INDIANA EMERGENCY MEDICAL SERVICES WORKFORCE

July 15th, 2024

STUDENT TECHNICAL REPORT

July 2024 Student Data Report

Executive Summary

Addressing the needs of the Indiana emergency medical services workforce requires an examination of the training pipeline for this workforce. Beginning in October 2023, the Indiana EMS Student Pulse Check survey was administered to EMS trainees through the training and certification management system maintained by the Indiana Department of Homeland Security. As of June 30, 2024, eight trainees completed the survey.

Overall, there was little racial diversity among respondents, while gender distribution was equal. Most of the survey respondents had very little previous EMS experience and heard about EMS careers through friends and colleagues. Most of the respondents completed EMT certification programs and plan on pursuing full-time or part-time employment in a fire department or hospital-based ambulance service. Reported factors that influenced their future employment decisions included low commute time, reimbursement for recertification costs, and flexible scheduling.

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 including 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. This strategy was identified by IDHS and the Bowen Center as the most feasible and appropriate given the ACADIS system specifications. As of June 30, 2024, 8 individuals responded to the survey. Data was exported from REDCap, imported into Excel, cleaned, and analyzed.

Limitations

There are important limitations to this report that should be noted. First, the information presented in this report 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 October 2023 and June 2024, it is almost certain that a sample size of 8 represents an extremely 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.

Findings

Demographics

EMS student demographics are presented in Table 1. There was equal representation between males and females among the survey respondents (n=4). There was very little racial diversity with only 1 student reporting a race other than White. No survey respondents chose to report their ethnicity.

Table 1 Demographic Characteristics for Indiana EMS Students

	Female		Male		Total	
	n	%	n	%	n	%
Total	**4**		**4**		**8**	
Race						
American Indian/Alaska Native	0	0	0	0	0	0
Asian	0	0	0	0	0	0
Black or African American	0	0	1	25%	1	12.5%
Native Hawaiian/Pacific Islander	0	0	0	0	0	0
White	4	100%	3	75%	7	87.5%
Some Other Race	0	0	0	0	0	0

Note: No respondents indicated a choice for ethnicity, so it is not presented in this table.

Student Background

When asked about current credentials, all respondents reported that they held no certifications or licenses, whether in EMS, fire, or other health care professions. Individuals were asked to select the education programs in which they are enrolled and completing (Table 2). Almost 63% of respondents indicated they were enrolled in an EMT certification program. This was followed by EMR certification, Firefighter I, and Firefighter II, which were selected by 25% of survey respondents.

Table 2 Current Education Program

	Total	
	n	%
None	1	12.5%
EMR certification	2	25%
EMT certification	5	62.5%
Advanced EMT certification	0	0
Paramedic certification	0	0
Critical Care Paramedic (ISBC certification)	0	0
Flight Paramedic certification (ISBC certification)	0	0

Table 2 Current Education Program

	Total	
	n	%
Community Paramedic certification (ISBC certification)	0	0
Tactical Paramedic certification (ISBC certification)	0	0
Volunteer Firefighter	1	12.5%
Firefighter I	2	25%
Firefighter II	2	25%
Interagency Wildfire	0	0
Physician assistant	0	0
Nurse – ASN	0	0
Nurse – BSN	0	0
Physician	0	0
Other health profession	0	0
Other non-health profession	0	0

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

Table 3 presents findings from respondents reporting how they became aware of EMS careers. The majority of respondents (75%) indicated that their knowledge of EMS careers was due to knowing someone working in the field. One person (12.5%) indicated they did their own research.

Table 3 Knowledge of EMS Careers

	Total	
	n	%
I know someone who is an EMR, EMT, or paramedic	6	75.0%
I learned about it during academic advising through my school counselor (or related activity)	0	0
I learned about this career at a job fair	0	0
I did my own research to learn about these jobs	1	12.5%
I learned about careers in EMS on a television show or movie	0	0
General knowledge	0	0
Other	1	12.5%

When asked about their ambulance experience, students report very little previous experience (Table 4). Most (75%) reported having no experience, while 25% reporting less than 1 year of ambulance service.

