

Influences on Retention in the Indiana EMS Workforce

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Background

Emergency medical services (EMS) workers play a critical role in the healthcare system as first responders during medical crises. Each year, there are individuals in Indiana who are licensed/certified in an EMS role who opt to allow their license to lapse instead of renewing it. In an effort to assess the overall health of the workforce, it is necessary to learn who is leaving the EMS field and why. In 2023, the Indiana Department of Homeland Security (IDHS) commissioned a survey of former EMS license holders to identify challenges to retention. This report highlights responses from that survey and identifies potential opportunities for action.

Methodology

Survey Development

Indiana EMS professionals are required to renew their credentials every two years to stay in good standing with the state. Each year, a percentage of licensed/certified individuals choose not to go through the renewal process and allow their credentials to expire. A retention survey was developed in an effort to better understand the factors influencing previously certified personnel to leave EMS. Many other states are experiencing and working to address EMS workforce shortages. In particular, Minnesota recently developed and deployed a retention survey capturing some of the same information that is of interest to Indiana. Using Minnesota's survey as a framework, Indiana developed a survey that met the specific needs of the state and incorporated opportunities for open-ended feedback.

Survey Distribution

IDHS identified all emergency medical responder (EMR), emergency medical technician (EMT), advanced emergency medical technician (AEMT), and paramedic licenses that expired from January 1, 2018, through September 30, 2023. After de-duplication, this resulted in 11,824 unique individuals who allowed their Indiana EMS license to expire during this time period. The survey was administered using REDCap. A link to the retention survey was emailed to these individuals and one reminder email was sent to request completion from non-respondents during the survey period (November 30 - December 8, 2023).

Analysis

The survey was closed on December 8th, 2023 and quantitative and qualitative data were extracted from REDCap and uploaded into a Microsoft Excel spreadsheet with each row

¹ Findings from the Minnesota EMS Retention Survey can be found in their recent report, Influencers of Retention in the Minnesota EMS Workforce, which is available at:

https://mn.gov/emsrb/assets/Influencers%20of%20Retention%20in%20the%20EMS%20Workforce-Fianl%20for%20Publication tcm1116-548644.pdf

² Indiana's EMS Retention Survey can be found at: https://scholarworks.iupui.edu/bitstreams/7e6dadde-9967-4786-ac2d-ab83fae88f16/download



representing a distinct response. Quantitative data were cleaned and prepared for descriptive analysis. The qualitative data were then prepared for the coding and analysis. Coding of qualitative data occurred in three phases. In the initial phase, responses were labeled based on their inherent meaning, allowing for the identification of content and trends through assumptions. In the second phase, members of the Bowen Center convened to review results of individual coding, identify incidents of discordance between individual results, and discuss recoding strategy for such incidents. Recoding of discordant responses was accomplished once consensus was achieved within the research team. The coding system employed was comprehensive, with codes carefully defined and designed to be mutually exclusive.

Once all codes were finalized, they were methodically organized into overarching themes, with related codes being grouped together. The thematic analysis served to distill the essence of the data, providing a comprehensive understanding of the underlying patterns and insights. With the completion of the theming process, the qualitative data were then succinctly summarized in a table format.



Description of Survey Population

The survey had a response rate of 8.9%, as 1,048 of the 11,824 individuals provided a response. As described by Table 1, respondents represent former EMS workers with a wide range of experience from both urban and rural settings and in different types of employment. Just over 40% of respondents had 15 years or more of experience when they left the field. The next largest group by experience level was 5 to 15 years, followed by 1 to 5 years. Around 10% of respondents worked in EMS for less than a year or not at all. Nearly half of respondents worked in EMS as their primary source of income, while nearly one-third (29%) were volunteers or worked for a small stipend. Many former EMS workers served both urban and rural locations (40%). About one-third of respondents previously provided services in rural settings exclusively, 21% worked in urban areas, and a greater proportion (40%) worked in both rural and urban settings.

