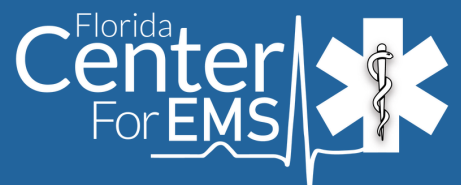


FLORIDA'S LIFELINE IN FOCUS:

NREMT Performance Review 2025



September 2026



Front Matter

Florida's Lifeline in Focus: NREMT Performance Review 2025

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Executive Summary

This report analyzes first-attempt pass rates on the National Registry of Emergency Medical Technicians (NREMT) certification examinations for Florida's approved EMT and paramedic training programs across the 2023 through 2025 graduating cohorts, using certification data provided by the Florida Department of Health. Results are examined statewide, by Bureau of Emergency Medical Oversight (BEMO) region, and at the program level. The report concludes with evidence-based recommendations on initial training and continuing education.

Florida's EMT programs are performing at the national standard. In 2025, the state's 5,873 EMT candidates passed on their first attempt at 74.1%, statistically indistinguishable from the national average of 73.2%, and the statewide rate rose a significant 5.5 percentage points from 2023. The EMT level warrants continued monitoring rather than intervention.

The paramedic level is the report's central concern. Florida's 1,869 paramedic candidates passed at 63.4% in 2025, 9.5 percentage points below the national average of 72.9%. The shortfall is longstanding. Florida has trailed the rest of the nation in every comparable cohort since the state began requiring the National Registry examination in 2018 and pooled across those cohorts a Florida candidate had roughly half the odds of first-attempt success of a candidate trained elsewhere. Program retention is within one point of the national rate, so the deficit arises at the certification examination rather than in program completion. The 3.5-point gain recorded in 2025 is real, but a decade of stability in the high fifties and low sixties defines the problem as structural.

The shortfall is concentrated rather than diffuse. The Southeast region posts the lowest first-attempt rate at both certification levels while enrolling the largest candidate volume of any region. Three paramedic programs have passed fewer than half of their first-attempt candidates in every year with available data and together account for a disproportionate share of the state's first-attempt failures. Commercial ownership is independently associated with lower paramedic first-attempt success after adjustment for program size, and about 6% of eligible paramedic graduates never attempt the examination at all. This concentration is a policy asset: targeted effort directed at a small number of programs and one region can move the statewide

figure more efficiently than uniform statewide effort. Improvement is demonstrably achievable within the existing program population, as several Florida programs posted statistically significant paramedic gains of roughly 29 to 32 percentage points over the study period under the same statutes, examination, and labor market as the programs that did not improve.

The report makes seven recommendations, framed to operate within the Department's existing program approval authority under Chapter 401, Florida Statutes. The Department should continue rolling multi-year, volume-aware performance metrics as the trigger for structured review and should establish a graduated performance-review process for approved programs. This is modeled on the state's own nursing precedent in § 464.019, Florida Statutes, attached to the existing biennial renewal cycle and sequenced from technical assistance through improvement planning to probationary status and, for sustained failure, non-renewal. Structured improvement planning should begin with the programs of sustained concern and address curricular alignment with the NREMT examination's clinical judgment framework, live clinical experience, examination readiness, and admission and progression standards. A regional improvement collaborative should pair the Southeast's low-performing programs with the state's documented improvers. Programs should be expected to track every graduate to a first examination attempt and support unsuccessful candidates through the retest window. Continuing education should be aligned with the clinical judgment model now governing initial certification. Finally, program-level results should continue to be published annually, programs under review should disclose that status to applicants, and this analysis should be repeated annually on the same rolling cohort basis.

First-attempt pass rate measures one dimension of program quality at one point in a graduate's career, and the associations reported here are descriptive rather than causal. The recommendations are accordingly sequenced to lead with measurement, support, and discipline to reserve consequences for sustained and well-measured failure.

Introduction

The Florida Department of Health (DOH) regulates Emergency Medical Services (EMS) training programs under § 401.2701, Florida Statutes, which sets the application, approval, and minimum-hour requirements for programs preparing emergency medical technicians (EMTs) and paramedics. The National Registry of Emergency Medical Technicians (NREMT) is the national certifying body responsible for validating EMS provider competency through standardized examinations. A program's first-attempt NREMT pass rate is a widely used and directly comparable indicator of graduate achievement and program performance, and it varies with program characteristics such as accreditation status (Rodriguez et al., 2018).

Florida's EMS training enterprise is large. In 2025, its approved programs put more than 5,700 EMT candidates and roughly 1,900 paramedic candidates through the National Registry examination. The paramedic figure alone equals about one in ten of the 18,060 paramedics newly certified nationwide that year (National Registry of Emergency Medical Technicians, 2025a), placing Florida among the largest single-state contributors to the national paramedic workforce and giving its programs' outcomes weight beyond the state.

Two changes to the National Registry examinations fall within the study period and bear on how the results should be interpreted by the reader. On July 1, 2024, the National Registry replaced the separate cognitive and psychomotor examinations for paramedic and Advanced Emergency Medical Technician candidates with a single integrated certification examination; the EMT examination was unaffected (National Registry of Emergency Medical Technicians, 2024a). On April 7, 2025, the National Registry launched updated EMT and Emergency Medical Responder examinations with revised content domains, retaining the computer-adaptive testing format (National Registry of Emergency Medical Technicians, 2025b). Because pass rates in this report are organized by graduating cohort, and candidates may test for up to two years after completing a program, the new paramedic examination phased into the 2024 and 2025 cohorts rather than marking a single clean break.

This report analyzes first-attempt pass rates for Florida EMT and paramedic programs from 2023 through 2025, disaggregated by program and DOH Bureau of Emergency Medical Oversight (BEMO) region, and develops evidence-based recommendations for

strengthening initial training and continuing education statewide. BEMO administers the state's EMS system through five regions, and this report reports results at that level because the region is the unit through which the Department conducts program oversight. Regional boundaries are shown in **Appendix A**.

Methodology

Data Sources

This analysis rests on two bodies of material: certification data provided by the Florida Department of Health, which forms the analytic core, and supplementary information assembled from public sources, which supplies national context and the program-level structure used to organize the findings.

The core data for this report are **first-attempt NREMT certification pass rates for Florida EMS training programs, provided by the Florida DOH**. The Department supplied six files between March and April 2026. Two single-year files reported 2025 first-attempt results for 60 EMT programs and 47 paramedic programs, giving the aggregate numbers of candidates who passed and those who scored below the passing threshold for each program. Two three-year files reported first-attempt results by individual year for 2023, 2024, and 2025, covering 60 EMT and 46 paramedic programs; these are the only sources containing 2023 and 2024 figures, and all trend analysis in this report derives from them. The 2024 EMT first-attempt figures in the Department's three-year file contained row-level errors. These were replaced with figures drawn directly from the NREMT Performance Report through state EMS office access (extract of July 24, 2026). Two website-publication files reported 2025 results for 59 EMT and 46 paramedic programs together with cumulative pass rates within three and six attempts, counts of candidates still eligible to retest, and the National Registry's inclusion and exclusion criteria (National Registry of Emergency Medical Technicians, 2024c). Each file identifies its source as the National Registry's internal database, extracted in March 2026.

All 2025 figures in this report derive from the April 7, 2026 data delivery, the most recent extraction of the National Registry database available at the time of analysis. Figures for the 2023 and 2024 cohorts derive from the March 12, 2026 year-by-year delivery, the sole delivery reporting those years. Because the National Registry database is continuously updated as late-testing cohort members make first attempts, each delivery is a snapshot, and figures in this report may differ slightly from figures extracted at other dates, including the March 1, 2026 preliminary delivery and any subsequently published tables. Two EMT records in the April 7 delivery were corrected against the March 12 delivery and are documented in the project's data

provenance ledger: Landes Emergency Training Services, which is absent from the April file although its 2025 cohort tested, and Suncoast Technical College, whose April record is internally inconsistent.

Three further sources provide national context and the structure used to organize the analysis and were assembled outside the Department's data delivery. National certification volumes and benchmarks are drawn from the National Registry's most recent annual report, retrieved from the National Registry website (National Registry of Emergency Medical Technicians, 2025a). Enrollment, graduation, retention, and historical examination figures for Florida paramedic education are drawn from the Committee on Accreditation of Educational Programs for the Emergency Medical Services Professions (CoAEMSP) program annual report data presented to the Florida EMS Advisory Council Education Committee (EMSAC) on January 7, 2026 (Committee on Accreditation of Educational Programs for the EMS Professions, 2026). Program locations, counties, accreditation status, and ownership were compiled into a training-center registry built for this analysis; its foundation is an internal Department coordination grid, extended with publicly available institutional information and the Department's public map of approved programs.

