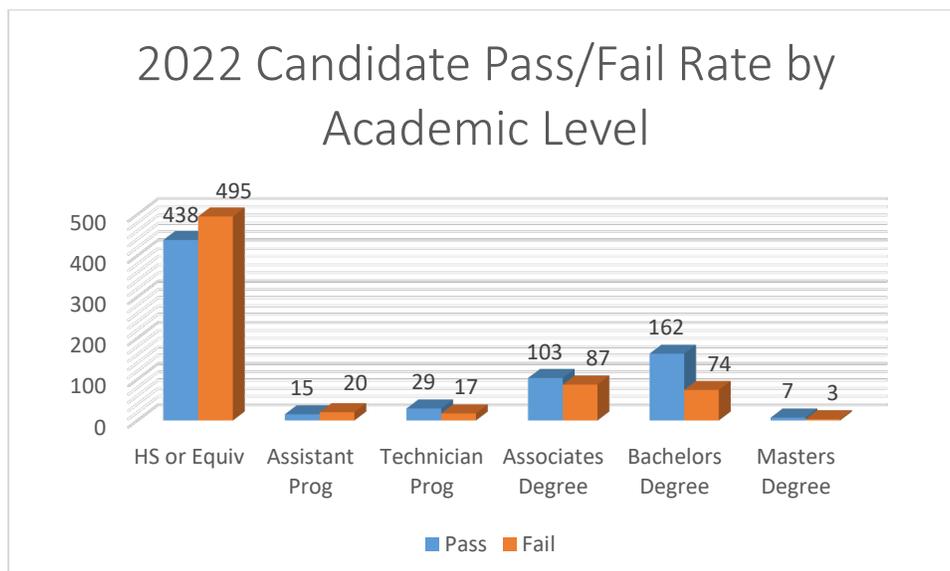
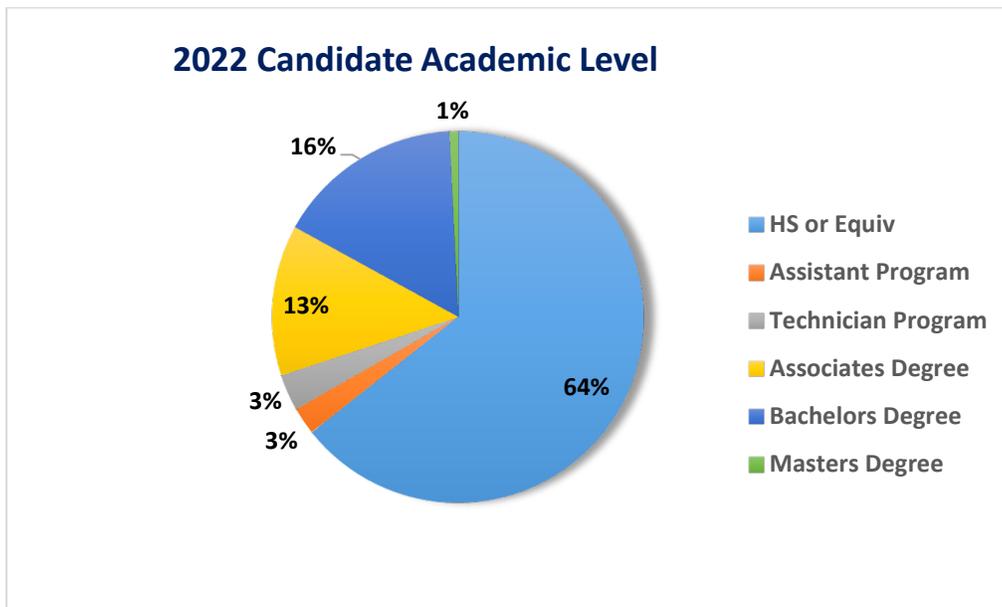


Overall passing rate dropped from 54.1% in 2021 to 52% in 2022.

Year in Review

Education Level

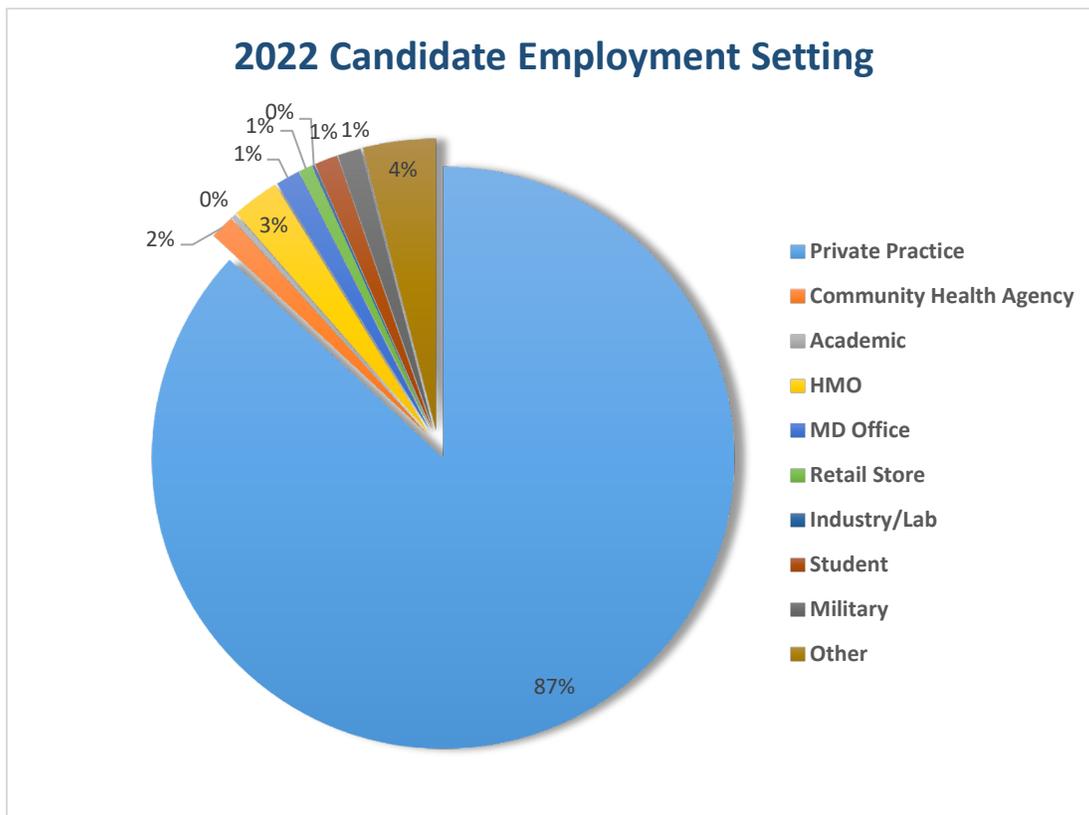
The trend in the education level continued with most candidates (64%) holding a minimum of a high school diploma or equivalent. Nearly one-third (30%) of candidates held an Associate's, Bachelor's, or Master's degree, while only five percent (6%) of candidates were enrolled or were graduates of a CPC or ACOE approved optometric assistant or technician program. The pass rate by academic level was consistent with 2021 results with approximately half of the candidates passing, with the most notable change in those holding a masters degree. In 2021, 85% of candidates holding a Master's degree passed the exam while in 2022 only 70% of candidates holding a masters degree passed an exam. However, the pool of candidates holding a Masters Degree is very small and therefore the passing rate would be easily affected.