Table 1. EMS Experience Characteristics

	N	%
Total	10)48
Experience Status		
Never worked in EMS	68	6.49
Less than 1 year	42	4.01
1 - 5 years	209	19.94
5 - 15 years	299	28.53
15 years or more	429	40.94
Non-Respondent	1	0.10
Location of Work as EMS Provider		
Rural Area	327	31.20
Urban Area	222	21.18
Both Rural and Urban	419	39.98
Never worked in EMS	77	7.35
Non-Respondent	3	0.29
Previous Position		
Volunteer or Small Financial Stipend	302	28.82
Career - Primary Source of Income	513	48.95
Career Plus Volunteer	124	11.83
Not Applicable	106	10.11
Non-Respondent	3	0.29

Source: Indiana EMS Retention Survey: 2023.



Findings

Top Overall Influences on Retention

Pay was the biggest factor influencing retention. One-third of former EMS workers cited it as an important influence on their decision to leave the field, and another 15% said it was a moderate influence. In total, pay was a consideration for almost half of former EMS workers. The second most common driver for leaving was the quality of agency leadership, with a quarter of respondents calling it an important influence. It was a moderate influence for an additional 15% of respondents. Lack of or quality of retirement/pension benefits was the third biggest influence on retention with 37% of former EMS workers saying it was an important or moderate influence on their decision to quit. Burnout/mental health and the educational requirements were also often major considerations.

Table 2. Factors Influencing Non-Renewal of EMS Certification

	Important Influence	Moderate Influence
Pay, or lack of pay	33.97%	15.17%
Lack of or quality of Retirement/Pension Benefits	21.56%	15.65%
Moved out of Indiana	11.35%	1.62%
Time Commitment	12.02%	16.22%
Educational Requirements	15.84%	15.55%
Age/Physical Requirements	14.41%	10.69%
Quality of Agency Leadership	25.10%	15.74%
Relationship and interaction with crew members	10.69%	10.97%
Burnout/Mental Health	19.75%	15.08%
Shift/Workweek Schedule	12.40%	12.79%
Desire to pursue other Healthcare Opportunities	15.65%	6.30%

Source: Indiana EMS Retention Survey: 2023



Top Influences on Retention by Experience

While low pay is the top reason EMS workers leave, its importance decreases with years of experience in EMS. Regardless of career stage, quality of agency leadership was a major consideration, peaking with 30% of the 5-to-15-year group calling it an important influence. For the 1-to-5-year and 5-to-15-year respondents, quality of agency leadership was the second most cited factor behind pay in their decision to leave the field. After pay, former EMS workers with less than 1 year of experience cited a desire to pursue other healthcare opportunities as an important influence on their decision not to renew their certification, suggesting their EMS certification was a stepping stone to other health careers. On the other hand, the age/physical requirements were the biggest driver for those with 15 years or more of experience to leave. Roughly the same percentage (23-24%) of former EMS workers named burnout/mental health as an important influence on leaving whether they had less than 1 year of experience, 1 to 5 years of experience, or 5 to 15 years of experience.

Table 3. Factors Influencing Non-Renewal of EMS Certification by Years of Experience

	Less tha	Less than 1 year		Years	5 - 15	Years	15 Years	or More
	(n=42)		(n=209)		(n=299)		(n=4	429)
	Important	Moderate	Important	Moderate	Important	Moderate	Important	Moderate
	Influence	Influence	Influence	Influence	Influence	Influence	Influence	Influence
Pay, or lack of pay	54.76%	11.90%	44.23%	19.71%	42.14%	13.71%	21.78%	15.93%
Lack of or quality of Retirement/Pension Benefits	14.29%	9.52%	23.56%	20.19%	28.43%	16.05%	18.27%	14.75%
Moved out of Indiana	9.52%	9.52%	14.42%	0.48%	12.04%	2.34%	9.60%	0.70%
Time Commitment	19.05%	9.52%	14.42%	16.83%	14.09%	15.77%	9.62%	17.84%
Educational Requirements	14.29%	7.14%	12.50%	11.06%	17.73%	17.73%	16.71%	18.35%
Age/Physical Requirements	11.90%	2.38%	4.33%	8.65%	8.70%	12.71%	25.53%	12.41%
Quality of Agency Leadership	19.05%	21.43%	26.92%	16.35%	29.77%	20.74%	25.06%	13.58%
Relationship and interaction with crew members	21.43%	16.67%	17.31%	11.06%	12.37%	13.04%	6.56%	10.54%
Burnout/Mental Health	23.81%	7.14%	23.19%	11.59%	23.08%	17.39%	17.80%	18.03%
Shift/Workweek Schedule	19.05%	9.52%	18.45%	16.99%	15.44%	13.09%	7.96%	11.71%
Desire to pursue other Healthcare Opportunities	28.57%	7.14%	24.64%	7.73%	15.72%	7.69%	9.13%	4.68%