For purposes of this report, each training center in the registry was classified by ownership type. Governmental programs were defined as those operated by a public institution, chiefly state and community colleges and school-district technical colleges and centers. Commercial programs were defined as those operated by a for-profit entity. Private nonprofit programs were defined as those operated by a tax-exempt institution. A small number of programs operated jointly by a public agency and another party were identified as public-private consortia.

Classification proceeded in stages. An initial category was tentatively assigned based upon each institution's name and website. For-profit status was then confirmed for twelve institutions through Florida Division of Corporations (Sunbiz) entity records, each matched to an active domestic profit corporation or limited liability company bearing a state document number (Florida Department of State, 2026). Tax-exempt status was confirmed for one institution through third-party databases derived from Internal Revenue Service filings and matched by employer identification number; the remaining private nonprofit institutions were classified on institutional and secondary sources. Six institutions whose operating name is a trade name of another legal entity

could not be matched in Sunbiz (Florida Department of State, 2026). These were classified on corroborating website and secondary evidence and are flagged in the registry for confirmation with the school. All records were retrieved in July 2026. The ownership category for each program was recorded in an internal training-center registry.

The programs compared in this report are the training sites the Department lists on its public website of approved programs, which serves as the reference population for the program-level comparisons that follow. Each site is linked to county-level context through a worksheet compiled for this analysis that synthesizes publicly available data for all 67 Florida counties, including each county's BEMO region and the Department's rural-county designation. Ownership and county context are descriptive attributes attached to this population; the first-attempt pass-rate data provided by the Department remain the basis of the analysis.

Definitions

All definitions in this report are derived from NREMT's public-facing documents and websites. The first-attempt pass rate is the percentage of candidates who passed the NREMT certification examination on their first attempt after completing a Florida EMS training program. The cumulative third- and sixth-attempt rates are the percentages who passed within three and six attempts, respectively. A candidate who fails but remains within the two-year eligibility window following program completion is counted as still eligible to retest; one whose window has expired is not.

[Pass rates are reported by graduating cohort rather than by calendar year of testing.](#) The National Registry defines a cohort by the date a candidate completed their first education program, so a candidate who completed a 2025 Florida program and tested in early 2026 is counted in the 2025 figures. This convention has an important consequence for interpretation in that figures for a given cohort year can shift modestly between successive database extracts as later-testing graduates are added.

The National Registry excludes from these figures candidates who did not appear for the examination, declined the required non-disclosure agreement, were recertifying by examination, were transitioning from another certification level, were not seeking national certification, or held a lapsed certification.

Statistics

Statewide and regional pass rates are weighted by candidate volume rather than computed as simple averages of program rates, so that programs with larger cohorts contribute proportionally to the aggregate. This follows the method the Department uses for its published performance data, and it governs every aggregate pass rate reported here, including the pooled multi-year and Florida-versus-national comparisons in the Discussion. Program-level reliability statistics are the one exception: because those address whether an individual program's rate is stable enough to interpret, each program contributes equally rather than in proportion to its cohort. Each program is assigned to the BEMO region of its primary-campus county. For programs operating multiple campuses, the primary accredited campus is used.

Trend analysis is limited to programs with at least ten first-attempt candidates in both 2023 and 2025, the cohort years compared in the trend analysis, to avoid drawing conclusions from cohorts small enough such that a few individual outcomes produce large percentage swings.

This threshold was derived empirically rather than adopted by convention. Program-level first-attempt results were decomposed into true between-program variance and binomial sampling variance, yielding an estimated true between-program standard deviation of 12 to 15 percentage points for paramedic programs and 10 to 13 for EMT across the three study years. At a single-year denominator of ten candidates, only about 40% of the observed variance between programs is attributable to real differences rather than sampling error, so a single year of ten candidates is insufficient to characterize a program. Because retained programs must field ten candidates in both 2023 and 2025, and nearly all also test candidates in 2024, they contribute a pooled three-year denominator well above that floor: a median of 124 candidates among retained paramedic programs (IQR 61 to 178, minimum 33) and 224 among retained EMT programs (IQR 165 to 358, minimum 32). Estimated reliability at these denominators, meaning the proportion of observed variance between programs attributable to real differences, ranges from 0.73 at the smallest retained program to 0.92 at the median.

This threshold was validated against an independent source. Eleven years of Florida program-level results from the National Registry Performance Report (2013 through

2023 cohorts) (National Registry of Emergency Medical Technicians, 2024c) were used to correlate each program's pass rate with its own rate in the following year, stratified by cohort size. Among programs with fewer than ten candidates, a program's rate carried little information about its own rate one year later (paramedic $r = 0.26$; EMT $r = 0.25$), and the average program moved 22 to 31 percentage points between adjacent cohorts. At ten or more candidates the correlation approximately doubled (paramedic $r = 0.62$; EMT $r = 0.48$) and mean year-to-year movement fell to approximately 12 percentage points. The variance decomposition applied to this historical series produced reliability estimates within 0.05 of those obtained from the study-period data. Where individual programs are reported rather than pooled, higher thresholds are applied, because identifying a single program requires greater precision than estimating a group trend.

To confirm that this exclusion does not bias the results, the 2025 rates of excluded programs were compared with those of included programs at both certification levels. Supplementary comparisons tested whether first-attempt rates vary by program ownership, program size, or county rurality, the last using the Department's rural-county designation. Differences between groups were evaluated with two-proportion z-tests at a significance level of 0.05. Comparisons involving a single program are evaluated with Fisher's exact test rather than the z-test, because it is exact at any cell count and does not rely on the normal approximation.

Two further comparison types use different tests. The comparison of the Florida rate against a fixed national benchmark, reported in **Table 1**, was evaluated as a one-sample test of a proportion against that benchmark rather than as a comparison of two independent groups. Differences across the five BEMO regions were evaluated with a chi-square test of independence.

Program size was analyzed as a continuous attribute. Its association with the first-attempt pass rate was measured with the Spearman rank correlation, each program weighted equally, because size is right-skewed at both certification levels (Shapiro-Wilk $p < .01$). Differences in size between two groups of programs were evaluated with the Mann-Whitney U test, and differences across regions with the Kruskal-Wallis test. Whether size forms distinct tiers was assessed three ways: Hartigan's dip test for unimodality, a Gaussian mixture fitted to log size and selected by the Bayesian information criterion (BIC), and the goodness-of-variance-fit curve for Fisher-Jenks

natural breaks. Where pass rates are compared across imposed size tiers, the ordered comparison uses the Cochran-Armitage test for trend.

Two multivariable approaches are reported. Ownership and size effects on first-attempt outcome were estimated with candidate-weighted logistic regression, with program size entered on a log scale, and are reported as odds ratios; region and size were entered jointly in the same form for the Regional Analysis. The pooled Florida-versus-national comparison across the 2018 to 2023 cohorts is a Mantel-Haenszel odds ratio stratified by cohort year, reported with a 95% confidence interval, and the narrowing of that gap is the Florida-by-year interaction term from a logistic model.

Program-level p-values are reported without adjustment for multiple comparisons. Roughly twenty programs are tested across the trend comparisons, so at a significance level of 0.05 one or two nominally significant results are expected by chance alone. These program-level tests are therefore exploratory. They indicate where a change is large enough to warrant attention rather than establish that it is real.

Sensitivity Analysis

Because trend analysis was restricted to programs with at least ten first-attempt candidates in both 2023 and 2025, the cohort years compared in the trend analysis, the 2025 first-attempt rates of the excluded programs were compared with those of the included programs to test whether the restriction biases the results.

Among EMT programs, the 53 included programs had a 2025 weighted first-attempt rate of 74.1%, and the 7 excluded programs, totaling 124 candidates, had a weighted rate of 70.2%, a difference of 3.9 percentage points. Five of the seven had essentially no 2023 cohort, and the remaining two fell just below the threshold. Small numbers and program newness, rather than instructional quality, drive the excluded rates; excluded EMT programs do not form a performance tier distinct from the included programs.

