



**INDIANA
EMERGENCY
MEDICAL
SERVICES
WORKFORCE**

July 1st, 2024 – November 1st, 2024

STUDENT DATA REPORT

Quarter 2 Student Data Report

Executive Summary

- Most of the students included in this report completed EMT programs and reported little previous experience with ambulance services.
- The average program cost across all respondents was about \$2,750, while the average expected wage was almost \$25 an hour.
- About 40% of EMS students desire full-time employment after program completion, while 25% are open to either full-time or part-time opportunities.
- Health insurance and paid time off were the most important benefits when considering future employment. Similarly, flexible scheduling and three days off a week were important non-benefit options for full-time employment.
- Location was reported by 40% of respondents as one of the top 3 influencing factors when thinking of future employment.

Introduction

Recognizing the need for a comprehensive assessment of Indiana's emergency medical services (EMS) workforce, the Indiana Department of Homeland Security (IDHS) sponsored the development of the [2023 Indiana EMS Workforce Assessment](#). EMS workforce issues such as shortages of qualified personnel able to provide services in the communities that need them have been documented. Indiana's training pipeline for EMS personnel is critically important to developing the workforce with the skills necessary to support Hoosiers. It is important to understand the distribution, outcomes, and opportunities in Indiana EMS training institutions, especially from the perspective of current students to enhance training.

Methodology

The [Indiana EMS Student Pulse Check](#) survey was developed to understand the experience of students regarding their recently completed EMS training program and provide IDHS with a better understanding of this aspect of the training pipeline. This survey asked questions regarding demographics, training and certification, professional experience, and employment plans.

The Bowen Center developed an electronic version of the survey in REDCap, and the link to this survey was embedded into the ACADIS certification and education management system by IDHS. When students complete their EMS training program, they are required to sign in to the ACADIS system to sign off on several final steps, including completing the embedded survey. A member of the IDHS team also sends out manual emails reminding students to complete the survey. This strategy was identified by IDHS and the Bowen Center as the most feasible and appropriate given the ACADIS system specifications. As of November 1, 2024, 74 individuals responded to the survey. Data were exported from REDCap and imported into Microsoft Excel. Responses received outside of July 1, 2024, through November 1, 2024, were removed, leaving 66 responses. Incomplete responses (n=7) as

well as responses for training completed outside of Indiana (n=1) were also removed. Data from 58 individuals were then cleaned and analyzed using Excel.

Limitations

There are important limitations to this report that should be noted. First, the information presented is largely based on self-reported data, which introduces the potential for some level of response bias. Additionally, while it is unclear how many students completed training programs between July and November 2024, it is likely that a sample size of 58 represents a low response rate. It is important to note that this report does not aim to generalize findings from such a small sample across the entire student population but rather to describe the demographics and experiences of those who participated.

Findings

Demographics

EMS student demographics are included in Table 1. Males represented 55% of survey respondents. Male EMS students also reported more racial diversity than female students; however, the majority of survey respondents reported their race as White.

Table 1 Demographic characteristics for Indiana EMS students

| | Female | | Male | | Other | | Total | |
|----------------------------------|-----------|------|-----------|-------|----------|------|-----------|-------|
| | N | % | N | % | N | % | N | % |
| Total | 25 | | 32 | | 1 | | 58 | |
| Race/Ethnicity | | | | | | | | |
| American Indian/Alaska Native | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Asian | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Black or African American | 0 | 0 | 3 | 9.1% | 0 | 0 | 3 | 5.1% |
| Hispanic or Latino | 0 | 0 | 3 | 9.1% | 0 | 0 | 3 | 5.1% |
| Native Hawaiian/Pacific Islander | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| White | 25 | 100% | 26 | 78.8% | 1 | 100% | 51 | 86.4% |
| Some Other Race | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Student Background

When asked about current certifications, 42% of respondents reported a current emergency medical technician (EMT) certificate. Firefighter credentials (either I or II) were held by 32% of respondents, which was closely followed by 22% of respondents who reported holding paramedic licenses. See Table 2 for additional details.