Table 4 Previous Ambulance Experience

	Total	
	n	%
None	6	75.0%
Less than 1 year	2	25.0%
1-5 years	0	0
6-10 years	0	0

Table 4 Previous Ambulance Experience

	Total	
	n	%
More than 10 years	0	0

Estimated Costs and Anticipated Wages

To understand the financial environment of EMS training, students were asked to estimate the total cost for their EMS training program as well as to report a realistic expected hourly wage. Results are included in Table 5. Individuals were asked to include non-tuition costs such as educational materials or uniforms. The range of responses was from $0 to $2,000, with an average across all respondents of $813.75. When asked about their expected hourly wage after program completion, the range of responses was from $20 to $48, with an average of $27.13.

Table 5 Student Reported Cost and Expected Wages

Total Costs			Expected Wage (per hour)		
Mean	Minimum	Maximum	Mean	Minimum	Maximum
$813.75	$0	$2,000	$27.13	$20	$48

Student Comfort Level

Respondents were asked to report their comfort in handling common and complex situations. All respondents indicated being either very or somewhat comfortable with handling burns and domestic violence runs. About 25% of respondents indicated that they would not feel very comfortable handling runs involving sexual assaults or the death of a child. Table 6 includes more detail.

Table 6 Comfort Level with Difficult Runs

	Very Comfortable		Somewhat Comfortable		Not Very Comfortable	
	n	Percent	n	Percent	n	Percent
Accidents	3	37.5%	4	50%	1	12.5%
Burns	3	37.5%	5	62.5%	0	0
Caring for patients with or suspected to have COVID-19	3	37.5%	4	50%	1	12.5%
Massive traumatic injury	3	37.5%	4	50%	1	12.5%
Disasters	2	25%	4	50%	1	12.5%
Other types of crime	2	25%	5	62.5%	0	0
Sexual assault	2	25%	4	50%	2	25%
Your own friend or family member needing care	2	25%	4	50%	1	12.5%
Death of a child	1	12.5%	5	62.5%	2	25%
Domestic violence	1	12.5%	7	88%	0	0

Note: The total for each category may not equal 8 as respondents indicating unsure are not included in the table.

Employment Plans

Desired Employment

Many questions focused on the individual's employment plans after program completion. When asked about their desired employment arrangement, 37.5% of respondents reported a willingness to accept both a full- or part-time position. Additionally, 25% were unsure of plans, while another 25% were exclusively looking for full-time work. See table 7 for more information.

Table 7 Desired Employment Situation

	n	%
Yes, Full-time	2	25.0%
Yes, Part-time	0	0
Yes, Either full- or part-time	3	37.5%
Seeking work with a hospital	0	0
Seeking work in another health care related service	0	0
Seeking further health care related training	0	0
Seeking further non health care related training	0	0
Other	1	12.5%
Unsure	2	25.0%

Employer Type

When identifying the desired employer settings after completing training, 62.5% of respondents reported a desire to work for a fire department (Table 8), while 50% indicated a desire to work for a hospital-based ambulance service.

Table 8 Desired Employer Setting

	Total	
	n	%
Fire department	5	62.5%
Hospital ambulance department	4	50%
Law enforcement/corrections	1	12.5%
Third service (county, city, township, municipal)	1	12.5%
Private for-profit	1	12.5%
No preference	0	0
Federal or military ambulance department	0	0
Private non-profit	0	0
Hospital in a non-ambulance position	0	0
Government service in a non-ambulance position	0	0
Public health agency	0	0
Research institution	0	0

Table 8 Desired Employer Setting

	Total	
	n	%
Higher education in a staff or faculty role	0	0
Military in a non-ambulance position	0	0
Plan to continue education and not enter workforce in the near term	0	0
Other	0	0
Unsure	0	0
None of the Above	0	0

Job Type

Table 9 includes respondent desired job types. Approximately 63% of respondents plan to obtain EMT (ambulance) jobs. Firefighter positions follow, with EMR and EMT positions both reported by 25% of survey respondents. This is consistent with the findings regarding employment settings and the training programs represented in this report.