Among paramedic programs, the 38 included programs had a 2025 weighted rate of 64.9%, while the 8 excluded programs, totaling 142 candidates, had a weighted rate of 45.1%, a gap of 19.8 percentage points. This gap is large but reflects that most of the excluded programs are new rather than a hidden tier of established underperformers.

Five of the eight enrolled no candidates in 2023 and have produced only their first or second graduating cohort (Committee on Accreditation of Educational Programs for the EMS Professions, 2026).

Restricting the 2025 paramedic rate to established programs with three consecutive years of candidates yields 65.1%, about 1.7 percentage points above the published statewide figure of 63.4%, which includes the newly operating programs. Both figures are reported for transparency. Neither alters the central finding that Florida paramedic programs perform well below the national average.

Results

Statewide Overview

2025 Florida vs. National Performance

In 2025, Florida's EMT programs performed at the national average, while its paramedic programs fell well short of it. **Table 1** reports the weighted first-attempt pass rates against the national averages supplied by the National Registry. Florida's 5,873 EMT candidates passed on their first attempt at 74.1%, statistically indistinguishable from the national average of 73.2% ($z = 1.5, p = .14$). Its 1,869 paramedic candidates passed at 63.4%, 9.5 percentage points below the national average of 72.9%, a difference that is highly significant ($z = -9.2, p < .001$). The paramedic shortfall is therefore the more consequential finding. Florida trains a large share of the nation's paramedics, so a gap of this size bears on the national workforce and not on Florida alone.

Table 1 Florida and National First-Attempt Pass Rates, 2025

Certification level	2025 candidates	Florida	National	Difference
EMT	5,873	74.1%	73.2%	+0.9 pts
Paramedic	1,869	63.4%	72.9%	-9.5 pts
Note. Difference tested as a one-sample comparison of the Florida rate against the national benchmark. The EMT difference is not statistically significant ($z = 1.5, p = .14$); the paramedic difference is significant ($z = -9.2, p < .001$).				

Three-Year Context

Table 2 places the 2025 figures in a three-year context. EMT first-attempt rates held near 68.5% in 2023 and 2024, then rose to 74.1% in 2025, a statistically significant gain of 5.5 points ($z = 6.1, p < .001$). Paramedic rates improved from 59.9% in 2023 to 63.4% in 2025, a smaller but still significant gain of 3.5 points ($z = 2.1, p = .03$). Both improvements are real, but only the EMT level reached the national benchmark; despite its gain, the paramedic rate remained close to ten points below the national average throughout the period.

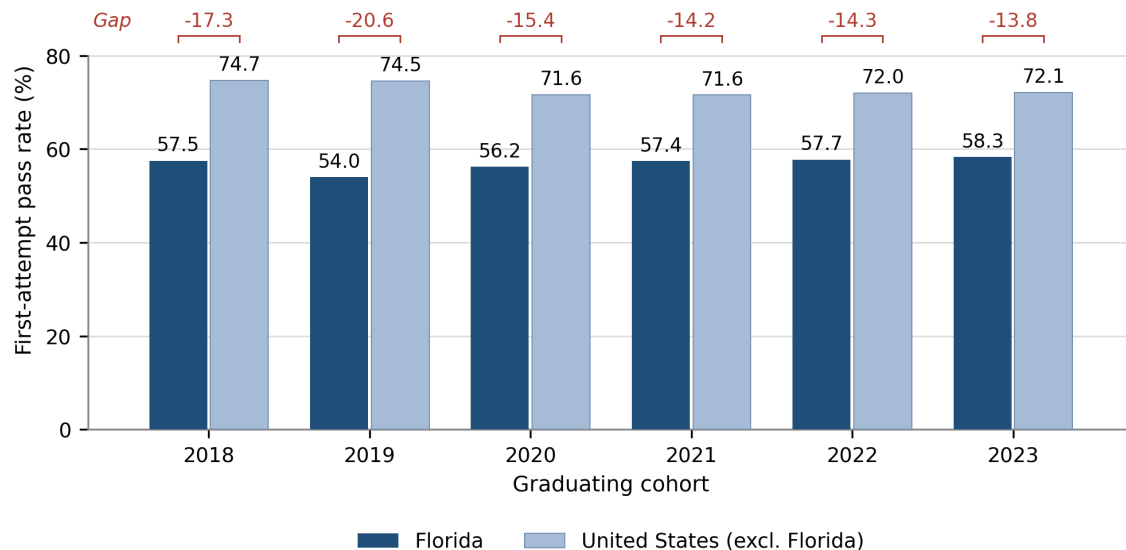
Table 2 *Florida Weighted First-Attempt Pass Rates by Year, 2023–2025*

Certification level	2023	2024	2025
EMT	68.5%	68.6%	74.1%
Paramedic	59.9%	59.2%	63.4%
Note. 2025 figures derive from the April 7, 2026 delivery as described in the Methodology; 2023 and 2024 figures derive from the March 12, 2026 year-by-year delivery.			

Paramedic Performance Since the 2018 Examination Requirement

Because Florida did not require the National Registry examination for paramedic licensure until August 1, 2018, the state's paramedic results become comparable with the national figure only from the 2018 graduating cohort forward. **Figure 1** shows that comparison for the six cohorts through 2023, the most recent year in which candidates have exhausted their two-year eligibility window. Florida trailed the rest of the nation in every cohort, by between 13.8 and 20.6 percentage points, and every annual difference is statistically significant. The gap narrows over the period, though roughly half of that convergence reflects a declining national rate rather than Florida improvement.

Figure 1 *Florida and National Paramedic First-Attempt Pass Rates, 2018 to 2023 Cohorts*



Note. First-attempt pass rates for the paramedic level, by graduating cohort. National figures exclude Florida candidates so that the comparison is between Florida and the rest of the nation. Figures derive from the National Registry Performance Report (National Registry of Emergency Medical Technicians, 2024c) and are a separate extract from the Department files used in Tables 1 and 2; the 2023 Florida rate is 58.3% here against 59.9% in Table 2, a difference of 1.6 percentage points between the two extracts. All six annual differences are significant at $p < .001$. The series ends at the 2023 cohort, the most recent for which candidates have exhausted the two-year eligibility window; no comparable national first-attempt figure was available for the 2024 cohort at the time of analysis. The full eleven-year series, including the 2013 to 2017 cohorts, is reported in Appendix B.

National Context: CoAEMSP Program Data

National CoAEMSP program annual report data, presented to the EMSAC Education Committee in January 2026, place Florida's paramedic results in a broader context (Committee on Accreditation of Educational Programs for the EMS Professions, 2026). Nationally, paramedic program enrollment reached 20,627 in 2023, up 9.7% from 2022, and graduates rose 12.9% to 17,007, with more than 76,000 new paramedics entering the workforce between 2018 and 2023. Two comparisons stand out. Florida's paramedic retention rate, 81% in 2023, is one point below the national rate of 82%, so Florida students complete their programs at close to the national rate (Committee on Accreditation of Educational Programs for the EMS Professions, 2026). The gap opens at the examination: Florida's 2023 first-attempt pass rate of 63% trailed the national 74%, and its cumulative pass rate of roughly 84% trailed the national 89% (Committee on Accreditation of Educational Programs for the EMS Professions, 2026). The shortfall is concentrated at certification, not in program completion.

Program Size and Geographic Context

Two program characteristics were examined for their relationship to first-attempt performance: [program size and county rurality](#). Program size was treated as a continuous variable rather than grouped into tiers. It is uncorrelated with first-attempt pass rate at both levels (EMT Spearman $\rho = 0.15$, $p = .25$; paramedic $\rho = -0.17$, $p = .25$), and the multivariable model reported in the Regional Analysis subsection shows that size contributes nothing once region is accounted for ($p = .84$ for EMT, $p = .89$ for paramedic). **Table 3** reports the distribution of program size at each level alongside these correlations. Pass rates by size tier are not reported, because the distribution of program size provides no basis for defining tiers. Size is a smooth right-skewed continuum at both levels rather than a set of distinct groups: Hartigan's dip test does not reject unimodality (EMT $D = 0.032$, $p = .95$; paramedic $D = 0.044$, $p = .74$), a Gaussian mixture fitted to log size prefers a single component by BIC at both levels,

and the goodness-of-variance-fit curve for Fisher-Jenks natural breaks rises smoothly with no elbow.