Year in Review

Employment Setting

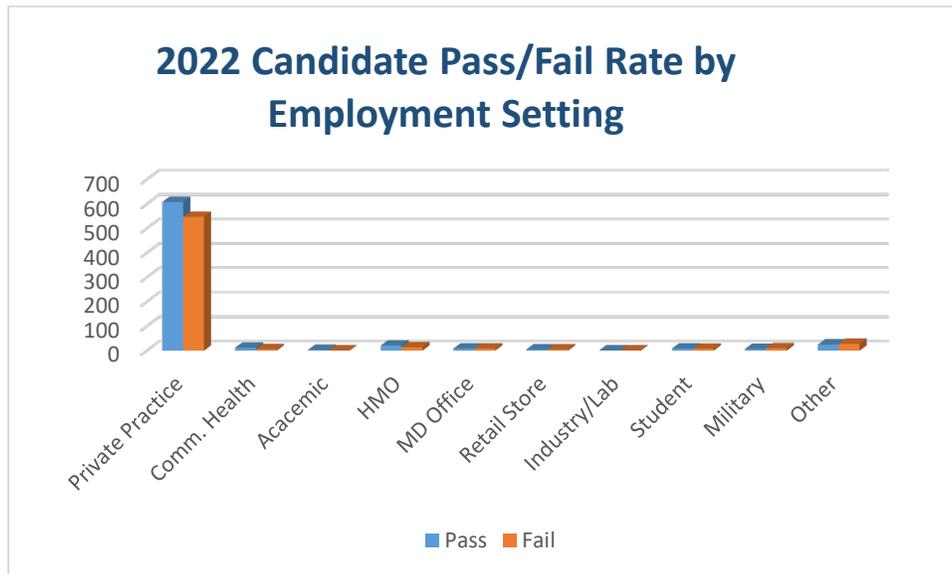
Overall, 87% of candidates (an increase of 3% since 2021) were employed by a private practice. Of the 1,155 candidates in this category, 52.6% or 608 paraoptometric passed the CPO, CPOA, CPOT, or CPOC examination on the first or second attempt. These results remain consistent with the 2021 pass rate when 54.5% of candidates who were employed by a private practice passed an exam.



For the second year in a row, employment in private practice settings rose slightly, up about 3% from 2021.

Year in Review

The predominant employment setting for candidates taking any paraoptometric examinations remains the optometric private practice.



The decreased passing rate experienced in 2021 across all examinations continued in 2022. This decrease seems to be the result of several factors. Passing rates are often affected after a new form of the examination is released. Passing scores that were raised slightly on the CPO and CPOA examinations in 2021, following the 2019 Job Task Analysis and based on the Angoff Method of Standard Setting remained. (Passing scores for the CPOT written and clinical examinations and the CPOC examination were not changed from previous years.) In 2022, 7.7% of examinations were hand-scored to insure accuracy.

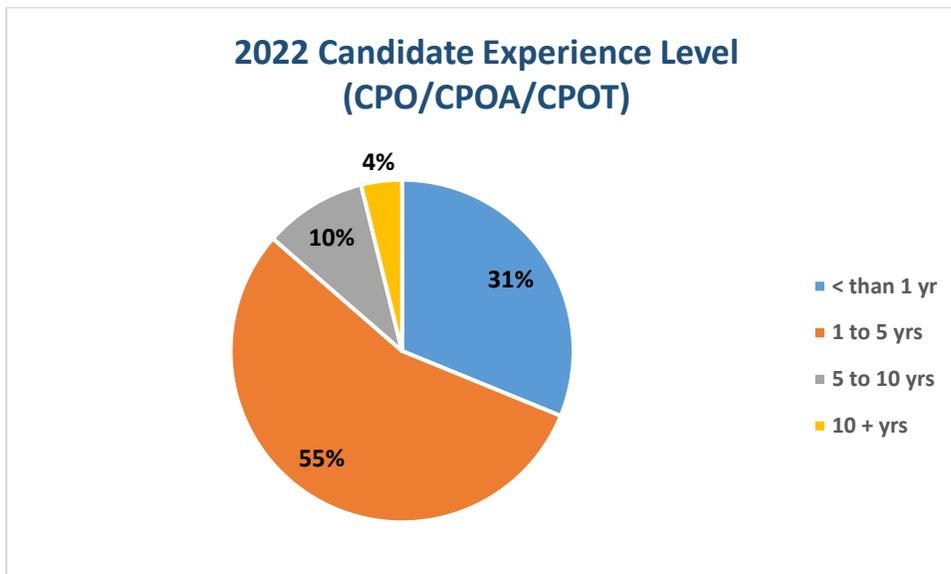
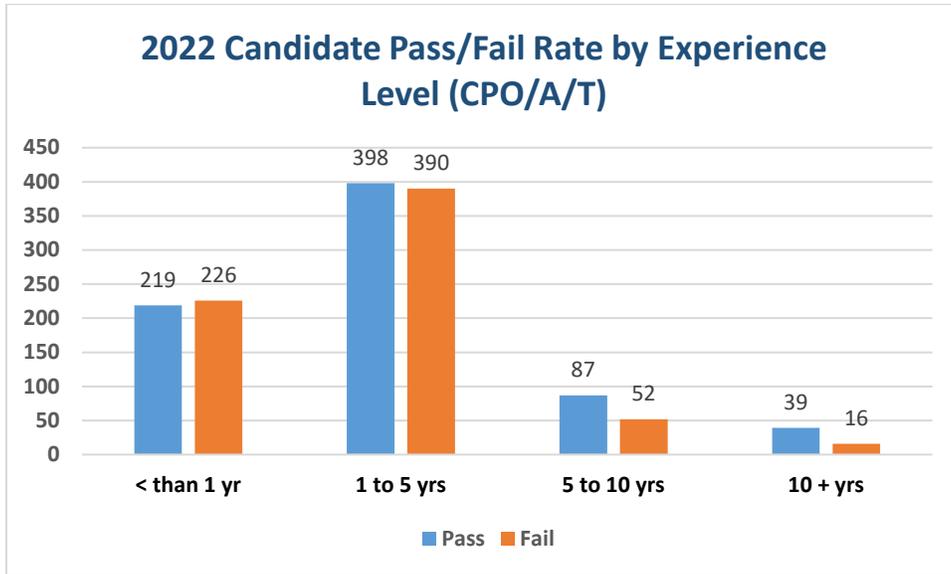
The pass rate fell for those employed by a private practice remained at just above 50% in 2022.

An informal survey of a small sample of paraoptometrics who tested in 2021 revealed that candidates were unaware of the content outlines, the resources available in the candidate handbook, and of the new and additional study materials that were recommended on the website and in the candidate handbook. The CPC now contacts all exam registrants by email to provide them with a link to a *Know Before You Go* video which guides registrants through the AOA website, the candidate handbook and points to resources available to aid them in preparing for the exams.

