



2023

Pulse of 9-1-1

NENA & Carbyne
State of the Industry Survey

Overview

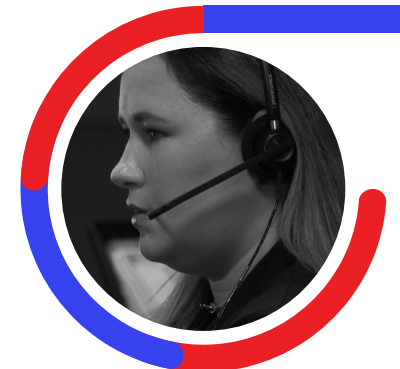


Carbyne, with the assistance of NENA, conducted a comprehensive State of 9-1-1 Survey in May/June 2023. This inaugural survey gathered insights from professionals across all levels of emergency services in North America. Nearly 850 people responded, dedicating their time and perspective to answer a wide range of questions relating to their call centers, their role, and their personal response to the challenges and stresses of their mission. In addition, we looked at the changing influence of technology on their workplace, the difficulties, and the potential.

This report sheds light on the major challenges, perspectives, and aspirations of individuals involved in the 9-1-1 profession of telecommunicators, dispatchers, management, and leadership roles. The survey displays a very diverse array of experiences and opinions within the 9-1-1 industry, together with some key issues that impact call centers of all sizes across the country. While we face clear challenges, it is our hope that by gathering the collective wisdom of the entire ecosystem, we will empower industry leaders and decision-makers to drive positive change and shape the future of emergency services.

Your voice matters. We are grateful to everyone who responded, providing not only figures and data, but also your heartfelt words of wisdom, hope and frustration.

Credits:
National Emergency Number Association
Carbyne



Key Insights



The 9-1-1 industry is currently facing a crucial turning point, grappling with significant challenges in staffing, technology, wellness/mental health, and Diversity, Equity and Inclusion (DEI) within the workplace. A staggering **82%** of respondents' call centers report being understaffed. These staffing challenges span from difficulties in hiring new personnel to problems with employee retention. The consequences of these challenges are alarmingly evident. The results reveal wellness/mental health issues such as burnout, anxiety, and PTSD among emergency call center personnel at every level and an aging workforce without enough younger employees to backfill retirees. Additionally, there are shifting perspectives regarding DEI within both the workplace and the community served by these 9-1-1 centers. Consequently, there is a need for cultural change within emergency communication centers, with many employees feeling that management is unsupportive or slow to respond to these needs.

Staffing

75% of survey participants attributed staffing issues primarily to the high-stress environment, while almost **65%** cited low wages as the main deterrent.



Technology

- **83%** of respondents say they experience high call volumes multiple times weekly, including a substantial amount of misdials clogging up the lines. Additionally, **33%** handle spam calls and **29%** grapple with incident-specific surges.
- Outdated technology is a recurring issue, with **60%** of participants noting that their centers regularly experience outages affecting either their phone or computer systems or both.
- Access to geolocation services is limited, with less than half of the respondents indicating the availability of services like RapidSOS and/or Carbyne in their centers.



Wellness/Mental Health



- Alarming, **74%** of respondents revealed that their 9-1-1 centers are plagued by staff burnout, with **83%** observing early warning signs such as anxiety, fatigue, and low energy levels.
- Despite the positive fact that over **90%** of the participant's employers provide support services, it's worrisome that only **34%** of employees and an even smaller percentage of telecommunicators (**18%**), make use of these facilities. This exposes a gap between the provided support and employee engagement, indicating the need for better promotion of available resources and a cultural shift towards acceptance of help.
- Around **36%** of participants identified management as the most stressful aspect of their job, above incoming calls.

Training and Preparedness

Less than half of the respondents felt adequately equipped to handle any incident. Around **38%** felt ill-prepared to deal with an active shooter situation, **25%** felt they lacked training for mental health calls, and 18% were uncomfortable managing civil disturbances or bias-related events.