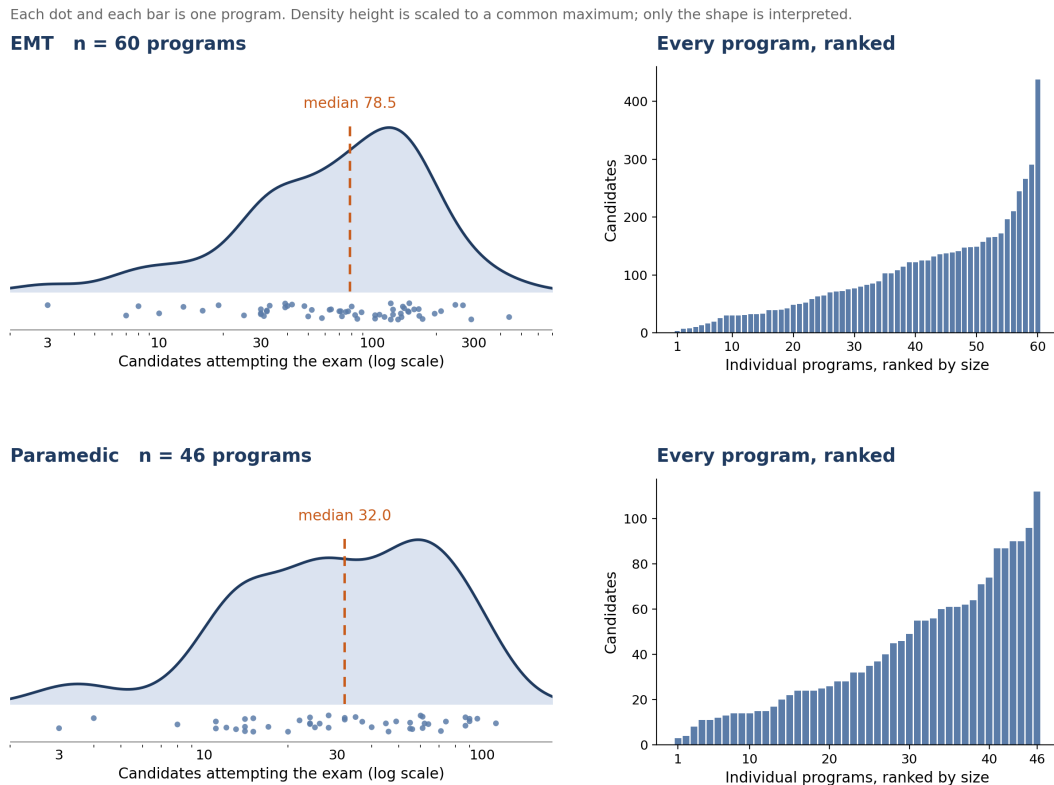


Figure 2 *Distribution of Program Size, 2025 Cohort.*

Note: Program size is the number of 2025 cohort graduates who made at least one attempt at the certification examination. Each dot represents one program. Density curves are scaled to a common maximum height, and the vertical axis is suppressed because only the shape of the distribution is interpreted. Figures derive from the 2025 canonical datasets described in Methodology.

Because no natural thresholds exist, any cut points are imposed rather than discovered, and the resulting tiers are sensitive to that choice. Under conventional round cut points the paramedic tiers appear to decline monotonically with size, from 72.8% to 57.5%. Under distribution-based tertiles, the same candidates produce a non-monotonic pattern that does not reach statistical significance (73.3%, 60.5%, 62.9%; Cochran-Armitage $p = .06$), and whose p -value shifts between .06 and .13 depending solely on how programs tied at the tertile boundary are assigned. A tiered presentation would therefore report an artifact of the cut points rather than the property of the programs. The EMT result is flat under every scheme tested.

Table 3 2025 Program Size Distribution and Its Association with First-Attempt Pass Rate

Level	Programs	Candidates	Median (IQR)	Range	ρ	p
EMT	60	5,873	78.5 (38–138)	3–438	+0.15	.25
Paramedic	46	1,869	32.0 (16–61)	3–112	–0.17	.25
Note. Program size is the number of first-attempt candidates in 2025. Median and interquartile range are reported rather than the mean because the distribution is right-skewed at both levels (Shapiro-Wilk $p < .01$). Spearman ρ is the rank correlation between program size and first-attempt pass rate, with each program weighed equally. Neither correlation is statistically significant. Pass rates by size tier are not reported; see the text.						

County rurality, which is a different measure from BEMO region, showed no significant association with performance at either level. Programs in counties the DOH designates rural passed at 69.5% (EMT) and 64.0% (paramedic), compared with 74.2% and 63.4% in non-rural counties, and neither difference is statistically significant (EMT $z = -1.34$, $p = .18$; paramedic $z = 0.11$, $p = .91$). The small number of rural-county programs (seven EMT and six paramedic, totaling 164 and 75 candidates) further limits what can be concluded. Whether a program sits in a rural or non-rural county therefore does not predict its pass rate. This is a separate question from BEMO region, which the regional analysis examines and which does vary significantly; rurality is not the reason some regions outperform others. **Appendix C** maps the location of every approved training site against county rural designation.

Program Ownership

Programs were also compared by ownership, classified as governmental, commercial, or private nonprofit. **Table 4** reports the results. **Among EMT programs**, governmental and commercial programs performed almost identically, and the **difference between them was not significant** (75.2% vs 74.8%, $z = 0.34$, $p = .73$). **Among paramedic programs**, the **difference was larger and statistically significant**: governmental programs passed at 68.3% and commercial programs at 55.5%, a gap of nearly 13 points ($z = 5.25$, $p < .001$). Commercial paramedic programs are substantially larger than governmental ones, with a median of 64 first-attempt candidates against 25 (Mann-Whitney $p = .02$), and four of the six programs with more than 75 candidates are commercial even though commercial providers account for only one paramedic program in five. Program size does not, however, account for the ownership gap. In a candidate-weighted logistic model containing both terms, commercial ownership remains strongly associated with lower first-attempt success (odds ratio 0.61, $p < .001$)

while program size contributes nothing (odds ratio 0.92 per unit of log size, $p = .36$), and adjusting for size shifts the ownership estimate by 4.4%. The confounding therefore runs in the opposite direction to what a size-tiered presentation would suggest: the appearance of falling pass rates among larger programs reflects the concentration of commercial providers at the top of the size distribution, not an effect of scale. Ownership is an independent correlate of paramedic first-attempt performance; size is not.

Table 4 2025 Weighted First-Attempt Pass Rates by Ownership

Ownership	EMT	Paramedic
Governmental	75.2%	68.3%
Commercial	74.8%	55.5%
Private nonprofit	62.2%	52.5%
Public-private	—	57.7%
Note. Governmental and commercial groups carry most programs; private nonprofit and public-private categories comprise few programs and are shown for completeness. Ownership was matched for all 60 EMT programs and 47 of 48 paramedic programs. No EMT program is classified as public-private; the single public-private paramedic program is a fire-rescue and private-institute consortium with 26 first-attempt candidates in 2025.		

EMT Program Analysis

Regional Performance

Table 5 reports 2025 first-attempt pass rates for EMT programs by BEMO region, weighted by candidate volume and sorted by rate. Each program is assigned to the region of its primary-campus county. The Northeast region led the state at 78.1%, followed closely by the Panhandle at 77.6% and Central at 77.0%; all three exceeded the statewide average of 74.1%. The Southwest (70.1%) and Southeast (69.8%) regions trailed. The Southeast carries the largest candidate volume of any region, so its programs weigh heavily on the statewide figure. The differences among regions are statistically significant overall (chi-square = 46.2, df = 4, $p < .001$).

Table 5 EMT 2025 First-Attempt Pass Rates by BEMO Region

BEMO region	Programs	Candidates	Pass rate
Northeast	14	1,545	78.1%
Panhandle	9	416	77.6%
Central	12	1,215	77.0%
Southwest	10	591	70.1%
Southeast	15	2,106	69.8%
Statewide	60	5,873	74.1%
Note. All 2025 figures derive from the basis described in the Methodology.			

Programs Demonstrating Notable Improvement

EMT first-attempt performance improved broadly between 2023 and 2025, with twenty-five of the fifty-three gaining at least eight percentage points. Program details can be requested from BEMO.

Programs with Declining Trends

Nine EMT programs declined by five or more percentage points from 2023 to 2025. Tested individually, one program had a 31-point fall that reaches nominal significance ($p = .02$, unadjusted for multiple comparisons), and it is the steepest decline in the state. The other eight declines fall within the range of year-to-year cohort variation. Program details can be requested from BEMO.