Year in Review

Experience

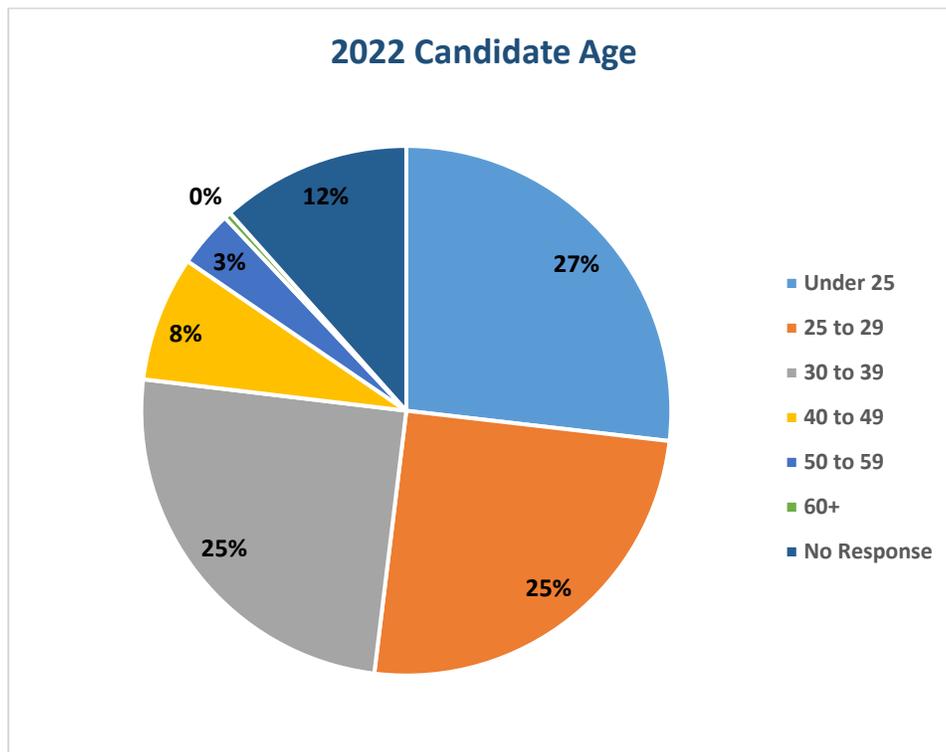
The passing rate does not appear to be affected either way by experience level for those with less than one year to up to 5 years of experience. In 2022, 49% of those with 1 year or less experience passed the exam while 50.1% with 1 to 5 years of experience passed. Those with 5 to 10 years of experience had a passing rate of 62% while those with 10 or more years of experience had a passing rate of 71%.



Year in Review

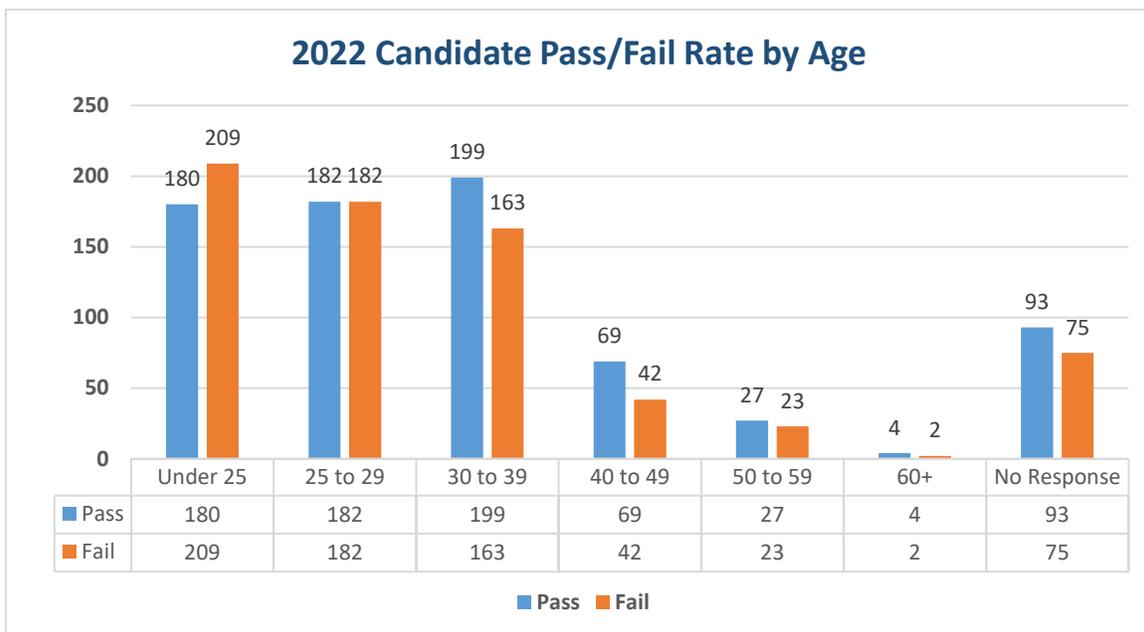
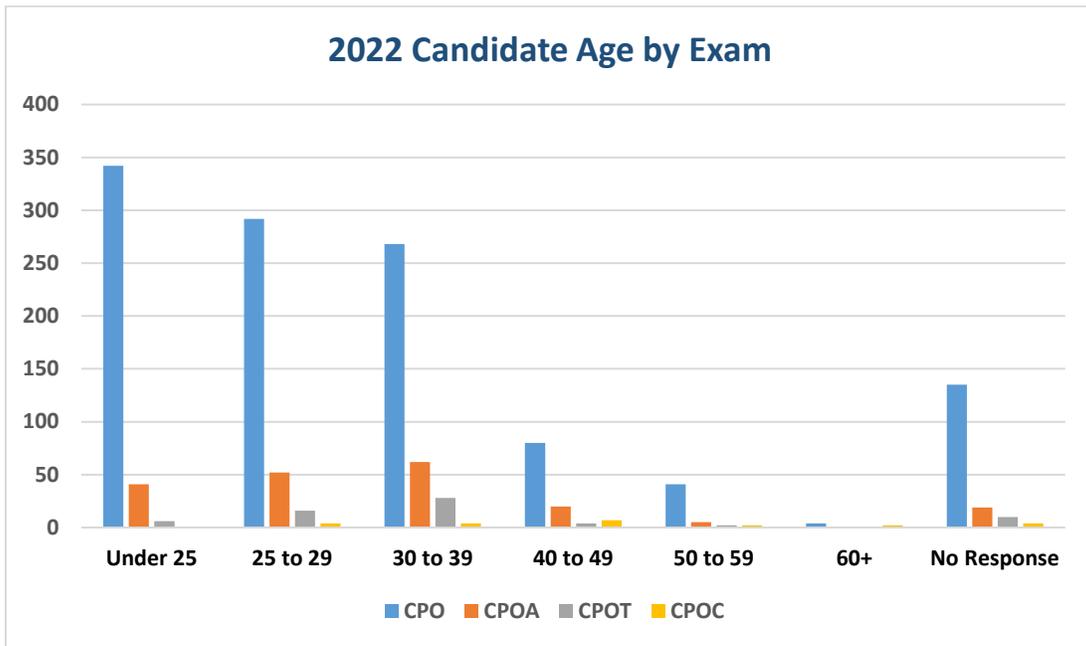
Candidate Age

Again in 2022, the largest age group (50%) was comprised of candidates who were between the ages of 25-39, followed by approximately one-quarter (27%) under the age of 25, with the remaining 11% of those who responded being 40 and up. However, of the candidates who provided their age, none were in the 60+ age group. Twelve percent of the candidates did not provide their age.