Table 2 Current credentials

| | Total | |
|---|-------|-------|
| | N | % |
| None | 17 | 28.8% |
| EMR certification | 9 | 15.3% |
| EMT certification | 25 | 42.4% |
| Advanced EMT certification | 1 | 1.7% |
| Paramedic license | 13 | 22.0% |
| Critical care paramedic (ISBC certification) | 1 | 1.7% |
| Flight paramedic certification (ISBC certification) | 1 | 1.7% |
| Volunteer firefighter | 7 | 11.9% |
| Firefighter I | 19 | 32.2% |
| Firefighter II | 19 | 32.2% |
| Nurse – BSN | 1 | 1.7% |
| Other health profession | 6 | 10.2% |
| Other non-health profession | 4 | 6.8% |

Note: Percentages in this table do not add up to 100% because respondents were able to select multiple responses.

Students were asked which education program they were enrolled in, as shown in Table 3. More than 30% indicated they were completing education for an EMT certification. Of note, 26 respondents (45%) indicated they were not enrolled in any education program. This is likely due to the survey being distributed after program completion.

Table 3 Current education program

| | Total | |
|-----------------------------|-------|-------|
| | N | % |
| None | 26 | 44.8% |
| EMR certification | 2 | 3.4% |
| EMT certification | 21 | 36.2% |
| Advanced EMT certification | 2 | 3.4% |
| Paramedic licensure | 3 | 5.2% |
| Firefighter I | 3 | 5.2% |
| Firefighter II | 3 | 5.2% |
| Other health profession | 2 | 3.4% |
| Other non-health profession | 2 | 3.4% |

Students were asked to indicate how they developed an awareness of EMS careers (Table 4). Almost 40% of respondents reported knowing someone working in an EMS career, followed by almost 25% who indicated a general knowledge.

Table 4 Knowledge of EMS careers

| | Total | |
|---|-------|-------|
| | N | % |
| I know someone who is an EMR, EMT, or paramedic | 22 | 37.9% |
| General knowledge | 14 | 24.1% |
| I did my own research to learn about these jobs | 12 | 20.7% |
| Other | 6 | 10.3% |
| I learned about it during academic advising through my school counselor (or related activity) | 3 | 5.2% |
| I learned about this career at a job fair | 1 | 1.7% |

Finally, students were asked about previous ambulance experience. The majority of respondents (48%) indicated they had no previous experience on an ambulance. About 20% reported that they had 1-5 years, closely followed by 19% who reported less than 1 year of experience. See table 5 for more information.

Table 5 Previous ambulance experience

| | Total | |
|--------------------|-------|-------|
| | N | % |
| None | 28 | 48.3% |
| Less than 1 year | 11 | 19.0% |
| 1-5 years | 12 | 20.7% |
| 6-10 years | 5 | 8.6% |
| More than 10 years | 2 | 3.4% |

Estimated Costs and Anticipated Wages

To better understand the financial landscape of EMS training, students were asked to estimate the total cost of their EMS training program. Students were asked to include non-tuition expenses, such as educational materials or uniforms, in this estimated cost. Students were also asked to report what their expectations were for a realistic hourly wage post-program completion. Averages and ranges are presented in Table 6. The average program cost across all respondents was about \$2,750, while the average expected wage was almost \$25 an hour.

Table 6 Student-reported cost and expected wages

| Total Costs | | | Expected Wage (per hour) | | |
|-------------|---------|----------|--------------------------|---------|---------|
| Mean | Minimum | Maximum | Mean | Minimum | Maximum |
| \$2,747.45 | \$0 | \$24,000 | \$24.9 | \$12.0 | \$50.0 |

Student Comfort Level

Students were asked to report their level of comfort handling common or complex EMS runs. Almost all (96%) survey respondents reported being comfortable caring for patients with COVID-19 or individuals involved in

accidents. Only 20% of respondents indicated that they would not be very comfortable handling a situation involving the death of a child. As shown in Table 7, this was the highest reported level of discomfort.