Table 9: Desired Job Type

	Total	
	n	%
EMT (Ambulance)	5	62.5%
Firefighter (EMR)	2	25%
Firefighter (EMT)	2	25%
EMT (Hospital/Clinic)	1	12.5%
EMT (Other)	1	12.5%
Paramedic (Hospital/Clinic)	1	12.5%
Firefighter (Paramedic)	1	12.5%

Individuals were asked about non-benefit employer factors that may influence their future employment. Table 10 on the following pages presents this information. Flexible scheduling was selected by 37.5% of individuals as the most important factor, which was followed by 25% indicating that employer-assisted scheduling of time-off coverage was also very important. Staff support for extended drop-off/wait/boarding times and peer mental health support were both reported by 37.5% of survey respondents as not at all important.

Table 10 Desired Employment Options by Importance

	Most Important		Moderately Important		Somewhat Important		Not at all Important	
	n	%	n	%	n	%	n	%
Flexible scheduling	3	37.50%	2	25%	1	12.5%	2	25%
Employer assisted scheduling of time-off coverage	2	25%	2	25%	3	37.5%	1	12.5%

Table 10 Desired Employment Options by Importance

	Most Important		Moderately Important		Somewhat Important		Not at all Important	
	n	%	n	%	n	%	n	%
Rotating crews between busy and slow assignments	1	12.5%	3	37.5%	2	25%	2	25%
48-hour workweek or less	1	12.5%	2	25%	5	62.5%	0	0
Minimum time off between shifts	1	12.5%	2	25%	4	50%	1	12.5%
Maximum duty time policy	1	12.5%	2	25%	3	37.5%	2	25%
At least three days off for full time employees	1	12.5%	2	25%	3	37.5%	2	25%
Scheduling additional staff shifts to cover known busy periods	1	12.5%	2	25%	3	37.5%	2	25%
Fatigue management plan	1	12.5%	1	12.5%	5	62.5%	1	12.5%
Ensuring staff are not held over to cover uncovered shifts	1	12.5%	1	12.5%	5	62.5%	1	12.5%
Minimum time for calling off a shift before it is considered disciplinary	1	12.5%	1	12.5%	5	62.5%	1	12.5%
Peer support (mental health)	1	12.5%	1	12.5%	3	37.5%	3	37.5%
Short time requirement for ePCR completion at end of shift	1	12.5%	0	0	6	75%	1	12.5%
Maximum number of dispatches per time/shift	1	12.5%	0	0	5	62.5%	2	25%
Staff support for extended drop-off/wait/boarding times	1	12.5%	0	0	4	50%	3	37.5%

Recruitment

Individuals were asked if any Indiana-based or out-of-state ambulance companies had attempted to recruit them. All respondents indicated they had not been contacted by any ambulance services.

Community Factors

Respondents were given the opportunity to indicate the community factors that would be important influences in their job hunt or employer selection. The results are included in Table 11. The factors rated as most important were commute time and the reputation of the hospital or health system serving the community with 62.5% of respondents indicating these as very important. The factors rated as least important were nightlife, with 75% reporting it as not too important, and proximity to major travel routes, with almost 63% reporting the same.

Table 11 Desired Community for Employment

	Very Important		Somewhat Important		Not too Important	
	n	%	n	%	n	%
Commute time	5	62.5%	2	25%	1	12.5%
Hospital/health system reputation (not the employer)	5	62.5%	2	25%	1	12.5%
Cost of living	4	50%	3	37.5%	1	12.5%
Crime rates/safety	4	50%	3	37.5%	1	12.5%
Proximity to spouse work/school	4	50%	3	37.5%	1	12.5%
Proximity to higher education	3	37.5%	2	25%	3	37.5%