Year in Review

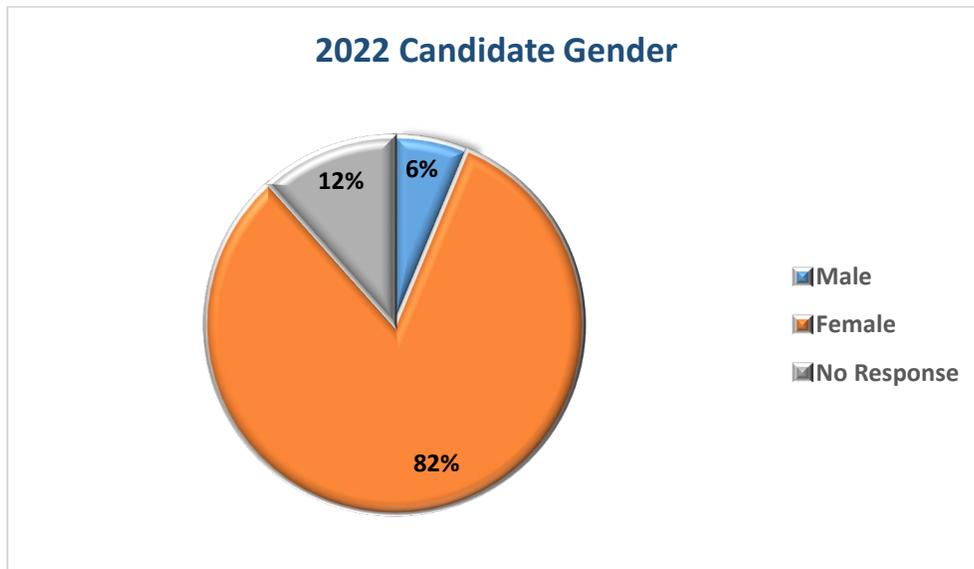
While the overall passing rate amongst all candidates who provided their age remained unchanged at approximately 50%, there were changes to the percent of passing candidates in each age group, except for the 25-29 age group who again had a 50% passing rate. The highest group passing rate for the second year in a row was the 60+ group with an average 67% passing rate, down from 70% in 2021. The passing rate for candidates in the 50-59 age groups experienced an increase in the passing rate from 50% in 2021 to 54% in 2022. Candidates in the 40-49 age range improved their passing rate slightly, up from 60% in 2021 to 62% in 2022, while those in the 30-39 age group fell from 57% to 55% passing rate in 2022. The average passing rate for the under 25 age group saw the biggest change from 53% passing in 2021 to only 46% passing in 2022. Of the 1,450 candidates, 168 did not provide their age.



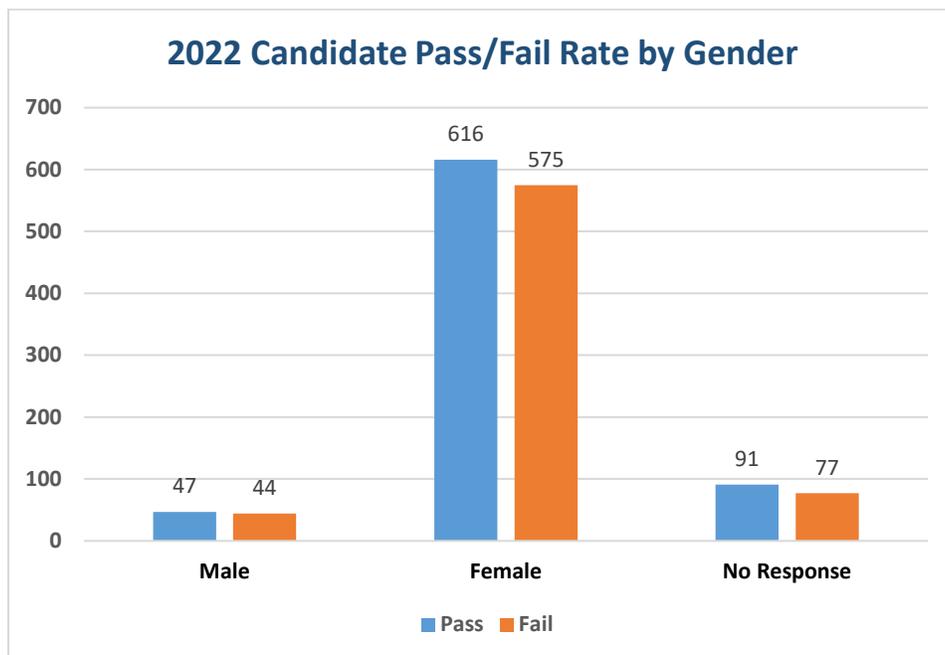
Year in Review

Candidate Gender

In 2022, of the 1,282 respondents who identified their gender, the percentage of female candidates was predominantly higher than the number of male candidates, with just over 6% of candidates identified as male. Of the 1,450 exam registrants, 11.6% declined to identify their gender.



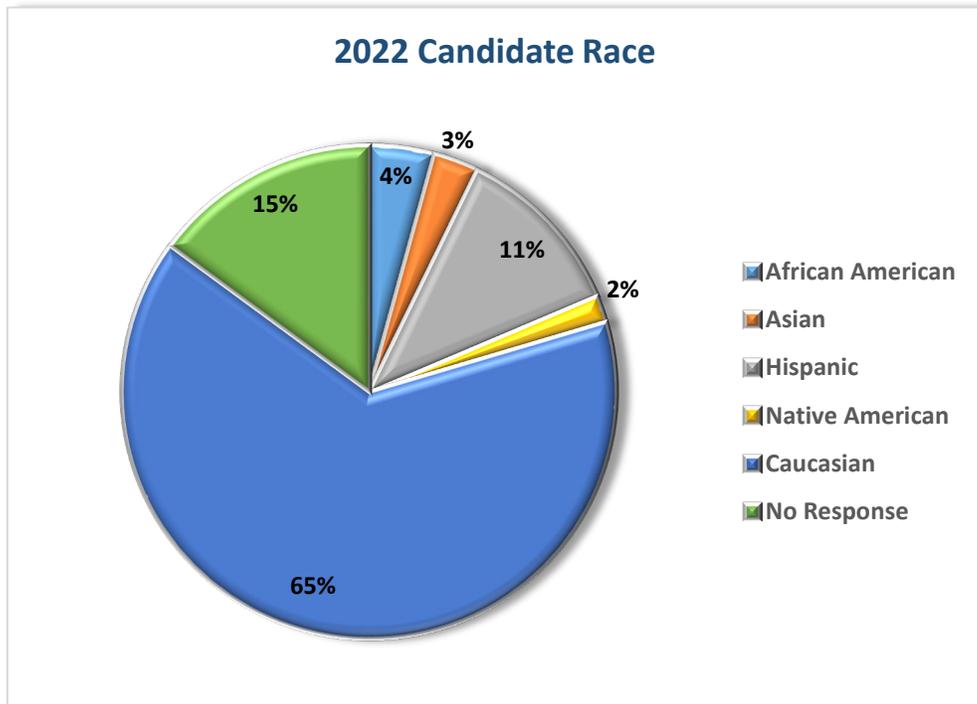
Of the candidates who indicated gender, there was no significant difference in the pass rate based on gender: 51.6% of male and 51.7% of female candidates passed their examination. These pass rates are slightly lower than they were in 2021, and are significantly lower than they were in 2020 when the pass rates for male and female candidates were between 75% and 77.5%, respectively.