Source: Indiana EMS Retention Survey: 2023



Top Influences on Retention by Location

Pay was an important influence on retention for 42% of those who worked in both urban and rural areas and 36% of those who worked in urban areas alone. It was far and away the most cited factor in leaving for both groups. In rural areas, the leading consideration was quality of agency leadership (24%), with pay running second at 23%. Though pay was a significant driver for all three groups, those in urban areas were much more likely to say a desire to pursue other healthcare opportunities was an important influence (26%) than those in rural areas (13%) or both urban and rural areas (12%). Quality of agency leadership mattered to all three groups, but especially to those in both urban and rural areas, 31% of whom said it was an important influence on their decision to leave. About 30% of the same group also considered the lack of or quality of retirement/pension benefits an important influence.

Table 4. Factors Influencing Non-Renewal of EMS Certification by Location

	Rural	Area	Urban	Area	Both Urban	and Rural
	(n=327)		(n=2	22)	(n=419)	
	Important	Moderate	Important	Moderate	Important	Moderate
	Influence	Influence	Influence	Influence	Influence	Influence
Pay, or lack of pay	22.70%	15.95%	36.49%	18.02%	42.21%	15.35%
Lack of or quality of Retirement/Pension Benefits	16.87%	12.27%	17.12%	17.57%	29.26%	18.71%
Moved out of Indiana	4.91%	0.31%	16.22%	3.60%	13.91%	1.44%
Time Commitment	14.11%	19.63%	9.09%	16.82%	12.95%	14.63%
Educational Requirements	17.48%	20.55%	10.91%	12.27%	17.27%	14.15%
Age/Physical Requirements	17.48%	10.12%	11.76%	13.57%	15.79%	10.77%
Quality of Agency Leadership	23.62%	16.56%	23.98%	15.84%	31.10%	17.46%
Relationship and interaction with crew members	13.80%	11.04%	9.05%	13.12%	11.00%	11.24%
Burnout/Mental Health	15.38%	16.62%	22.62%	13.57%	24.40%	17.22%
Shift/Workweek Schedule	10.46%	14.46%	11.76%	11.76%	15.62%	13.22%
Desire to pursue other Healthcare Opportunities	12.62%	5.23%	25.79%	6.79%	12.20%	6.70%

Source: Indiana EMS Retention Survey: 2023

Top Influences on Retention by Agency Type

Pay was consistently the most important influence on retention, regardless of agency type. However, it was much more pronounced for respondents who previously worked in ambulance services (46%) and medical response/first response agencies (50%). By comparison, only 23% of those previously working in fire departments and 27% of those in law enforcement cited pay as an important influence. Other agency types leaned closer to ambulance services at 39%. In most cases, quality of leadership was the next most often cited as an important influence on leaving. This was not the case for those from law enforcement, who cited educational requirements (25%), or other agency types, who cited lack of or quality of retirement/pension benefits (25%), second most. Medical response/first response agencies named burnout/mental health (30%) and shift/workweek schedule (25%) as important influences at a significantly higher rate, though burnout/mental health was also high for ambulance services (25%).