Table 11 Desired Community for Employment

	Very Important		Somewhat Important		Not too Important	
	n	%	n	%	n	%
Quality of schools for children	3	37.5%	2	25%	3	37.5%
Recreational opportunities	3	37.5%	3	37.5%	2	25%
Small town or a more rural lifestyle	3	37.5%	3	37.5%	2	25%
Proximity to co-parent	2	25%	2	25%	4	50%
Proximity to extended family & friends	2	25%	3	37.5%	3	37.5%
Big city or a more urban lifestyle	1	12.5%	4	50%	3	37.5%
Cultural amenities	1	12.5%	4	50%	3	37.5%
Diversity in the community members	1	12.5%	4	50%	3	37.5%
Proximity to major travel routes (airport, interstate, etc.)	1	12.5%	2	25%	5	62.5%
Nightlife	0	0	2	25%	6	75%

Desired Benefits

In addition to community factors, individuals were asked about employer-provided benefits that may influence their future employment (Table 12). All respondents indicated that reimbursement of recertification costs and uniform allowances were either very or somewhat important when selecting an employer. Looking at less important benefits, reimbursement for relocation was reported by 37.5% of respondents as not important. This was followed by 25% who indicated that sign-on bonuses and support for attending conferences were not important influencing factors.

Table 12 Desired Benefits from Employers

	Very Important		Somewhat Important		Not too Important	
	n	%	n	%	n	%
Recertification costs reimbursement	7	87.50%	1	12.50%	0	0
Uniform allowance	7	87.50%	1	12.50%	0	0
Paid time off	6	75%	1	12.50%	1	12.50%
Health insurance	6	75%	1	12.50%	1	12.50%
Life insurance	6	75%	1	12.50%	1	12.50%
Long-term disability coverage	6	75%	1	12.50%	1	12.50%
Short-term disability coverage	6	75%	1	12.50%	1	12.50%
Pension/OPERS	6	75%	0	0	2	25%
Other retirement programs	6	75%	0	0	2	25%
Extra compensation for working a less desirable shift	5	62.50%	2	25%	1	12.50%
Tuition reimbursement	5	62.50%	2	25%	1	12.50%
Scholarships	5	62.50%	1	12.50%	2	25%
Gym membership	5	62.50%	1	12.50%	2	25%
401k/403b/457b/IRA	5	62.50%	1	12.50%	2	25%
Social security payments	5	62.50%	1	12.50%	2	25%
Retention bonus	4	50%	4	50%	0	0

Table 12 Desired Benefits from Employers

	Very Important		Somewhat Important		Not too Important	
	n	%	n	%	n	%
Relocation reimbursement	3	37.50%	2	25%	3	37.50%
Conference support	3	37.50%	3	37.50%	2	25%
Sign-on bonus	0	0	6	75%	2	25%

Ranking of Important Factors

Table 13 reports findings from the final survey question, which asked respondents to rank the most important factors when selecting an ambulance service for future employment. Station-based amenities was selected as a top 3 factor for 62.5% of respondents, while 37.5% of respondents indicated staffing patterns, location, and availability of additional assignments as top factors.