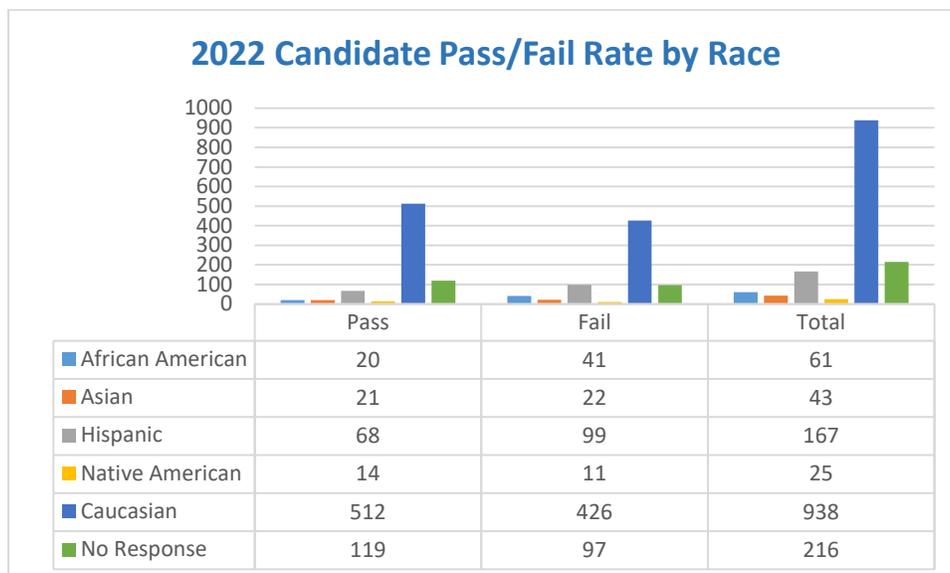
Year in Review

Candidate Race

These statistics are nearly identical to the previous two years of candidate breakdown by race. Of those who indicated race on their application, Caucasians accounted for 65% of all candidates. Hispanics made up 11% of the candidate pool, with the remaining 9% of respondents is comprised of African American, Asian, and Native American candidates, while 15% marked no response.



Of the candidates who identified their race as Native American, their pass rate was the highest among the candidates at 56%, followed by those who identified themselves as Caucasian, at a 54.6% passing rate. As was noted previously, the number of candidates in the group can greatly affect the passing rate.



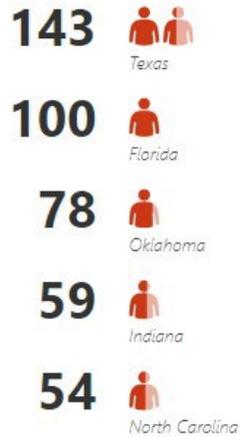
Year in Review

State Statistics

Again in 2022, the top five states with the most exam candidates in 2022 were Texas, Florida, Oklahoma, Indiana and North Carolina.

For the eighth consecutive year, Texas produced the most candidates. Florida took second place while Oklahoma moved up to third place and Indiana dropped to fourth place. North Carolina remained in fifth place.

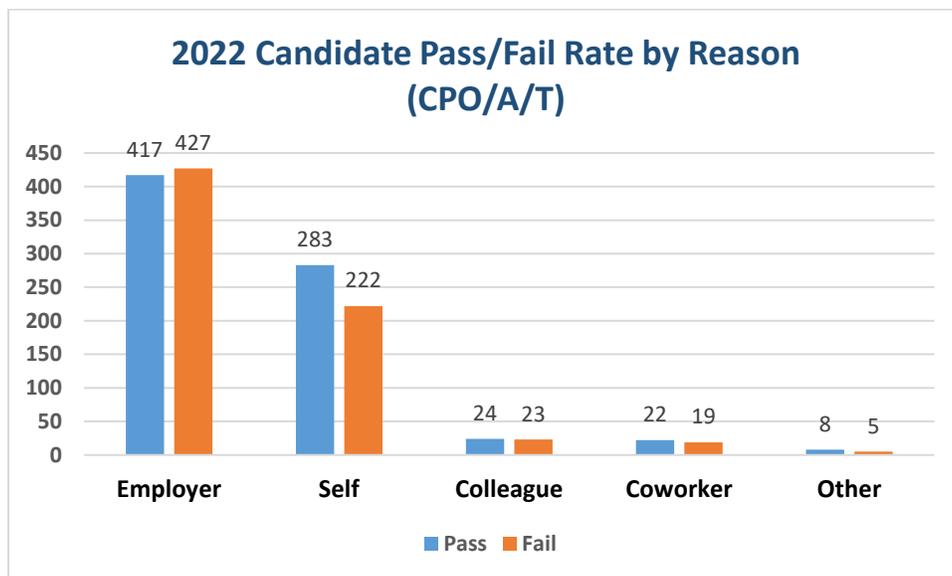
MOST EXAMS PER STATE



Year in Review

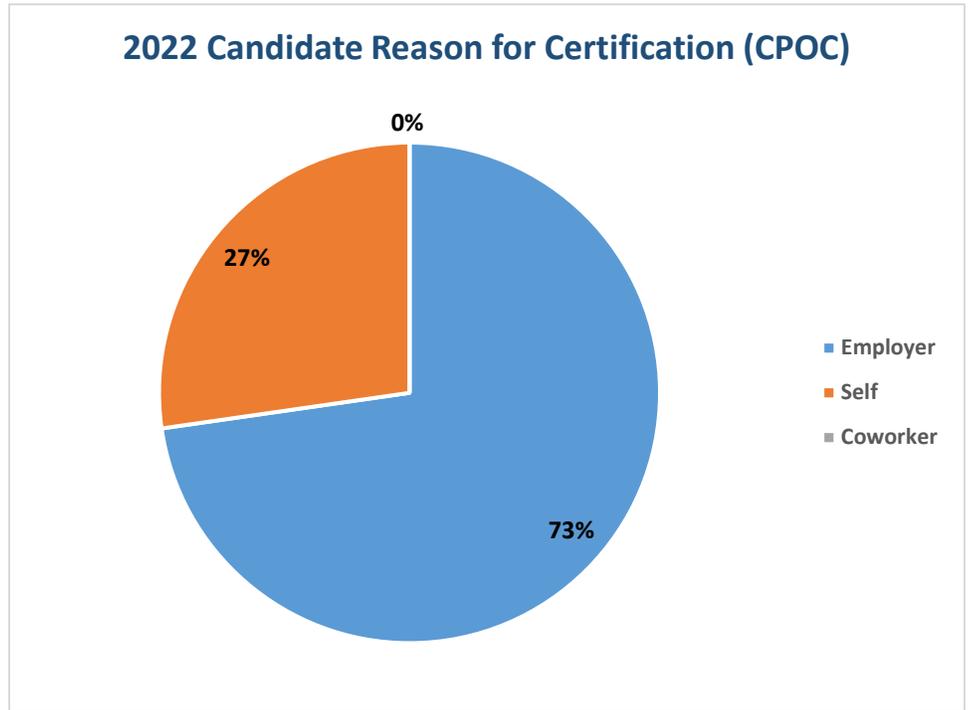
Reason for Certification

Employer-required certification at the CPO, CPOA and CPOT level dropped slightly from 56% in 2021 to 55% in 2022, while self-motivation rose slightly from 37% in 2021 to 38% in 2022.