Table 7 Comfort level with difficult runs

| | Very Comfortable | | Somewhat Comfortable | | Not Very Comfortable | |
|--|------------------|---------|----------------------|---------|----------------------|---------|
| | N | Percent | N | Percent | N | Percent |
| Caring for patients with or suspected to have COVID-19 | 45 | 77.6% | 11 | 19.0% | 1 | 1.7% |
| Accidents | 39 | 67.2% | 17 | 29.3% | 1 | 1.7% |
| Your own friend or family member needing care | 35 | 60.3% | 20 | 34.5% | 3 | 5.2% |
| Massive traumatic injury | 30 | 51.7% | 21 | 36.2% | 5 | 8.6% |
| Domestic violence | 28 | 48.3% | 23 | 39.7% | 5 | 8.6% |
| Burns | 27 | 46.6% | 27 | 46.6% | 3 | 5.2% |
| Disasters | 22 | 37.9% | 30 | 51.7% | 2 | 3.4% |
| Other types of crime | 22 | 37.9% | 25 | 43.1% | 5 | 8.6% |
| Sexual assault | 20 | 34.5% | 26 | 44.8% | 8 | 13.8% |
| Death of a child | 18 | 31.0% | 24 | 41.4% | 12 | 20.7% |

Employment Plans

Students were asked several questions to understand their employment plans post-program completion. These questions covered employment hours, setting, job title, community factors, benefits and other factors.

Desired Employment

Almost 40% of survey respondents desire full-time employment after program completion, while only 12% are looking for part-time employment. Of the 7 respondents who indicated other, 6 (85%) reported being employed in public safety and intended to continue as they are. Table 8 provides a further breakdown of responses.

Table 8 Desired employment

| | N | % |
|--|----|-------|
| Yes, full-time | 23 | 39.7% |
| Yes, either full- or part-time | 14 | 24.1% |
| Yes, part-time | 7 | 12.1% |
| Other | 7 | 12.1% |
| Unsure | 5 | 8.6% |
| Seeking further health care-related training | 1 | 1.7% |
| Seeking further non-health care-related training | 1 | 1.7% |

Employer Type

Table 9 shows EMS students' desired employment settings. More than 60% of respondents indicated they wanted to work in a fire department after completion of their program. Almost 50% indicated they would prefer to work in a hospital in an ambulance department. This was followed by slightly more than 30% who indicated a preference for working in a third service setting.

Table 9 Desired employer setting

| | Total | |
|---|-------|-------|
| | N | % |
| Fire department | 36 | 62.1% |
| Hospital ambulance services/emergency department | 28 | 48.3% |
| Third service (county, city, township, municipal) | 18 | 31.0% |
| Hospital in a non-ambulance position | 7 | 12.1% |
| Private non-profit | 6 | 10.3% |
| Private for-profit | 6 | 10.3% |
| Law enforcement/corrections | 5 | 8.6% |
| No preference | 5 | 8.6% |
| Federal or military ambulance department | 4 | 6.9% |
| Government service in a non-ambulance position | 3 | 5.2% |
| Public health agency | 3 | 5.2% |
| Unsure | 3 | 5.2% |
| Higher education in a staff or faculty role | 2 | 3.4% |
| Plan to continue education and not enter workforce in the near term | 2 | 3.4% |
| Other | 2 | 3.4% |

Note: 2 respondents indicating none of the above are not included in this table.

Job Type

As most students reported completing EMT programs, it is not surprising that the two top reported job types are EMT on an ambulance (43%) or firefighter with an EMT certification (26%). Several other job types are included in Table 10.