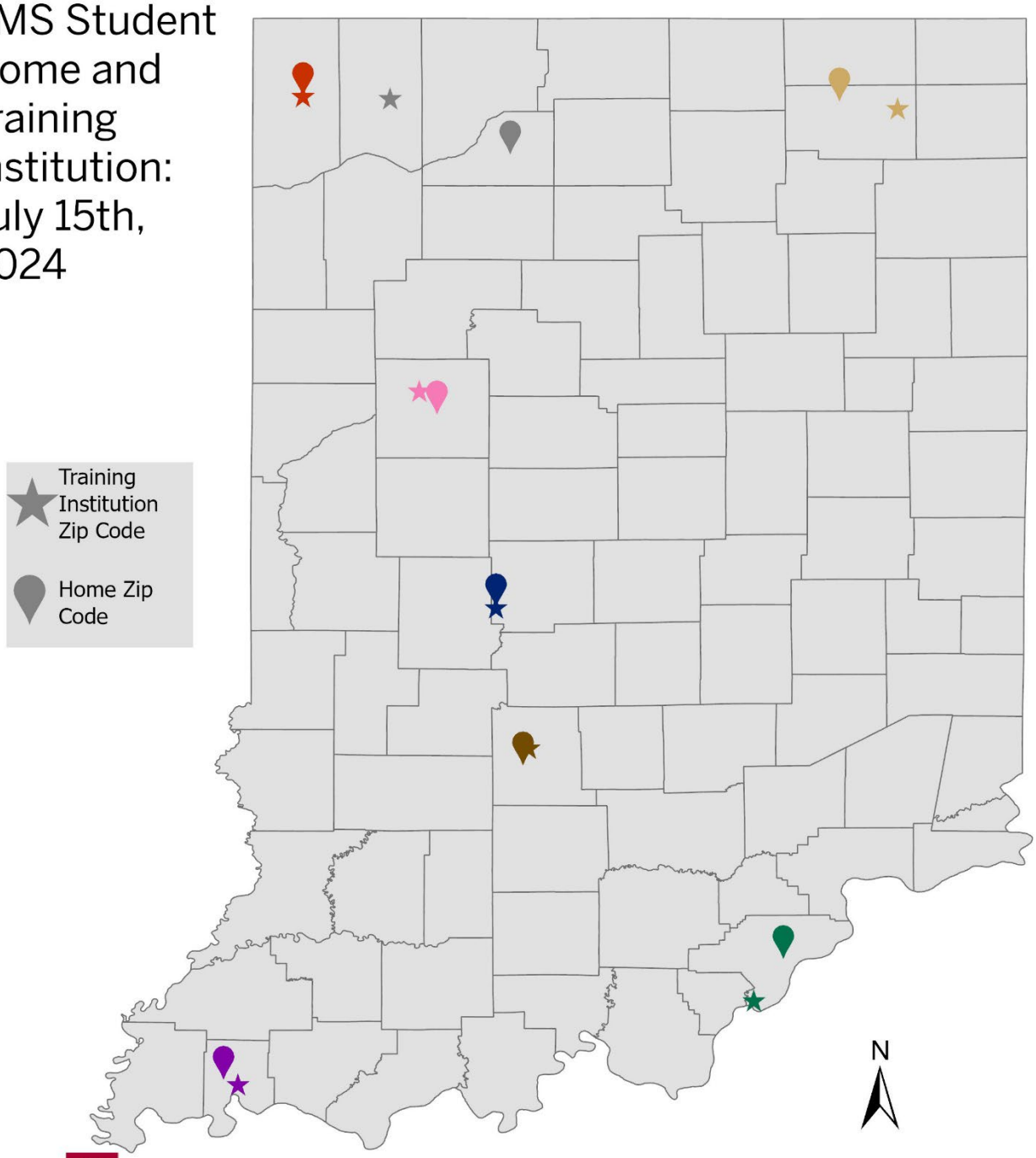
Table 13 Top Influencing Factors

	Total	
	n	%
Staffing pattern (length of the shifts, shift rotation).	3	37.5%
Location of the ambulance service (e.g. located in your home jurisdiction)	3	37.5%
Run volume of the ambulance service	2	25%
Type of responses for the ambulance service (example rural versus urban)	0	0
Station-based response with amenities such as bedrooms, kitchen, dayroom, office space	5	62.5%
Having the same (three or more) employees working at the same base with regular interpersonal interaction	2	25%
Professional development opportunities including career advancement funding or reimbursement.	0	0
Career advancement/promotion opportunities within the ambulance service	1	12.5%
Offering additional assignments (e.g., TEMS, bike team, committees, community outreach, etc.)	3	37.5%

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. Most respondents (62.5%) reported traveling out of their home zip code for their training program. Despite this, 87.5% of respondents were able to find a training institution in the same county as their home, with only 1 individual needing to travel outside of their home county.

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



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Source: Indiana EMS Student Pulse Check Survey, July 15th Technical Report.