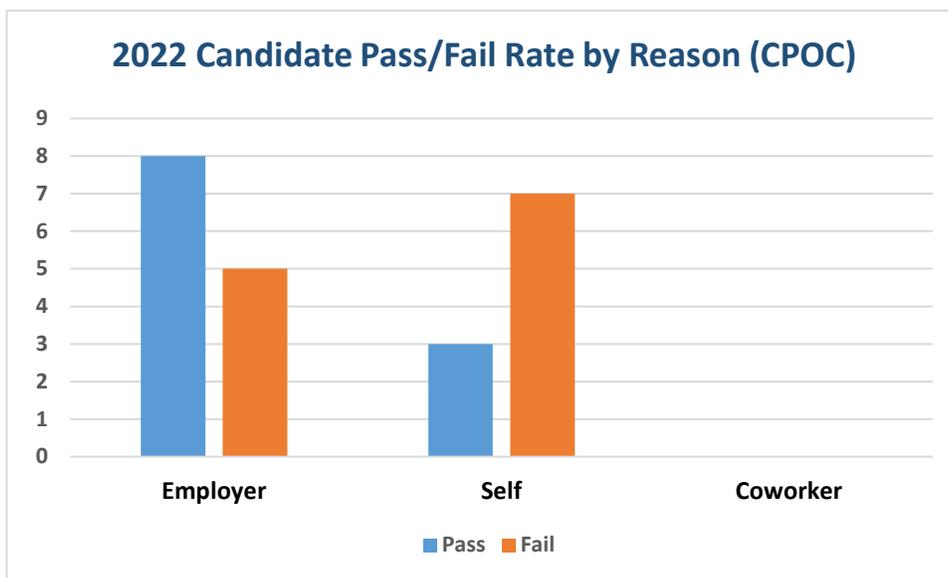


Year in Review

In 2022, the number of CPOC candidates who were self-motivated to sit for the exam fell drastically from 46% in 2021 to only 27% in 2022, while employer influence increased from 50% to 73% in 2022. Coworkers reportedly had no influence on the decision to take the CPOC exam in 2022.



The percent of passing candidates who were urged by their employer to test rose from nearly 52% in 2021 to 61.5% in 2022. However, the passing rate of self-motivated testers fell dramatically from 77% in 2021 to only 30% passing their exam in 2022, with 41% fewer candidates taking the CPOC examination in 2022 than in 2021.



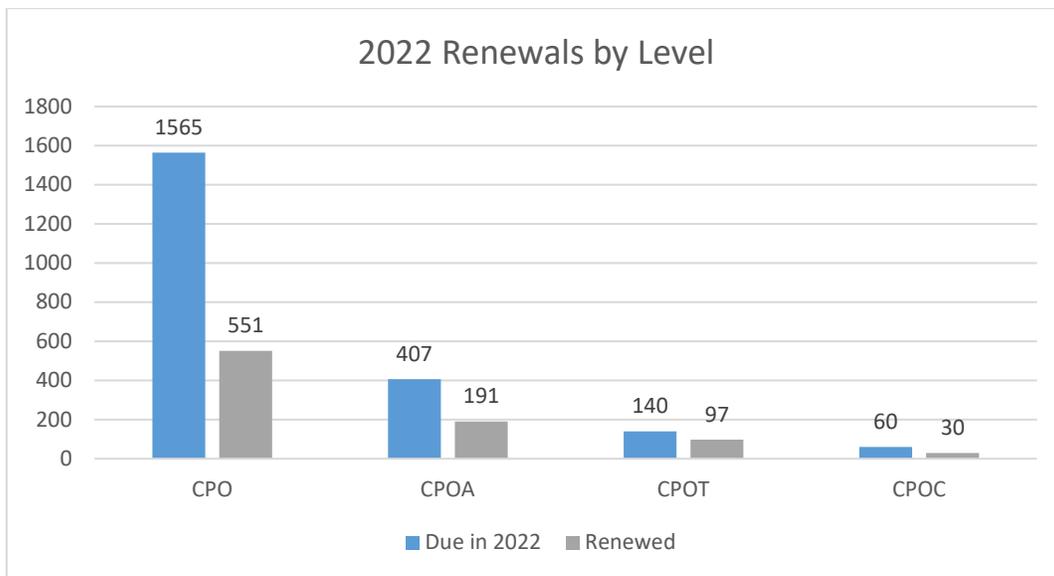
Employer urged candidate pass rate rose by over 9%.

The self-motivated tester pass rate plunged from 77% to 30% in 2022.

Year in Review

Certification Renewal

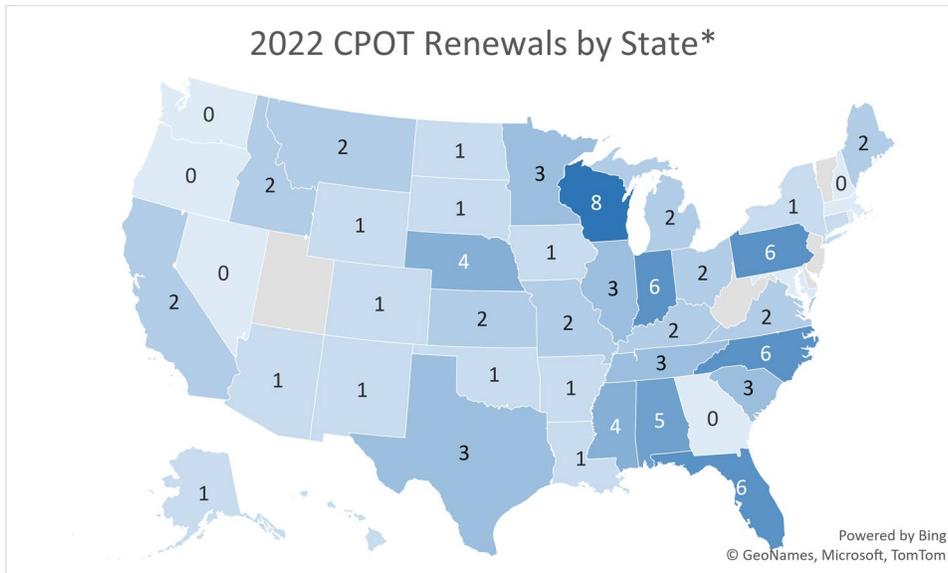
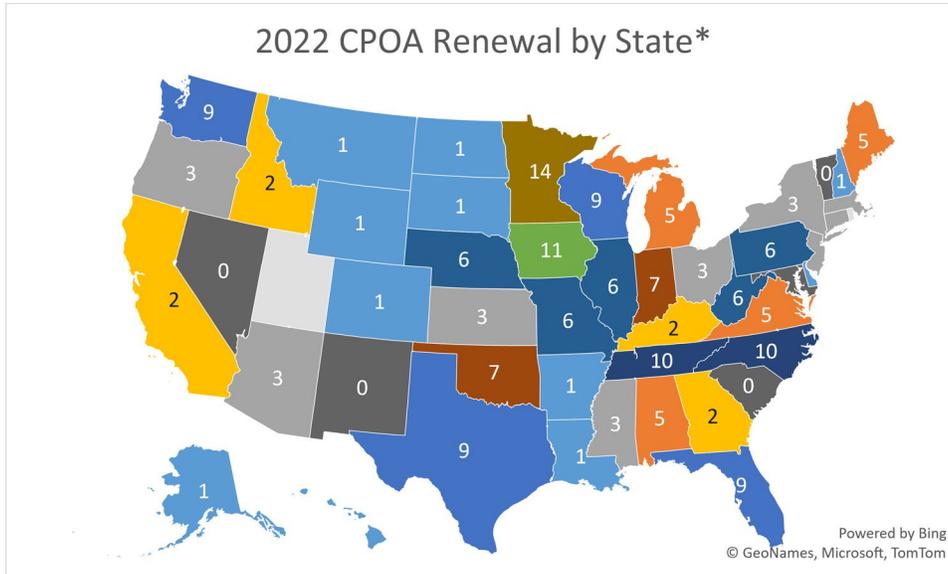
In 2022, 869 or 40% of the 2,172 certifications that were due for renewal were completed. The renewal statistics showed that 551 CPOs (36%) renewed their certification, while 191 CPOAs (47%), 97 CPOTs (70%) and 30 CPOCs (50%) were renewed until 2025. The overall renewal rate of 40% of the eligible certificants represents the second lowest number of renewals processed in the last 15 years.