Table 5. Factors Influencing Non-Renewal of EMS Certification by Agency

		ice Service =541)	1	Fire Department (n=505)				Medical Response/ First Response Agency (n=128)		Law Enforcement (n=60)		Other Agency (n=128)	
	Important Influence	Moderate Influence	Important Influence	Moderate Influence	Important Influence	Moderate Influence	Important Influence	Moderate Influence	Important Influence	Moderate Influence			
Pay, or lack of pay	45.56%	18.52%	23.46%	15.11%	50.00%	9.38%	27.12%	10.17%	39.06%	14.06%			
Lack of or quality of Retirement/Pension Benefits	30.00%	19.63%	17.30%	12.52%	27.34%	17.19%	22.03%	11.86%	25.00%	15.62%			
Moved out of Indiana	13.54%	1.67%	9.15%	1.39%	14.84%	2.34%	3.39%	0.00%	14.84%	2.34%			
Time Commitment	11.52%	16.36%	12.75%	19.72%	10.94%	16.41%	15.25%	23.73%	6.25%	10.94%			
Educational Requirements	13.73%	12.99%	18.16%	18.96%	15.75%	14.96%	25.42%	23.73%	18.75%	12.50%			
Age/Physical Requirements	16.33%	12.62%	15.11%	11.93%	14.06%	11.72%	10.00%	11.67%	14.84%	12.50%			
Quality of Agency Leadership	33.02%	20.59%	23.26%	15.11%	31.25%	21.88%	18.33%	10.00%	20.31%	12.50%			
Relationship and interaction with crew members	14.29%	14.10%	9.94%	12.13%	16.41%	12.50%	6.67%	10.00%	10.94%	7.81%			
Burnout/Mental Health	25.42%	16.70%	18.92%	16.73%	29.69%	14.84%	11.67%	10.00%	20.31%	13.28%			
Shift/Workweek Schedule	16.20%	15.08%	11.75%	12.15%	25.00%	10.16%	11.67%	10.00%	10.16%	14.84%			
Desire to pursue other Healthcare Opportunities	20.78%	6.33%	7.36%	5.37%	17.97%	7.03%	10.00%	6.67%	27.34%	6.25%			

Source: Indiana EMS Retention Survey: 2023



Top Influences on Retention by Position Type

Former career EMS workers and those who worked in both career and volunteer capacities most often rated pay as an influence on their decision to leave. For former career EMS workers, 63% called it either an important or moderate influence. For those who did EMS as both a career and volunteer effort, 64% said it was an important or moderate influence. The career and volunteer respondents also frequently cited the lack of or quality of retirement/pension benefits (56%), burnout/mental health (50%), and quality of agency leadership (50%) as reasons they quit. Just over 30% of former career EMS workers named quality of leadership as an important influence on leaving. The top influence for volunteers who left was the educational requirements, with 22% flagging them as important.

Table 6. Factors Influencing Non-Renewal of EMS Certification by Position

	Volunteer (n=302)		Career - Primary Source of Income (n=503)		Career and Volunteer (n=124)	
	Important	Moderate	Important	Moderate	Important	Moderate
	Influence	Influence	Influence	Influence	Influence	Influence
Pay, or lack of pay	13.29%	10.96%	45.31%	17.77%	43.55%	20.97%
Lack of or quality of Retirement/Pension Benefits	6.98%	8.64%	28.52%	19.73%	37.90%	18.55%
Moved out of Indiana	4.67%	0.33%	13.84%	2.34%	16.94%	0.81%
Time Commitment	16.28%	20.60%	10.39%	15.10%	13.71%	16.00%
Educational Requirements	21.67%	21.33%	12.13%	12.52%	15.32%	17.74%
Age/Physical Requirements	15.95%	10.30%	13.48%	11.13%	20.97%	14.52%
Quality of Agency Leadership	19.93%	15.28%	30.47%	16.99%	32.26%	17.74%
Relationship and interaction with crew members	10.96%	9.30%	11.13%	12.11%	12.90%	14.52%
Burnout/Mental Health	11.33%	14.33%	25.00%	16.99%	31.45%	18.55%
Shift/Workweek Schedule	7.00%	12.67%	15.69%	13.73%	17.74%	14.52%
Desire to pursue other Healthcare Opportunities	6.00%	3.00%	21.09%	6.25%	14.52%	12.90%

Source: Indiana EMS Retention Survey: 2023

Additional Detail on Other Influences on Retention

Survey respondents were given the opportunity to provide additional thoughts and feedback in an open text box. Themes from these responses are provided in Table 7 below. Out of those individuals who provided open text feedback, 20% of the responses were centered around issues with continuing education. These issues took a variety of forms including that the requirements are too high to complete for volunteers/part time EMS workers or those who may be unaffiliated with an agency, that the cost of CEU was too expensive compared to the pay, or that there were issues obtaining this training during the COVID-19 pandemic. This indicates there may be opportunities to explore adjusting these requirements. The second most frequent theme (n-=73) was that individuals left the EMS workforce due to their desire to retire. Another 10% of the responses were in alignment with the quantitative survey findings that indicated low wages were a driving factor in their decision to leave the workforce. Of note, 32 individuals mentioned that they "loved" working in EMS even though they made the difficult decision to exit the workforce. These individuals exited the workforce for a variety of different reasons but still made time to note how much they enjoyed working in EMS.