Demographics



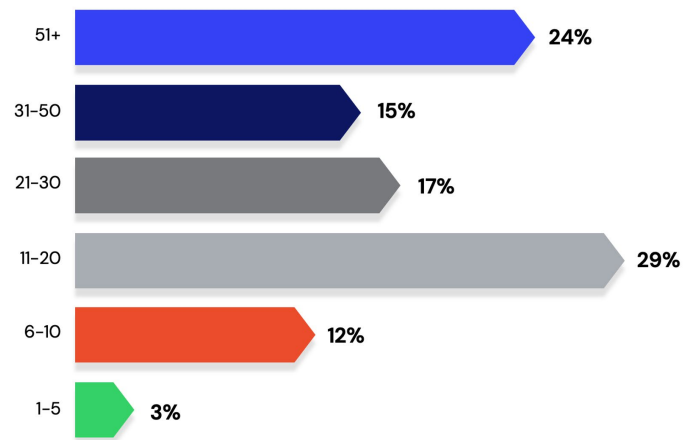
- The industry exhibits a significant female representation, with women making up **68%** of survey respondents. This female predominance is seen across a range of roles in the industry, maintaining a fairly even distribution: Trainees at **56%**, Dispatchers at **77%**, Telecommunicators at **70%**, Supervisors at **69%**, Managers at **65%**, Deputy Directors at **44%**, and Directors at **62%**.
- Demographically, call center staffing is aging. Approximately **60%** of respondents are between 30-50 years old. With only **12%** of respondents below the age of 30, the number of young people joining is not nearly enough to replace the number not only retiring but also those burning out and leaving in their fifties. The older, more experienced call takers are leaving the industry.

Diversity, Equity, and Inclusion



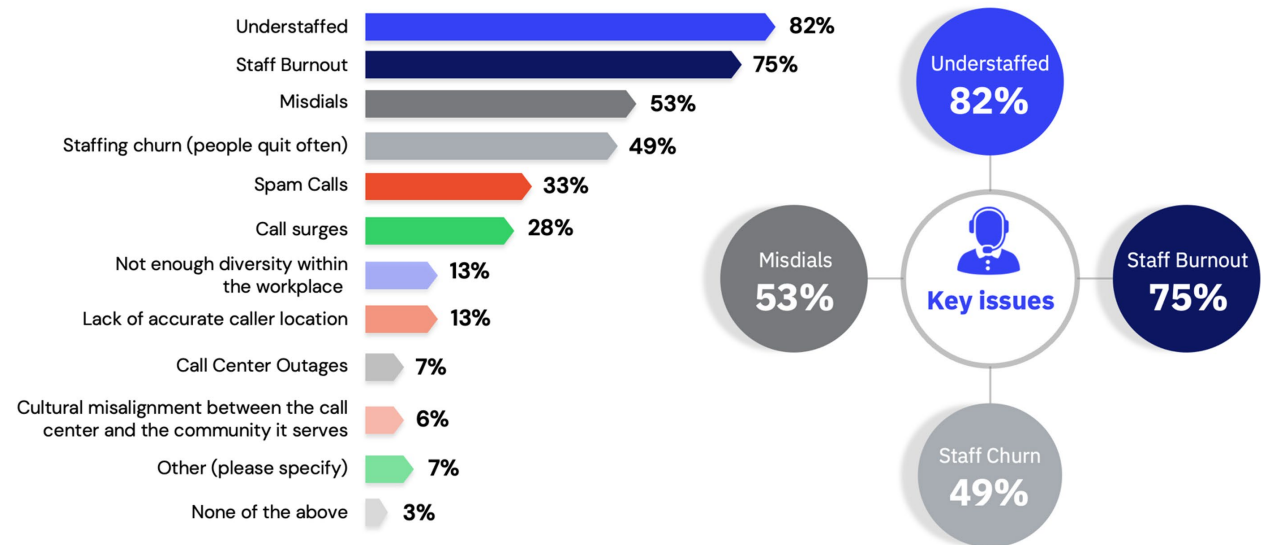
- While a majority, **56%** of participants, felt their workplaces were mostly or entirely inclusive, **42%** observed a lack of diversity within their leadership ranks (supervisors, managers, directors).
- A comfortable majority of **95%** felt at ease expressing their identity, culture, and background at work.
- A quarter of participants reported that their center's demographics do not accurately reflect the communities they serve, and nearly **40%** do not reside within the jurisdiction they serve.

Q How many people work in your call center?



All sizes of call centers were represented in the survey. In general, they all shared the same challenges, such as lack of staff, call surges and misdials.

Q Does your call center face any of the following issues?



- The primary issue faced by **82%** of all call centers is understaffing
- This leads to the additional challenges of staff burnout (**75%**) and staff churn (**49%**)
- Adding to the pressure caused by a lack of staff, is the huge number of misdials (**53%**)

7.5% of respondents checked “Other” when asked about the issues their center faces. Their feedback falls into several categories, including:

- **31%** Management issues
- **21%** Staffing turnover
- **17%** Outdated or malfunctioning equipment
- **15%** Toxic workplace
- **10%** Training
- **6%** Salary