Paramedic Program Analysis

Regional Performance

Table 6 reports 2025 first-attempt pass rates for paramedic programs by BEMO region, weighted by candidate volume. [The differences among regions are statistically significant](#) (chi-square = 23.3, df = 4, $p < .001$), but every region except the Panhandle fell below the 2025 national average of 72.9%. The Panhandle led at 78.0%, though on only 100 candidates across eight small programs, so its rate rests on thin volume. The Southeast carries the most candidates of any region and posted the lowest rate, 57.9%; its combination of low performance and high volume pulls the statewide figure down more than any other region.

Table 6 *Paramedic 2025 First-Attempt Pass Rates by BEMO Region*

BEMO region	Programs	Candidates	Pass rate
Panhandle	8	100	78.0%
Southwest	6	218	70.6%
Northeast	13	590	64.6%
Central	6	269	63.6%
Southeast	13	692	57.9%
Statewide	46	1,869	63.4%
Note. All 2025 figures derive from the basis described in the Methodology.			

Programs Demonstrating Notable Improvement

Several paramedic programs improved sharply from 2023 to 2025, but far fewer reached statistical significance than at the EMT level because paramedic cohorts are smaller. Program details can be requested from BEMO.

Programs of Sustained Concern

Seven paramedic programs passed fewer than half their first-attempt candidates in 2025. Two groups are distinct. Three programs have stayed below 50% in every year with data and represent a structural rather than cyclical problem. All carry substantial student volume, and [together they account for a large share of the state's first-attempt paramedic failures](#). The remaining programs are either newly operating and

encountering their first cohorts or improving from a low base. Program details can be requested from BEMO.

Florida Paramedic Pipeline: Enrollment, Retention, and Historical Pass Rates

The CoAEMSP program annual report data presented in January 2026 give a six-year view of the Florida paramedic pipeline (Committee on Accreditation of Educational Programs for the EMS Professions, 2026). Enrollment grew from 1,765 in 2018 to 2,118 in 2023, and graduates from 1,319 to 1,722, so the pipeline is expanding. Retention improved from 75% to 81% over the same period, reaching within one point of the 2023 national rate of 82%. The consistent weak point is the certification examination. Florida's first-attempt pass rate held between 59% and 63% across all six years and stood at 63% in 2023, against a national 74%, while its cumulative pass rate of 84% trailed the national 89%. **The gap is long-standing and located at certification, not at program completion.** A further loss precedes the examination entirely. From 2018 to 2023, about 6% of eligible Florida graduates, some 495 individuals, never attempted the certification examination.

Regional Analysis

Table 7 places the regional first-attempt rates for the two certification levels side by side. Two regions behave consistently across levels. The Panhandle is strong at both, and the Southeast is the weakest at both while carrying the most candidates of any region, so it is the single largest drag on the statewide figure at each level. The other three regions diverge between levels: the Northeast and Central regions are among the strongest for EMT but only middling for paramedic, while the Southwest is comparatively weak for EMT yet second only to the Panhandle for paramedic. Regional strength is therefore not uniform across the two certifications, and a region that trains EMTs well does not necessarily train paramedics well.

Table 7 2025 First-Attempt Pass Rates by BEMO Region, EMT and Paramedic

BEMO region	EMT	Paramedic	Both above national?
Panhandle	77.6%	78.0%	Yes
Northeast	78.1%	64.6%	EMT only
Central	77.0%	63.6%	EMT only
Southwest	70.1%	70.6%	Neither
Southeast	69.8%	57.9%	Neither
Statewide	74.1%	63.4%	—
Note. National benchmarks are 73.2% (EMT) and 72.9% (paramedic). The Panhandle is the only region above the national average at both levels; only the Panhandle exceeds the national paramedic average at all.			

Because larger programs are not evenly distributed across the state, these regional differences might simply reflect program size. They do not. Program size does vary by region (Kruskal-Wallis $p = .02$ for EMT, $p = .01$ for paramedic), but [when region and size are entered into the same model, region remains a significant predictor of first-attempt success at both levels](#) ($p < .001$ for EMT, $p < .001$ for paramedic), while size contributes nothing once region is accounted for ($p = .84$ for EMT, $p = .89$ for paramedic). [Region is thus a genuine axis of variation in its own right, not a proxy for how large a region's programs happen to be.](#) The practical implication is that regional differences point to differences in local instructional practice, clinical placement, and program mix rather than to scale.

Discussion

The central finding of this analysis is a persistent gap between Florida's paramedic first-attempt pass rate and the national average. In 2025, Florida paramedic candidates passed at 63.4%, 9.5 points below the national 72.9%, a difference that is large and statistically significant. Florida's EMT candidates, by contrast, performed at the national average, statistically indistinguishable from it. The paramedic gap is not a single-year result: first-attempt rates sat in the mid-to-high fifties from 2018 through 2023 before reaching 63.4% in 2025, against a national rate in the low seventies, so the shortfall is structural rather than recent.

The 2018 boundary is a regulatory one. Florida did not require the National Registry examination for paramedic licensure until August 1, 2018 (Florida Department of Health, 2026); before that date the state administered its own cognitive examination, and only candidates seeking national certification or interstate portability sat for the National Registry. The change is visible in volume rather than in performance.

Appendix B reports the full 2013 to 2023 cohort series, including candidate counts, program counts, and the annual significance tests on which the following figures rest. Across the 2013 through 2017 cohorts, 1,336 Florida paramedic candidates took the examination, against 8,343 across 2018 through 2023, while the number of programs reporting candidates rose only from about 34 to 45 (National Registry of Emergency Medical Technicians, 2024c). Pass rates did not significantly move. The pooled [first-attempt rate was 55.6% before the mandate and 56.9% after it](#), a difference of 1.3 percentage points ($z = 0.86, p = .40$). The shortfall against the rest of the nation was therefore neither created by the mandate nor concealed by the earlier voluntary testing. It was already present in the small self-selected group and persisted once the full graduating population became observable. What 2018 marks is the first cohort year in which Florida's paramedic performance can be compared with the national figure on a like-for-like basis. In every year since, the gap has been statistically significant. Pooled across 2018 through 2023, Florida candidates had roughly half the odds of passing on first attempt as candidates trained elsewhere (Mantel-Haenszel odds ratio 0.50, 95% CI 0.47 to 0.52). The gap has narrowed significantly over that period, from 17.3 percentage points in 2018 to 13.8 in 2023 (Florida-by-year interaction odds ratio 1.05 per year, $p < .001$), but Florida's own first-attempt rate shows no significant improvement across those cohorts ($p = .07$). The [convergence therefore owes as much to a slowly declining national rate as to gains in Florida.](#)

The gap does not lie in program completion. Florida's paramedic retention rate of 81% is within one point of the national rate, so students finish their programs at close to the national pace (Committee on Accreditation of Educational Programs for the EMS Professions, 2026). The shortfall opens at the certification examination, where Florida's first-attempt and cumulative pass rates both trail national benchmarks. [The problem is therefore one of examination readiness, not of moving students through the classroom.](#)

Just as important is where the gap is concentrated, because it is not spread evenly. It is not explained by program size. In our analysis, once region is taken into account, size has no bearing on pass rates, and the appearance of a size effect traces to a few large programs rather than to scale. This is in contrast to prior literature that demonstrated lower first-attempt pass rates for programs in the lowest quartile of graduate class size compared to the highest quartile; **62.5% vs. 77.3%** for paramedic programs and **61.9% vs. 65.7%** for EMT programs (Moungey et al., 2022).

Instead, in Florida the shortfall is carried by specific programs and specific places. [Three commercial or private paramedic programs have posted first-attempt rates below 50% every year with data and together account for a large share of the state's first-attempt failures](#), and the Southeast region trails at both certification levels while enrolling the most candidates of any region. A small number of programs and one region thus drive much of the statewide result, which means targeted intervention could move the statewide figure more efficiently than uniform statewide effort.

The cumulative-attempt data draw a further distinction among low-performing programs. In some, candidates who fail the first attempt largely certify with additional attempts, so the first-attempt rate understates eventual success, even if that success comes at a cost in time and repeated testing. This tracks with nationwide data indicating that the majority of candidates who fail the first attempt do go on to certify with additional attempts, though a notable minority never retest. For paramedic programs, cumulative **third-attempt pass rates** ranged from **76.9% to 91.9%** compared to [first-attempt rates of 62.5% to 77.3%](#), depending on program size (Moungey et al., 2022). For EMT programs, cumulative third-attempt rates were **72.7% to 79.1%** versus first-attempt rates of 61.9% to 65.7% (Moungey et al., 2022). In other programs, the pass rate stays low even after six attempts, which indicates a fundamental instructional shortfall rather than students who simply need more time.