Table 10 Desired job type

| | Total | |
|--|-------|-------|
| | N | % |
| EMT - Ambulance | 25 | 43.1% |
| Firefighter - EMT | 15 | 25.9% |
| Paramedic - Ground Ambulance 911 | 12 | 20.7% |
| EMT - Hospital | 10 | 17.2% |
| Firefighter - Paramedic | 6 | 10.3% |
| EMT - Other | 5 | 8.6% |
| Paramedic - Ground Ambulance Critical Care | 4 | 6.9% |
| Paramedic - Hospital/Clinic | 3 | 5.2% |
| Paramedic - Rotor/Fixed Wing Ambulance | 3 | 5.2% |
| Other | 3 | 5.2% |
| AEMT - Ambulance | 2 | 3.4% |
| EMR - Ambulance | 2 | 3.4% |
| Leadership - Fire Department | 2 | 3.4% |
| Nurse - Hospital/Clinic | 2 | 3.4% |
| Paramedic - Community Paramedicine | 2 | 3.4% |
| AEMT - Other | 1 | 1.7% |
| Educator - Other | 1 | 1.7% |
| EMR - Hospital | 1 | 1.7% |
| EMR - Other | 1 | 1.7% |
| Firefighter - Educator | 1 | 1.7% |
| Military | 1 | 1.7% |
| Nurse - Ground Ambulance Critical Care | 1 | 1.7% |
| Nurse - Rotor/Fixed Wing Ambulance | 1 | 1.7% |
| Physician - Agency Affiliated | 1 | 1.7% |
| Physician - EMS Medical Director | 1 | 1.7% |

Note: 6 respondents indicating none of the above are not presented in this table.

Recruitment

Respondents were asked whether they were contacted by ambulance services to begin to understand ambulance service interactions with students (Table 11). Only 13% of respondents were contacted by Indiana ambulance

services, and fewer (7%) were contacted by non-Indiana ambulance services. There may be opportunities for Indiana EMS ambulance services to increase contact with EMS students completing training programs to support recruitment and retention.

Table 11 Interactions with ambulance services

| | Yes | | No | |
|--|-----|--------|----|--------|
| | N | % | N | % |
| Have any Indiana ambulance services contacted you? | 8 | 13.80% | 50 | 86.20% |
| Have any non-Indiana ambulance services contacted you? | 4 | 6.90% | 54 | 93.10% |

Community Factors

Students were asked about community factors that may influence their decision regarding future employment (Table 12). Almost 75% of respondents indicated that the cost of living in the community was a very important factor. Commute time (64%) and crime rates/safety (60%) were also reported as very important. Nightlife and urban lifestyle were reported as not important by more than 60% of respondents.

Table 12 Desired community for employment

| | Very Important | | Somewhat Important | | Not too Important | |
|---|----------------|-------|--------------------|-------|-------------------|-------|
| | N | % | N | % | N | % |
| Cost of living | 42 | 72.4% | 12 | 20.7% | 4 | 6.9% |
| Commute time | 37 | 63.8% | 18 | 31.0% | 3 | 5.2% |
| Crime rates/safety | 35 | 60.3% | 18 | 31.0% | 5 | 8.6% |
| Proximity to spouse work/school | 29 | 50.0% | 19 | 32.8% | 9 | 15.5% |
| Hospital/health system reputation (not the employer) | 28 | 48.3% | 24 | 41.4% | 4 | 6.9% |
| Small town or a more rural lifestyle | 26 | 44.8% | 15 | 25.9% | 15 | 25.9% |
| Quality of schools for children | 23 | 39.7% | 22 | 37.9% | 11 | 19.0% |
| Recreational opportunities | 23 | 39.7% | 27 | 46.6% | 7 | 12.1% |
| Proximity to extended family & friends | 18 | 31.0% | 25 | 43.1% | 14 | 24.1% |
| Proximity to co-parent | 16 | 27.6% | 9 | 15.5% | 24 | 41.4% |
| Proximity to higher education | 15 | 25.9% | 23 | 39.7% | 19 | 32.8% |
| Diversity in the community members | 12 | 20.7% | 17 | 29.3% | 28 | 48.3% |
| Proximity to major travel routes (airport, interstate, etc) | 9 | 15.5% | 27 | 46.6% | 21 | 36.2% |
| Cultural amenities | 7 | 12.1% | 28 | 48.3% | 22 | 37.9% |
| Big city or a more urban lifestyle | 7 | 12.1% | 11 | 19.0% | 38 | 65.5% |
| Nightlife | 3 | 5.2% | 17 | 29.3% | 37 | 63.8% |

Note: Respondents indicating unsure are not presented in this table.