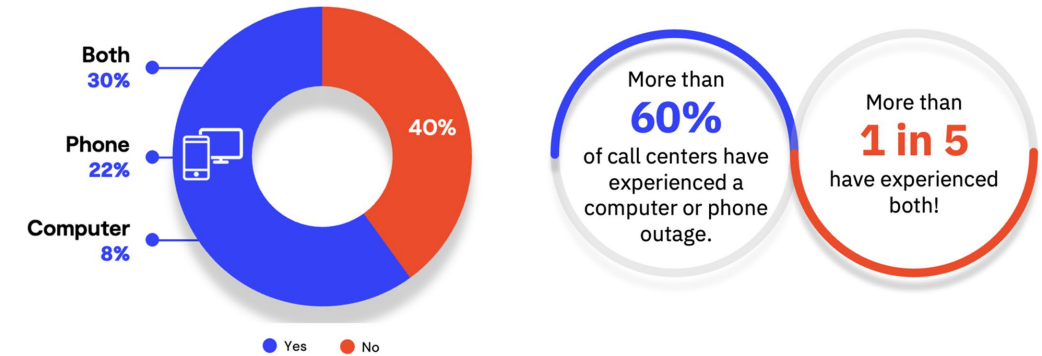
Section 2

Technology Challenges & Innovation

The survey results depict a reluctance among 9-1-1 centers to integrate new technologies into their systems. Importantly, the data show that a substantial number of respondents lack a fundamental understanding of these emerging 9-1-1 technologies, with confusion persisting about their specific functionalities and potential advantages. This knowledge gap fuels a degree of uncertainty as to whether such technological advances could effectively address longstanding issues such as staff shortages and elevated call volumes.

Q Has your call center experienced an outage in the last 12 months?

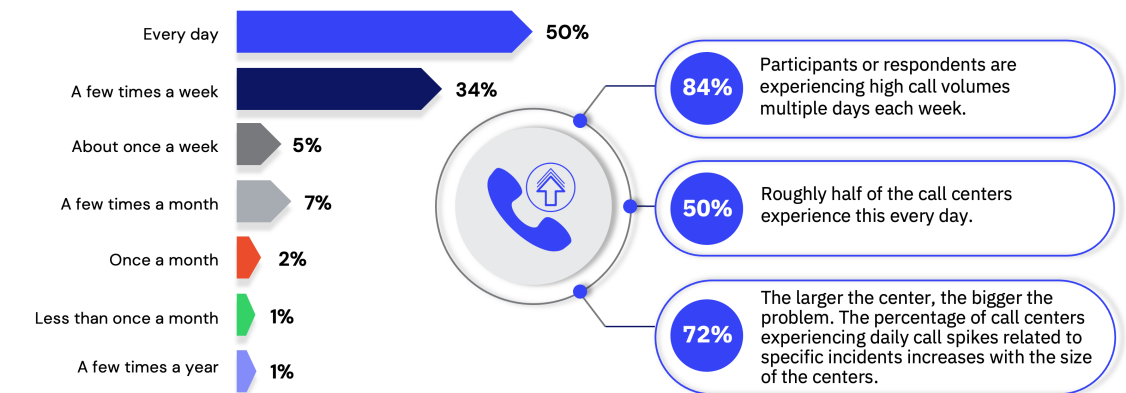
(The call center computer systems or phone service carrier went down, and you were unable to receive calls)



- 60% of call centers have experienced a computer or phone outage in the last year
- More than **one in five** 9-1-1 centers have experienced both

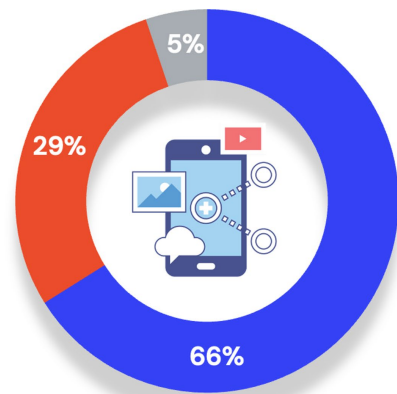
Q How frequently do you experience high call volumes related to a specific incident?

(For example, automobile accidents, structure fires, weather events, reported alleged crime in progress, etc.)



Q Does your center utilize NG911?

(Next Generation 9-1-1 is a digital protocol that allows 9-1-1 call centers to interact with video, texting, VoIP, and other rich media technologies).



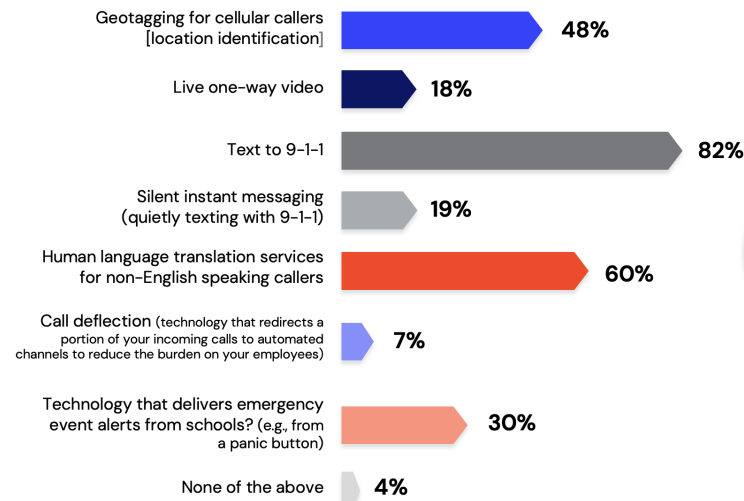
● Yes ● No ● I am not sure

66%

say their centers use NG911

The majority of respondents are referring solely to text-to-911, not ESInet or rich media like video, location or automated translation.