These two situations call for different responses and separating them matters for how the state directs its support.

There is genuine improvement to record. Both certification levels rose significantly between 2023 and 2025, and several programs posted large, statistically significant gains. These gains coincide with a period of change in the examinations themselves. The paramedic examination moved to a single integrated format emphasizing clinical judgment in July 2024, and the EMT examination was updated in April 2025 (National Registry of Emergency Medical Technicians, 2024a, 2025b). Because results are organized by graduating cohort, the most recent cohorts are the first to sit substantially under the new formats. The revised NREMT Paramedic Certification Examination places substantial weight on clinical judgment (34–38% of examination content) and assesses the linked cycle of recognizing and analyzing cues, forming hypotheses, generating and acting on solutions, and evaluating results (National Registry of Emergency Medical Technicians, 2024b). It also uses scenario-based items. These features imply that programs centered principally on didactic knowledge delivery, without structured opportunities to apply clinical judgment in scenarios and receive feedback, are less closely aligned with the competencies and formats the examination assesses (Rosenberger et al., 2025).

National paramedic-education research identifies program entry practices as one feature associated with stronger program outcomes. In a qualitative study of consistently high-performing programs, directors identified high entry requirements and prerequisites among their success strategies (Margolis et al., 2009). A later multi-program study found that programs using selective admissions reported higher median retention than those that did not (Tilghman, 2022). This literature is principally concerned with retention and attrition, however, so its relevance to Florida depends on whether those, not examination performance, capacity, or another outcome, are Florida's principal challenge.

Limitations

Several features of the data and design bind what this report can support.

The analysis is cross-sectional and observational at the program level. It can identify which programs, and which regions differ in first-attempt performance, but it cannot establish why. The Department's files contain aggregate counts of candidates passing and scoring below the passing threshold. They carry no student-level information on prior education, admission standards, attrition, or demographic composition, and no programmatic information on faculty qualifications, clinical placement quality, or instructional model. Associations reported here, including the ownership difference at the paramedic level and the variation among BEMO regions, are therefore descriptive. They identify where to look rather than what to change, and none should be read as evidence that a program characteristic causes a pass-rate difference.

Because the unit of analysis is the program rather than the candidate, the findings are subject to the ecological limitation common to aggregate performance data. A region or ownership category that performs poorly in aggregate contains individual programs that perform well, and the reverse. Statements about groups of programs do not transfer to any individual program within them, and still less to individual candidates.

Cohort accounting and examination changes both constrain interpretation. The National Registry defines a cohort by the date a candidate completed their first education program, and candidates retain eligibility for two years, so figures for recent cohorts remain open and will rise modestly as later-testing graduates are added. For this reason, the 2013 to 2023 series in **Appendix B** ends at the last cohort whose eligibility window has closed, while the 2023 through 2025 figures in the Results are drawn from a still-accruing window. The same convention means figures for a given cohort year differ slightly between extracts taken at different times. Such differences arise between the Department's file deliveries and the National Registry Performance Report and are noted where they occur. One program's ownership could not be matched with certainty and was excluded from the ownership comparison. Ownership classification also rests on evidence of differing depth. Corporate forms were confirmed in Florida state corporate records for most commercial programs, while the

remainder, including institutions operating under a trade name, were classified on institutional and secondary sources.

Separately, the paramedic examination moved to a single integrated format in July 2024, and the EMT examination was updated in April 2025, so the most recent cohorts are the first to sit substantially under revised instruments. Year-over-year changes spanning those dates reflect both program performance and a change in the measure itself and cannot be cleanly separated.

Small denominators limit what can be said about individual programs. Program cohorts are right-skewed at both levels, and a program testing ten or fifteen candidates produces a rate that moves by seven to ten percentage points on a single additional outcome. Trend analysis is therefore restricted to programs with at least ten candidates in both 2023 and 2025, the cohort years compared, which excludes seven EMT and eight paramedic programs, most of them newly operating. The Sensitivity Analysis examines whether that restriction biases the results. The same constraint applies to subgroup comparisons: the private nonprofit and public-private ownership categories and the rural-county comparison each rest on a small number of programs, and their estimates should be read as descriptive rather than as reliable group differences. Where individual programs are reported, higher thresholds are applied, but even so a single low cohort year should not be treated as establishing a program's trajectory. Program-level significance tests are also unadjusted for multiple comparisons, so an individual program's p-value should be read as exploratory rather than as confirmation that a change is real.

Finally, the report measures examination performance and nothing beyond it. First-attempt pass rates capture one dimension of program quality at one point in a graduate's career. They say nothing about clinical competence in the field, retention in the workforce, or employer satisfaction, and a program that certifies most of its graduates only after repeated attempts imposes costs in time and fees that this measure does not reflect. The cumulative-attempt data reported here partly addresses that gap but do not close it.

Conclusions

Florida's EMT training enterprise is performing at the national standard. In 2025, the state's 5,873 EMT candidates passed the National Registry examination on their first attempt at 74.1%, statistically indistinguishable from the national average of 73.2%, and the statewide rate rose a significant 5.5 percentage points from 2023. This is a fair result rather than a distinguished one. It leaves roughly one candidate in four to face a second attempt, and it coexists with meaningful regional variation, but it establishes that the EMT level requires continued monitoring rather than intervention.

The paramedic level is another matter. [Florida's 2025 first-attempt rate of 63.4% sits 9.5 percentage points below the national average of 72.9%, and the shortfall is neither new nor narrowing on Florida's own account.](#) The state has trailed the rest of the nation in every comparable cohort since the 2018 examination mandate, by 13.8 to 20.6 percentage points, and pooled across those cohorts **a Florida candidate had roughly half the odds of first-attempt success of a candidate trained elsewhere.** Florida's own rate shows no statistically significant improvement across the 2018 to 2023 cohorts, and the pre-mandate record extends the same picture back a full decade. The convergence that has occurred owes as much to a slowly declining national rate as to gains in Florida. Program retention is within one point of the national figure, so the deficit is located at the certification examination, not in moving students through the classroom. The 3.5-point gain recorded in 2025 is real and welcome, but a decade of stability in the high fifties and low sixties defines the problem as structural.

The shortfall is concentrated, not diffuse. The Southeast region posts the lowest first-attempt rate at both certification levels while enrolling the largest candidate volume of any region, and its weight pulls the statewide figure down more than any other single factor. Three paramedic programs have passed fewer than half of their first-attempt candidates every year with available data, two of them in the Southeast region, and together they account for a disproportionate share of the state's first-attempt failures. Commercial ownership is independently associated with lower first-attempt success at the paramedic level after adjustment for program size. A further loss precedes the examination entirely. About 6% of eligible Florida paramedic graduates over 2018 to 2023, nearly 500 individuals, never attempted certification at all. Concentration is, from a policy standpoint, an asset. Targeted effort directed at a

small number of programs and one region can move the statewide figure more efficiently than uniform statewide effort.

Improvement is demonstrably achievable within Florida's existing program population. Three programs posted statistically significant paramedic gains of roughly 29 to 32 percentage points [between 2023 and 2025](#), and [more than twenty EMT programs gained at least eight points](#) over the same period. Whatever these programs changed, they changed it under the same statutes, the same examination, and the same labor market as the programs that did not improve. The state does not need to import a model of effective paramedic education; it needs to identify, document, and propagate the ones already operating within its borders.

Recommendations

Scope. The FL-CEMS was tasked with providing evidence-based recommendations on initial training and continuing education providers. The data provided by the Department for this analysis describe the performance of approved training programs. No performance data on continuing education providers were delivered. The recommendations that follow therefore address initial training programs directly and address continuing education at the system level, including the data collection that would allow future reports to evaluate continuing education providers on their merits. All recommendations are framed to operate within the Department's existing authority over program approval under §401.2701, Florida Statutes, which does not permit the Department to mandate that programs provide remediation at no cost.

Recommendation #1. Continue with rolling multi-year, volume-aware performance metrics for program oversight.