Table 7: Commonly reported themes influencing retention

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Row Labels	Theme	Percent	Selected Responses		
Issues with continuing 93 education		19.8	" help out a volunteer department from time to time but state requires too much CEU and time to keep up." "The continuing education was more expensive than my certification" "The main reason for not renewing my license was due to the fact you needed a supervisor signature to sign off on skills and [continuing] educational requirements. I was not employed with a		
Retired	73	15.6	company at the time, and I was not aware of any alternatives to getting signed off." "I retired after 40 years of service"		
Low wages	44	9.4	"I needed a higher paying job to support [my husband]"		
Physical and Mental health issues	40		"My experience was great as an EMT for many years. I simply decided at my age and health issues it was time to step aside and let others carry on. I appreciate the opportunity I had to serve my community. My department was awesome"		
			"After several spine surgeries and chronic pain from 25 years of service I was unable to continue in patient care"		
			"PTSD is a real health issue. I severed for 43 years from High School until I retired because of PTSD."		
Loved Working in EMS	32	6.8	"Kudos to Joel Thacker and staff on creating EMS division separate from Fire division"		
3	0.0		-	3.3	"I loved being a first responder and the people I worked with"
Pursued opportunity in another healthcare field	27	5.8	"I decided to advance my career by becoming an Emergency Room Nurse"		
Transitioned out of field	26 5.		"Indiana's EMS system is great! I loved my career and only left to become a Commissioned Naval Officer."		
		5.5	"I retired from the fire department and became a full-time police officer, so I did not keep my EMR certification."		
			"I slowly took on work elsewhere, not in the medical field. I left primarily due to the career change."		
Issues with renewal	24	5.1	"I just missed the deadline to renew mine and was confused on the process with no one to guide me on how to renew it."		



Table 7: Commonly reported themes influencing retention

	Count of		
Row Labels	Theme	Percent	Selected Responses
			"I thought I had clicked submit to renew but I either didn't or it didn't go through for some reason. This is the only reason I am no longer certified."
			"I could not renew my Indiana license due to their requirements for out-of-state licensure."
legues with agency leg derabin	19	4.1	"I really enjoyed the work, but lack of appreciation and guidance from management made me not want to do the work anymore. Changing employers was also considered, but after talking to peers and hearing many of the same concerns and complaints, I decided to just let the certifications expire."
Issues with agency leadership	19	4.1	"There is way too much politics and who knew who, rather than based on quality of individual performance."
			"My experience with a profit based corporate agenda and poor leadership led me to leave the industry altogether."
Moved out of state	18	3.8	"If anything comes up in the future for something in Indiana, I will renew my Indiana license"
Requirements to re-certify after lapse are too high			"I do wish I could continue but I do not want to have to sit through 6 months or more of training again. I would renew it if I could just take a remedial class and retest."
	16	3.4	"I was a volunteer, allowed EMT to expire due to having child around time of expiration date. I would have loved to keep it, just didn't have the time at the moment for recertification. More than likely won't get it again since I'd have to go through class again and don't have that time available at the moment."
			"I let my paramedic go due to health issues, but I have been given the chance to get it back if I took a refresher class. The problem is the lack of an available class."
Transitioned to Other EMS Role	12	2.6	"deciding to drop back to EMT basic."
			"The amount of people abusing the 911 system is also a big influence on my decision to quit EMS"
Dissatisfaction with EMS system	10	2.1	"The current EMS frame of mind seems to be that intervention is necessary and the responsibility of a person's health is taken by the state, rather than the individual."
			"The reason I quit is because the healthcare system leaves people who need it behind"
Poor overall experience	9	1.9	"I realized I just don't have the temperament"
Family concerns	7	1.5	" my kids became my priority"
Unable to fulfill certification requirements	5	1.1	"Having to be affiliated with an agency to renew at the time wasn't possible"
Issues with crewmembers	4	0.9	" a crew that caused me to question if there would always be someone there to have my back"
Lack of respect	4	0.9	"Paramedics are looked down upon by other medical professionals"
Unable to balance work/life	3	0.6	