Desired Benefits and Employer Factors

To understand what benefits may be desirable, individuals were asked to report which benefits were important when considering employment post-program completion. Table 13 includes more details. Health insurance and paid time off were reported as very important by 84.5% of respondents. Tax-deferred retirement accounts, such as 401ks, as well as short-term and long-term disability coverage were also reported as very important by more than 70% of respondents. Options that were reported as less important included gym memberships (32% reported as not too important) and sign-on bonuses (24%).

Table 13 Desired benefits from employers

| | Very Important | | Somewhat Important | | Not too Important | |
|---|----------------|-------|--------------------|-------|-------------------|-------|
| | N | % | N | % | N | % |
| Health insurance | 49 | 84.5% | 8 | 13.8% | 0 | 0.0% |
| Paid time off | 49 | 84.5% | 9 | 15.5% | 0 | 0.0% |
| 401k/403b/457b/IRA | 43 | 74.1% | 14 | 24.1% | 1 | 1.7% |
| Short-term disability coverage | 43 | 74.1% | 10 | 17.2% | 3 | 5.2% |
| Long-term disability coverage | 42 | 72.4% | 11 | 19.0% | 3 | 5.2% |
| Recertification costs and reimbursement | 41 | 70.7% | 16 | 27.6% | 1 | 1.7% |
| Life insurance | 40 | 69.0% | 13 | 22.4% | 3 | 5.2% |
| Uniform allowance | 40 | 69.0% | 15 | 25.9% | 3 | 5.2% |
| Pension/OPERS | 38 | 65.5% | 16 | 27.6% | 1 | 1.7% |
| Extra compensation for working a less desirable shift | 37 | 63.8% | 17 | 29.3% | 4 | 6.9% |
| Retention bonus | 37 | 63.8% | 18 | 31.0% | 2 | 3.4% |
| Tuition reimbursement | 37 | 63.8% | 12 | 20.7% | 9 | 15.5% |
| Social security payments | 35 | 60.3% | 16 | 27.6% | 2 | 3.4% |
| Other retirement programs | 30 | 51.7% | 19 | 32.8% | 4 | 6.9% |
| Relocation reimbursement | 23 | 39.7% | 21 | 36.2% | 12 | 20.7% |
| Scholarships | 22 | 37.9% | 24 | 41.4% | 10 | 17.2% |
| Conference support | 20 | 34.5% | 23 | 39.7% | 12 | 20.7% |
| Sign-on bonus | 18 | 31.0% | 26 | 44.8% | 14 | 24.1% |
| Gym membership | 16 | 27.6% | 22 | 37.9% | 19 | 32.8% |

Note: Individuals who reported not sure are not presented in this table.

Beyond benefits, employers may offer innovative employment arrangements or options that entice students. Table 14 shows what options students reported as important. About 35% of respondents reported that flexible scheduling and three days off are important when considering employment options, while 32% reported that it was important that employers ensure staff are not held over to cover uncovered shifts. Similarly, 31% reported that scheduling additional staff shifts to cover known busy periods would be an important employer consideration. About 25% of respondents indicated that maximum duty time policies were not important influences on their

employment decisions.