Any accountability mechanism is only as sound as the measure beneath it. Single-year pass rates for small cohorts are dominated by sampling variation. The reliability analysis in this report found that at a denominator of ten candidates, only about 40% of observed between-program variance reflects real differences. Nursing regulation research has documented both substantial instability in program pass rates over time and wide, poorly justified variation in the standards states impose on them (Foreman, 2019). The accreditor's own outcomes policy accordingly judges certification performance on a rolling three-year cycle and initiates action only after sustained

shortfall (Committee on Accreditation of Educational Programs for the EMS Professions, 2026). The Department should adopt the same architecture: a rolling three-year, cohort-based first-attempt measure with a minimum pooled denominator, supplemented by cumulative-attempt rates to distinguish programs whose graduates eventually certify from programs whose graduates do not certify at all. First-attempt rate should not serve as the sole criterion of program quality, a caution the nursing literature makes explicitly (Taylor et al., 2014), but as the trigger for structured review.

Recommendation #2. Establish a graduated performance-review process for approved programs, modeled on Florida's own nursing precedent.

Florida already operates a statutory accountability framework for health professions education. Under § 464.019, Florida Statutes, a nursing education program whose licensure examination passage rate falls below the required standard for two consecutive years is placed on probationary status, its director must present a remediation plan with specific benchmarks, the program must disclose its status in writing to students and applicants, and continued failure leads to termination. The mechanism is not merely punitive scaffolding. When the Illinois Board of Nursing confronted the same problem, it developed a structured remediation tool addressing curriculum, faculty, students, and administrative support for programs below the state threshold (Libner & Kubala, 2017), and a five-year follow-up study documented a marked and sustained decrease in the number of programs with unsatisfactory results (Libner, 2022). Much of the necessary administrative machinery for EMS training programs already exists. Section 401.2701, Florida Statutes, and Rule 64J-1.020, Florida Administrative Code, provide for a biennial certificate of approval, site visit authority, records access, and a plan-of-correction concept, but that framework is input-based. It verifies affiliations, faculty, hours, and equipment. Its plan-of-correction mechanism is triggered only by denial of an application, and neither the statute nor the rule as currently written ties approval or renewal to examination outcomes. The [missing elements are an outcome standard and a defined process applicable to approved programs](#), most naturally attached to the biennial renewal. The evidence favors a support-first sequence with escalating consequences. Options available to the Department, in ascending order of intrusiveness, include voluntary technical assistance; a required program improvement plan with benchmarks as a condition of continued approval; probationary approval status with disclosure to

applicants; and non-renewal of approval for sustained failure. Whether an outcome standard can be adopted by rule under existing authority or requires legislative amendment is a legal question this report does not resolve. The recommendation is that the ladder exists, that its steps be defined in advance, and that it be applied consistently using the metrics of Recommendation #1.

Recommendation #3. Direct structured improvement planning at the programs of sustained concern.

Three paramedic programs have remained below a 50% first-attempt rate in every year with data while carrying substantial candidate volume. They should logically be the first subjects of the process described in Recommendation #2. The content of an improvement plan should reflect what the literature associates with program performance.

First, curricular alignment with the current NREMT examination. The integrated paramedic examination devotes roughly a third of its content to clinical judgment and assesses a linked cycle of cue recognition, hypothesis formation, action, and evaluation (National Registry of Emergency Medical Technicians, 2024b; Rosenberger et al., 2025), so programs organized around didactic content delivery without structured scenario practice and feedback are misaligned with the instrument their graduates face.

Second, is live clinical experience. A national evaluation of paramedic programs found that heavy substitution of simulation for live clinical skills was associated with roughly half the odds of program-level first-attempt success (Salhi et al., 2026), so improvement plans should audit and limit simulation substitution where live placements are obtainable.

Third, is structured examination readiness. Directors of consistently high-performing paramedic programs identify deliberate preparation practices among their strategies (Margolis et al., 2009). A controlled improvement effort in nursing education that roughly doubled the supervised practice-question volume in turn raised first-attempt passage by nine and a half points (Oliver et al., 2018).

Fourth, admission and progression standards, which high-performing programs also emphasize, and which are associated with stronger retention in accredited paramedic

programs (Margolis et al., 2009; Tilghman, 2022). Because Chapter 401 does not permit the Department to require free remediation, the presence, structure, and funding of a program's remediation offering could, for example, instead be weighted as a scored criterion in the evaluation of its improvement plan.

Recommendation #4. Mount a regional improvement initiative in the Southeast.

The Southeast is the state's largest and lowest-performing region at both certification levels, and regional differences persist after adjustment for program size, which points to local instructional practice and clinical placement rather than scale. The Department's regional structure is the natural vehicle for a response. A Southeast collaborative should pair the region's low-performing programs with documented improvers and high performers from across the state, several of which operate at comparable scale, for structured peer review of curriculum, clinical placement, and examination preparation. The qualitative literature on high-performing programs supplies the agenda for such exchanges: entry standards, faculty engagement, curricular rigor, and accountability for outcomes (Margolis et al., 2009). This approach treats the state's own successful programs as the intervention, which is both the cheapest option available and the one most closely matched to Florida's regulatory and labor environment.

Recommendation #5. Reduce certification leakage between graduation and licensure.

The pipeline loses candidates at two points that program instruction never touches. About 6% of eligible Florida paramedic graduates never attempt the examination, and national data show that a third of EMT candidates and one in seven paramedic candidates who fail a first attempt never retest, with the odds of retesting declining as the interval between course completion and first attempt lengthens (Powell et al., 2022). Both losses are addressable by program practice rather than by curriculum. Programs should be expected, and improvement plans required, to schedule graduates' first attempts promptly after completion, to track every eligible graduate to a first attempt, and to maintain contact with unsuccessful candidates through the retest window. Time from program completion to first attempt, the share of graduates never attempting, and the share of failing candidates never retesting are all

measurable from existing National Registry data and should be added to the Department's routine program monitoring.

Recommendation #6. Align continuing education with the clinical judgment model.

Because no continuing education provider performance data were delivered, this report cannot rank or evaluate individual providers. Two system-level recommendations are nonetheless supportable.

First, the content of approved continuing education should be aligned with the same clinical judgment framework that now governs initial certification, since the national position literature on EMS education holds that both initial and continuing education should center deliberate practice and clinical judgment rather than isolated task completion (Dorsett et al., 2022).

Second, the Department should treat asynchronous and distributive formats as legitimate delivery vehicles where content permits; a national evaluation of an asynchronous continuing education curriculum across all fifty states documented significant knowledge and confidence gains, concentrated among the least experienced clinicians (Wang et al., 2024).

Recommendation #7. Publish, disclose, and repeat.