The following maps depict the number of renewals by state. No Canadians renewed a certification in 2022.



Year in Review



*In addition to the CPOA and CPOT renewals completed within the continental U.S., eight military members with overseas addresses (APO or AE) renewed their certification in 2022.

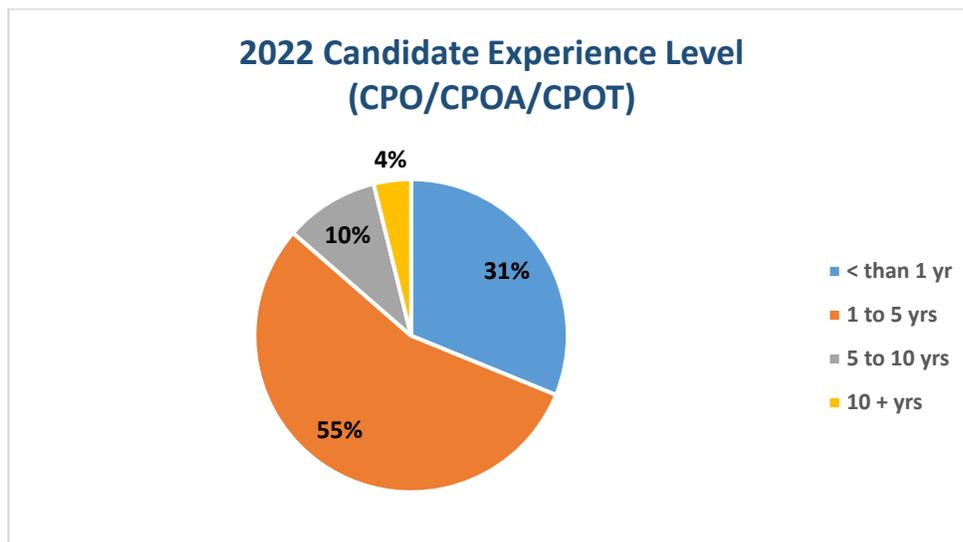
Appendix

Certified Paraoptometric (CPO) Exam

The CPO examination is comprised of one hundred scored multiple-choice questions and twenty unscored* items. The passing score is determined by the CPC following psychometric analysis by Professional Testing Corporation and based on the Angoff technique applied to the anchor test form. The examination is divided into four domains: clinical principles and procedures (36%), ophthalmic optics and dispensing (20%), contact lenses (20%), and professional issues (24%). A total of 1,165 candidates sat for the CPO examination in 2022 and just over 51% received a passing score. The lowest score reported was 14 and the highest was 99. There was no notable difference in the pass rate of first time and repeat candidates.

Month	First Time Candidates		High Score	Low Score	Average % Correct	Repeat Candidates	
	Pass	Fail				Pass	Fail
February	70	86	98	35	75%	25	15
May	153	126	98	39	76%	23	24
August	126	146	97	36	75%	21	28
November	157	125	99	14	77%	20	20

Slightly more than half (55%) of CPO, CPOA, and CPOT candidates tested in 2022 had between one and five years of experience, with 31% having less than one year of experience. This data is similar to data from 2021. The percentage of candidates with more than five years of experience in eye care fell from 19% in 2021 to only 14% in 2022. Of the 1,062 candidates who indicated years of experience, 49.2% passed the CPO exam while 69% of the 116 who indicated more than five years of experience passed.



*Unscored items do not count towards or against a candidate's score. These items are being evaluated to determine if they perform well enough statistically to be introduced as scored items on a future exam.

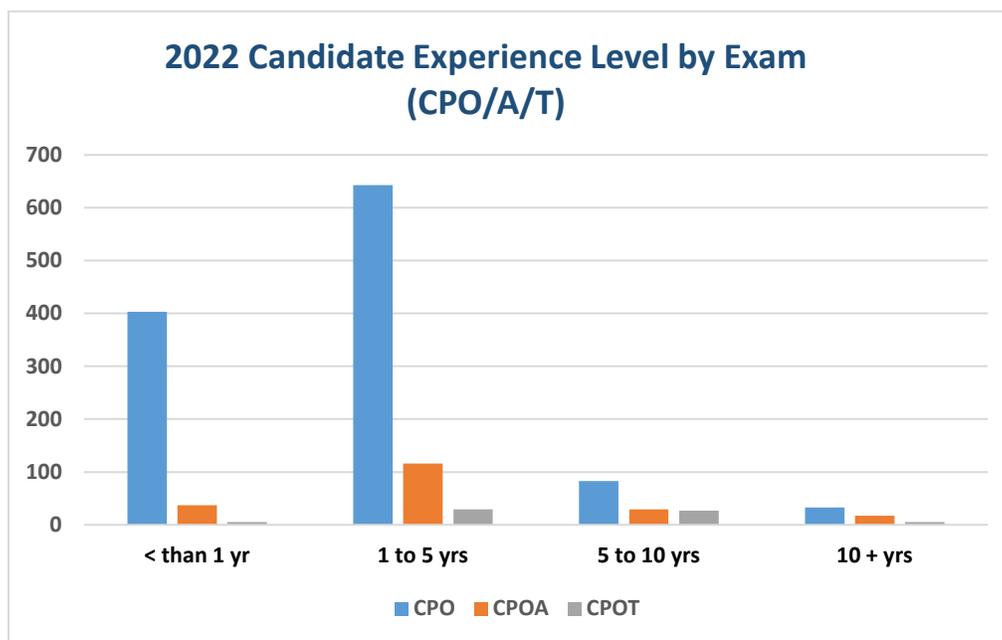
Appendix

Certified Paraoptometric Assistant (CPOA) Exam

The CPOA examination is comprised of 200 scored and 20 unscored* multiple-choice questions. The passing score is determined by the CPC following psychometric analysis by Professional Testing Corporation and based on the Angoff technique applied to the anchor test form. The examination is divided into five domains: testing and procedures (25%), special procedures (25%), ophthalmic optics and dispensing (12%), contact lenses (13%), and professional issues (25%). A total of 225 candidates sat for the CPOA examination in 2022 and 56.8% of them passed. Only 30.7% of the 26 repeat candidates passed their exam, while 60.3% of first-time candidates passed. The lowest score was 76 and the highest score was 183.