Table 7: Commonly reported themes influencing retention

Row Labels	Count of Theme	Percent	Selected Responses
Unable to find a position	2	0.4	
Planning to re-certify	1	0.2	

Note: Selected responses are not provided for themes with less than 4 associated responses to maintain anonymity.



Opportunities

- Consider new compensation strategies. Generally, wages and benefits for EMS workers are a top challenge and the top driving factor for those exiting the field. Respondents who worked in metro and mixed metro/rural areas were significantly more influenced by low wages than those in exclusively rural areas, and those working in fire departments or law enforcement were less influenced by pay compared to workers in other agency types (ambulance and medical response). Differences in pay prioritization by rurality may be due to the difference in the amount of downtime per shift in less populated areas, which could contribute to overall employee satisfaction and wellbeing. In response to those who prioritized pay, EMS organizations may consider exploring salary adjustments or additional compensation measures to recognize and reward professionals in new ways, such as stipends (referral, sign-on, or retention bonuses), paying for training, or implementing earn-and-learn strategies (hiring untrained and inexperienced individuals in a non-licensed role, providing training, and promoting to a licensed role after training completion).
- Strengthen agency leadership. The quality of agency leadership was an important influence among
 over one-fourth of respondents, higher among more experienced professionals and those working in
 ambulance service or first response. To strengthen EMS leadership development, policymakers may
 consider investing in training courses for personnel who move into leadership positions or implementing
 mentorship programs that pair more experienced staff with newer team members to nurture leadership
 skills in younger or less experienced staff leaders.
- Encourage a positive workplace culture. Organizational culture findings (such as relationships with crew members and shift/workweek scheduling) did not rise as one of the most important influences of remaining in EMS but were ranked higher among those EMS workers who had less than one year of experience. As such, these factors may be especially important to retaining early career EMS workers within the field. To support a positive workplace culture, organizational leaders should consider developing a culture where employees feel seen and heard, including considerations on scheduling preferences or working with certain colleagues. Agencies could consider developing both top-down and bottom-up feedback mechanisms as an alternative to a linear chain of command. Organizational policies that encourage transparency, communication, and employee engagement between leadership and their staff both encourage trust and contribute to employee satisfaction.
- Address burnout. Nearly 20% of respondents indicated burnout as an important influence in their decision to leave EMS. EMS leaders should consider additional research into other state approaches and consider supporting pilot projects that reduce EMS provider burnout. Strategies to reduce burnout may include establishing flexible shift schedule options, targeted resiliency training,³ or retaining a wellness coordinator.⁴ Additionally, as a part of employer benefit packages, organizations should consider ensuring that benefits offerings include access to confidential, high-quality behavioral health and substance use care.
- Acknowledge EMS as a pathway to other healthcare careers. Many former EMS workers reported their pursuit of other healthcare opportunities was an important or moderate influence in their reasons for leaving EMS. Although it may seem counterintuitive to long-term retention, formal acknowledgement of the role of EMS as a stepping stone to health sector careers through the development of formal career pathways or bridge programs may support short-term recruitment of EMS workers to fill critical workforce gaps.

³ SAMHSA Disaster Technical Assistance Center Supplemental Research Bulletin First Responders: Behavioral Health Concerns, Emergency Response, and Trauma. 2018. Available at: https://www.samhsa.gov/sites/default/files/dtac/supplementalresearchbulletin-firstresponders-may2018.pdf

Governor DeWine Announces Wellness Support for Dozens of First Responder Agencies. 2022. Available at: https://governor.ohio.gov/media/news-and-media/Governor-DeWine-Announces-Wellness-Support-for-Dozens-of-First-Responder-Agencies-11032022