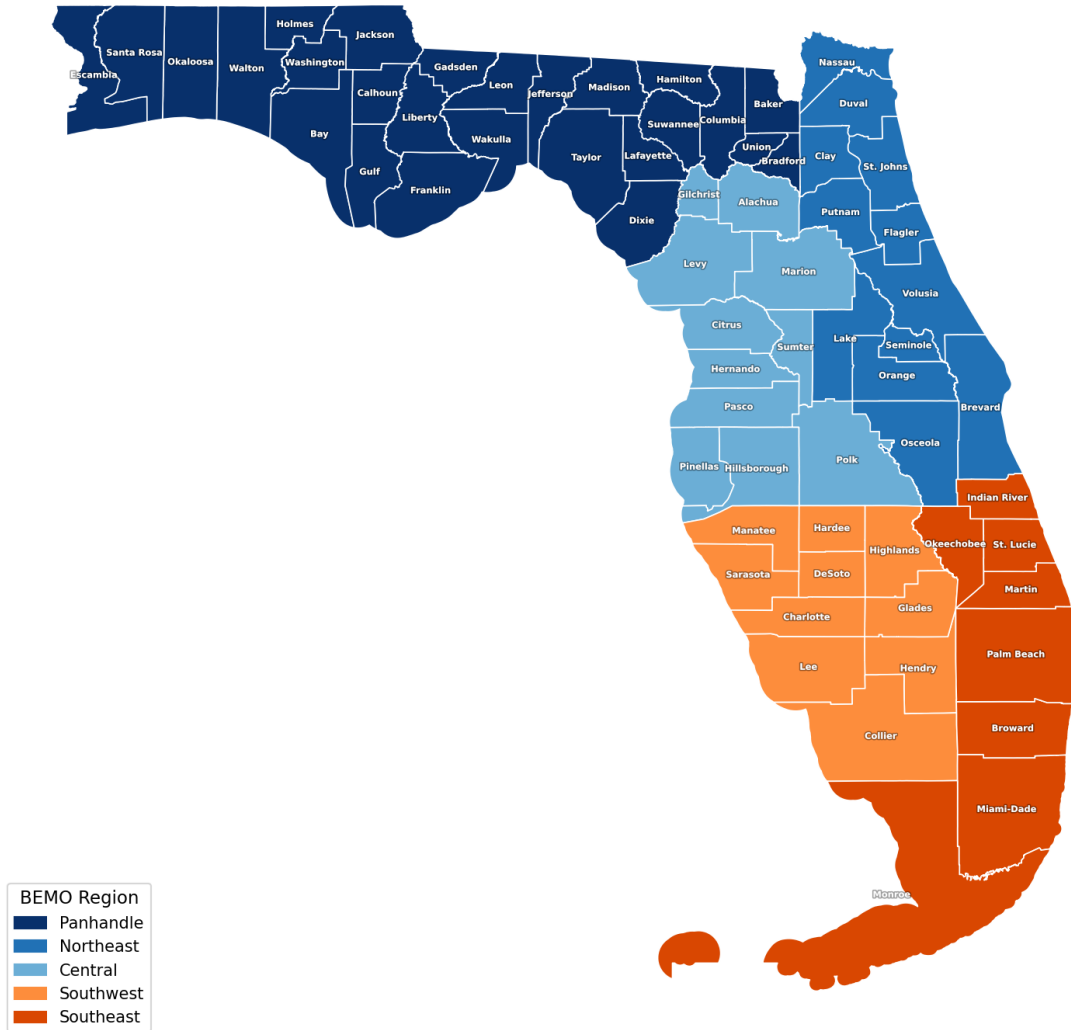
Program-level first-attempt pass rates should continue to be published annually on the Department's website. This tracks with the nursing field which has moved toward public accountability and informed student choice. Programs placed under the review process of Recommendation #2 should be required to prominently and conspicuously disclose that status to applicants, following the disclosure model of § 464.019, Florida Statutes. Disclosure costs the state nothing, respects the substantial tuition investment at stake, and creates a market incentive for improvement that operates independently of regulatory action. Finally, this analysis should be repeated on the same rolling cohort basis each year, because the 2024 and 2025 examination transitions mean the next two cohort years will show whether the 2025 gains mark the beginning of convergence or another oscillation within a stable, unacceptable range.

A closing caution

First-attempt pass rate is a defensible trigger for review and a poor sole verdict on quality. It measures one dimension of program performance at one point in a graduate's career, aggregate rates conceal strong programs inside weak categories and weak programs inside strong ones, and the associations reported here are descriptive rather than causal. The recommendations above are accordingly sequenced to lead with measurement, discipline, and support, and to reserve consequence for sustained, well-measured failure. That sequence is what the available evidence supports, it is what Florida's own nursing framework already embodies, and it is proportionate to a problem that has now persisted, essentially unchanged, for ten years.

Appendix A

BEMO EMS Regions



Appendix B

Paramedic Cohort Detail, 2013 to 2023

Table 8 Florida Paramedic Programs, Candidates, and First-Attempt Pass Rates Against the National Rate, 2013 to 2023 Cohorts

Cohort	Programs	Candidates	Florida	National	Gap (pts)	<i>p</i>
2013	31	97	63.9%	72.9%	-9.0	.06
2014	35	132	49.2%	74.5%	-25.3	< .001
2015	34	389	42.9%	73.8%	-30.9	< .001
2016	36	454	60.6%	72.1%	-11.5	< .001
2017	34	264	65.9%	73.9%	-8.0	.005
2018	37	1,046	57.5%	74.7%	-17.3	< .001
2019	38	1,482	54.0%	74.5%	-20.6	< .001
2020	36	1,212	56.2%	71.6%	-15.4	< .001
2021	42	1,315	57.4%	71.6%	-14.2	< .001
2022	42	1,490	57.7%	72.0%	-14.3	< .001
2023	45	1,798	58.3%	72.1%	-13.8	< .001
Pooled 2013–2017	48	1,336	55.6%	73.4%	-17.8	—
Pooled 2018–2023	49	8,343	56.9%	72.7%	-15.8	—

Note. Paramedic first-attempt pass rates by graduating cohort. **Programs** is the count of Florida programs reporting at least one paramedic candidate that year; the pooled rows report distinct programs across the period. National figures exclude Florida candidates. **Rates** are weighted by candidate volume. **p** tests the Florida versus non-Florida difference for that cohort. Florida did not require the National Registry examination for paramedic licensure until August 1, 2018, so the 2013 to 2017 cohorts represent a small self-selected minority of graduates and are not comparable with later years. The pooled difference between the two periods is not statistically significant ($z = 0.86, p = .40$).

Appendix C

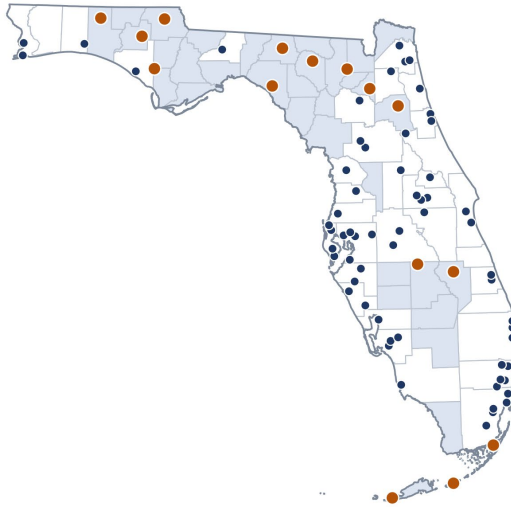
EMT and paramedic training program locations

Training program locations and county rural designation

Each marker is one approved training location. Programs operating more than one campus appear once per campus.

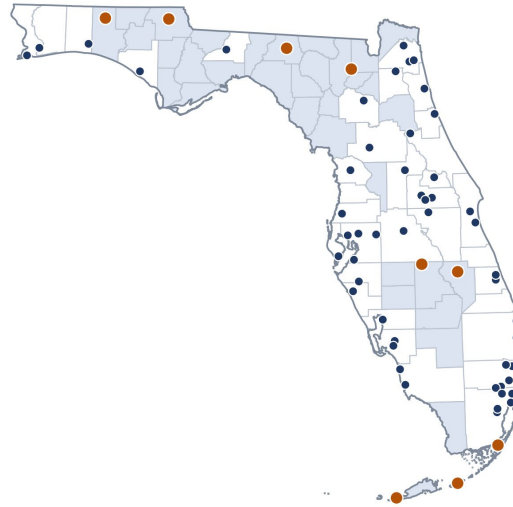
EMT

59 programs, 84 locations, 16 rural



Paramedic

46 programs, 62 locations, 9 rural



County designated rural by the Department of Health
 County not designated rural
 Training location in a rural county
 Training location in a non-rural county

Figure 3 Training program locations and county rural designation.

Note: Approved training locations for the programs included in the 2025 analysis, shown against county rural designation. Counties shaded in blue are those the Florida Department of Health designates as rural. Programs operating on more than one campus appear once per campus, and the rurality analysis reported in the Results section assigns each program to a single primary campus county. One EMT program is omitted because it does not appear on the current Department approved program list and no address record is available. County boundaries are from the U.S. Census Bureau (2022) (U.S. Census Bureau, 2020); location coordinates are derived from program addresses using U.S. Census Bureau (2021) ZIP Code Tabulation Area centroids (U.S. Census Bureau, 2022).

Acronyms & Definitions

Bayesian information criterion (BIC)

Bureau of Emergency Medical Oversight (BEMO)

Committee on Accreditation of Educational Programs for the Emergency Medical Services Professions (CoAEMSP)

Emergency Medical Services (EMS)

Emergency medical technician (EMT)

EMS Advisory Council Education Committee (EMSAC)

Florida Center for Emergency Medical Services (FL-CEMS)

Florida Department of Health (DOH)

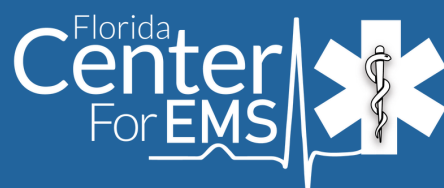
National Registry of Emergency Medical Technicians (NREMT)

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