Table 14 Desired employment options by importance

| | Most Important | | Moderately Important | | Somewhat Important | | Not at all Important | |
|---|----------------|-------|----------------------|-------|--------------------|-------|----------------------|-------|
| | N | % | N | % | N | % | N | % |
| Flexible scheduling | 21 | 36.2% | 21 | 36.2% | 13 | 22.4% | 3 | 5.2% |
| At least three days off for full-time employees | 21 | 36.2% | 14 | 24.1% | 15 | 25.9% | 8 | 13.8% |
| Ensuring staff are not held over to cover uncovered shifts | 19 | 32.8% | 20 | 34.5% | 14 | 24.1% | 5 | 8.6% |
| Scheduling additional staff shifts to cover known busy periods | 18 | 31.0% | 24 | 41.4% | 11 | 19.0% | 5 | 8.6% |
| Peer support (mental health) | 17 | 29.3% | 22 | 37.9% | 12 | 20.7% | 7 | 12.1% |
| 48-hour workweek or less | 16 | 27.6% | 21 | 36.2% | 11 | 19.0% | 10 | 17.2% |
| Rotating crews between busy and slow assignments | 15 | 25.9% | 20 | 34.5% | 15 | 25.9% | 8 | 13.8% |
| Minimum time for calling off a shift before it is considered disciplinary | 15 | 25.9% | 19 | 32.8% | 16 | 27.6% | 8 | 13.8% |
| Fatigue management plan | 14 | 24.1% | 28 | 48.3% | 9 | 15.5% | 7 | 12.1% |
| Employer-assisted scheduling of time-off coverage | 13 | 22.4% | 24 | 41.4% | 15 | 25.9% | 6 | 10.3% |
| Minimum time off between shifts | 13 | 22.4% | 15 | 25.9% | 16 | 27.6% | 14 | 24.1% |
| Staff support for extended drop-off/wait/boarding times | 11 | 19.0% | 23 | 39.7% | 18 | 31.0% | 6 | 10.3% |
| Short time requirement for ePCR completion at end of shift | 10 | 17.2% | 21 | 36.2% | 17 | 29.3% | 10 | 17.2% |
| Maximum number of dispatches per time/shift | 9 | 15.5% | 14 | 24.1% | 20 | 34.5% | 15 | 25.9% |
| Maximum duty time policy | 5 | 8.6% | 22 | 37.9% | 21 | 36.2% | 10 | 17.2% |

Ranking of Important Factors

Individuals were asked to select and rank the 3 most important factors for selecting an employer post-program completion. Almost 40% of respondents indicated that the location of the ambulance service was a top influencing factor. This was closely followed by professional development opportunities (38%), including funding for those experiences, and the presence of station-based amenities, such as a kitchen, dayroom, etc. (38%). Table 15, on the next page, includes more details on the top factors.