Month	First Time Candidates		High Score	Low Score	Average % Correct	Repeat Candidates	
	Pass	Fail				Pass	Fail
February	12	10	179	117	71%	1	3
May	34	30	174	81	71%	1	6
August	49	20	180	111	72%	3	5
November	25	19	183	76	71%	3	4

The majority of CPOA candidates indicated they had between one and five years of experience.



*Unscored items do not count towards or against a candidate's score. These items are being evaluated to determine if they perform well enough statistically to be introduced as scored items on a future exam.

Appendix

Certified Paraoptometric Technician (CPOT) Exam – Written

The CPOT Written examination is comprised of 225 scored and 25 unscored* multiple-choice questions. The passing score is determined by the CPC following psychometric analysis by Professional Testing Corporation and based on the Angoff technique applied to the anchor test form. The examination is divided into six domains: pre-testing procedures (23%), clinical procedures (27%), ophthalmic optics and dispensing (13%), contact lenses (11%), and professional issues (26%). A total of 33 candidates sat for the CPOT Written examination in 2022. Twenty-eight, or 84.8%, of testers passed their written examination. The lowest score was 118 and the highest score was 209. CPOT tests were only administered during the May and November examination periods. Four of the five repeat candidates passed the exam.

Month	First Time Candidates		High Score	Low Score	Average % Correct	Repeat Candidates	
	Pass	Fail				Pass	Fail
February	0	0	n/a	n/a	n/a	0	0
May	15	4	209	118	75%	2	1
August	0	0	n/a	n/a	n/a	0	0
November	9	0	196	159	77%	2	0

Certified Paraoptometric Technician (CPOT) Exam – Clinical

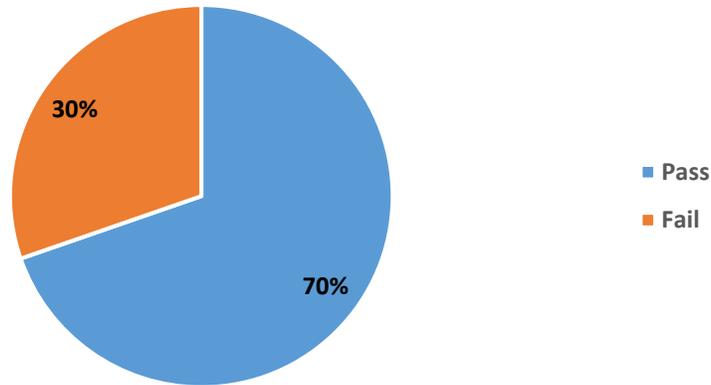
The CPOT Clinical examination is comprised of one hundred scored multiple-choice questions. There are no unscored items on this exam. The passing score is determined by the CPC following psychometric analysis by Professional Testing Corporation and based on the Angoff technique applied to the anchor test form. The examination is divided into five domains: pre-testing procedures (45%), special procedures (22%), optical dispensing techniques and recording (18%), and contact lenses (15%). A total of 33 candidates sat for the CPOT Clinical examination in 2022 and 54.5% of them passed on their first or second attempt while only 25% of repeat candidates passed. The lowest score reported was 67 and the highest was 91. CPOT tests were only administered during the May and November examination periods.

Month	First Time Candidates		High Score	Low Score	Average % Correct	Repeat Candidates	
	Pass	Fail				Pass	Fail
February	0	0	n/a	n/a	n/a	0	0
May	6	6	91	67	74%	1	4
August	0	0	n/a	n/a	n/a	0	0
November	10	3	89	67	80%	1	2

*Unscored items do not count towards or against a candidate's score. These items are being evaluated to determine if they perform well enough statistically to be introduced as scored items on a future exam.

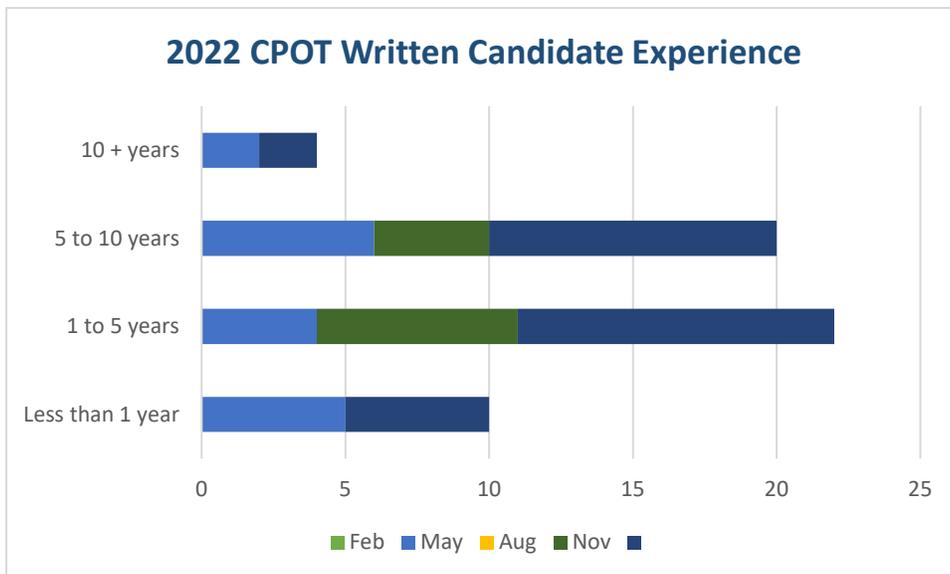
Appendix

2022 CPOT Overall Pass/Fail Rate for Either Exam



The overall passing rate for the CPOT examinations was 70%. Most candidates (nearly 61%) taking the CPOT written exam indicated they had one to five years of experience. The five candidates claiming less than one year of experience (15%) are likely graduates or candidates testing during the last semester of an ACOE-approved optometric technician program. Those with 5 years of less experience had a pass rate of 80% while those with more than 5 years of experience had a 92.3% pass rate and 46% of repeat candidates passed an examination.

2022 CPOT Written Candidate Experience



Appendix

Certified Paraoptometric Coding (CPOC) Exam

The CPOC examination is comprised of 125 multiple-choice questions. The passing score is determined by the CPC following psychometric analysis by Professional Testing Corporation and based on the Angoff technique applied to the anchor test form. The examination is divided into seven domains: anatomy and physiology (8%), medical terminology (8%), review of Current Procedural Terminology® (AMA) (22%), diagnosis codes (24%), medical records (14%), claim filing (12%), and compliance (12%). A total of 23 candidates sat for the CPOC examination in 2022 and 47.8% passed the examination (down from 61% in 2021). The lowest score reported was 63 and the highest was 112.

Month	First Time Candidates		High Score	Low Score	Average % Correct	Repeat Candidates	
	Pass	Fail				Pass	Fail
February	4	0	109	75	73%	3	0
May	0	0	0	0	0%	0	0
August	11	3	111	63	76%	1	0
November	8	7	112	67	73%	1	0

The experience level for the CPOCs testing in 2022 was predominantly those with five years of experience (43%), while those at the minimum requirement of two years of experience comprised less than one-quarter (17%) of the candidates. The experience level of candidates with five or more years of experience group increased from just 27% in 2021 to 43% in 2022. The group with the least experience had a 0% pass rate, while the most experienced group had a 60% passing rate.