Table 15 Top factors

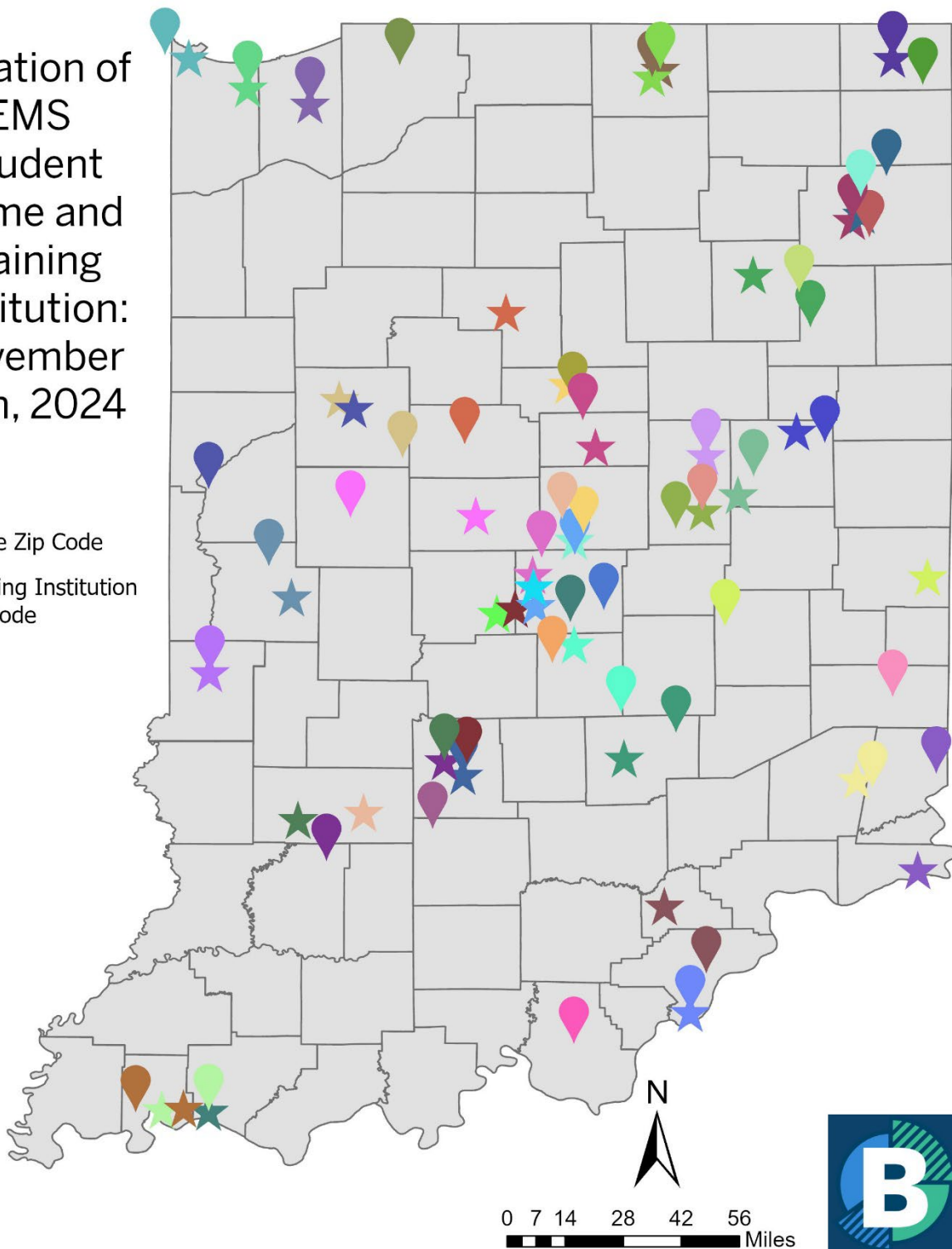
| | Total | | |
|---|---------|----|-------|
| | Average | N | % |
| Career advancement/promotion opportunities within the ambulance service | 2.43 | 14 | 24.1% |
| Professional development opportunities, including career advancement funding or reimbursement. | 2.36 | 22 | 37.9% |
| Run volume of the ambulance service | 2.18 | 17 | 29.3% |
| Type of responses for the ambulance service (example rural versus urban) | 2.14 | 14 | 24.1% |
| Offering additional assignments (e.g., TEMS, bike team, committees, community outreach, etc.) | 2 | 14 | 24.1% |
| Staffing pattern (length of the shifts, shift rotation). | 1.95 | 20 | 34.5% |
| Station-based response with amenities such as bedrooms, kitchen, dayroom, office space | 1.91 | 22 | 37.9% |
| Having the same (three or more) employees working at the same base with regular interpersonal interaction | 1.86 | 14 | 24.1% |
| Location of the ambulance service (e.g., located in your home jurisdiction) | 1.52 | 23 | 39.7% |

Geographic Distribution

Survey respondents were asked to report the zip code for their home and their training program. Figure 1 on the next page depicts this information. Each color represents a different survey respondent. Only 22.4% (n=13) of respondents reported completing a training program within the same zip code as their home. Looking at a county level, 43.6% (n=24) of respondents completed a training program in the same county as their home. Several respondents (n=4) reported a home zip code outside of Indiana, with 2 corresponding to Illinois, 1 to Ohio, and 1 to North Carolina.

Location of EMS Student Home and Training Institution: November 15th, 2024

- Home Zip Code
- Training Institution Zip Code



Source: Indiana EMS Student Pulse Check Survey, November 15th Technical Report.
Note: 3 respondents are not represented in this map due to a reported home zip code outside of Indiana.



Acknowledgements

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