Q Does your center have multimedia capabilities?



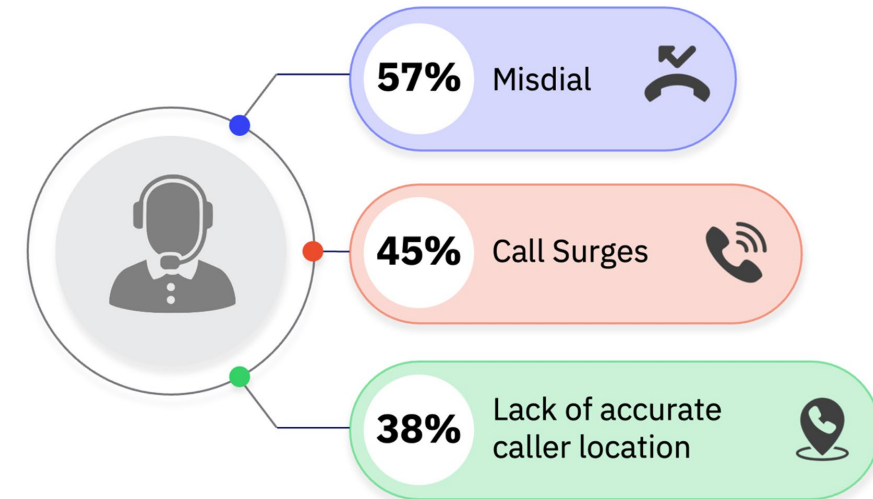
82%
Participants or respondents have text-to-911

60%
have human language translation (not AI)

Less than half of centers have location identification

Only **18%** have video

Q Please rank the challenges your call center faces, with 1 being the most important issue



Note: Respondents ranked each challenge above either 1st or 2nd priority

- Misdial was ranked 1st or 2nd by **57%** of respondents. This issue has increased exponentially with the growing use of smartphones, smart devices and apps that include easily-triggered emergency call buttons.
- Call Surges were ranked 1st or 2nd by **45%** of respondents.
- Lack of accurate caller location was ranked 1st or 2nd by **38%** of respondents.
- Interestingly, the near-daily high volume of calls were only ranked a 1st or 2nd challenge by **22%** of respondents.

Section 3

Staffing

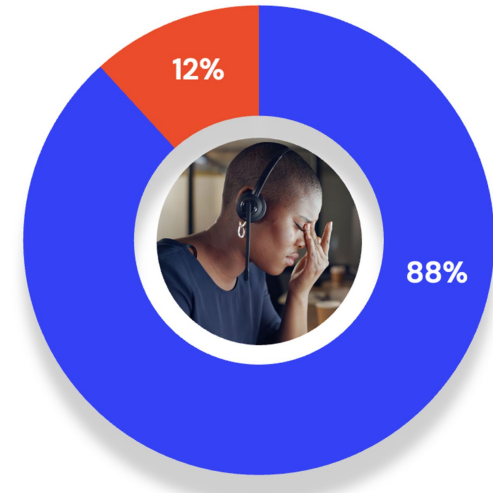
Staffing issues continue to pose the most significant challenge to emergency call centers. The sector is facing considerable difficulties in not just hiring, but also retaining its workforce. A high proportion of the respondents believe that the formidable stress levels associated with the job, combined with subpar remuneration, are major factors discouraging the influx of new talent.

This concern is underscored by a recent 9-1-1 staffing survey conducted by the International Academies of Emergency Dispatch, which painted a grim picture of the staffing crisis. This Carbyne and NENA survey found, "Nearly one-third of the centers reported stunning vacancy rates in 2022. Thirteen [centers] reported that **71%** or more of positions were unfilled; 92 reported a vacancy rate between **51%** and **70%**; and 202 reported [vacancy] rates from **31%** to **50%**... Nearly every participant reported a loss of employees in 2022.

*International Academies of Emergency Dispatch (IAED) - National Association of State 911 Administrators (NASNA) Staffing Survey Results 2023, p3, "A Deep and Wide-Ranging Problem".
<https://www.emergencydispatch.org/in-the-news/press-releases/d1ff0c4c-38ca-4e4f-8a96-cb6d9f2e5f63>



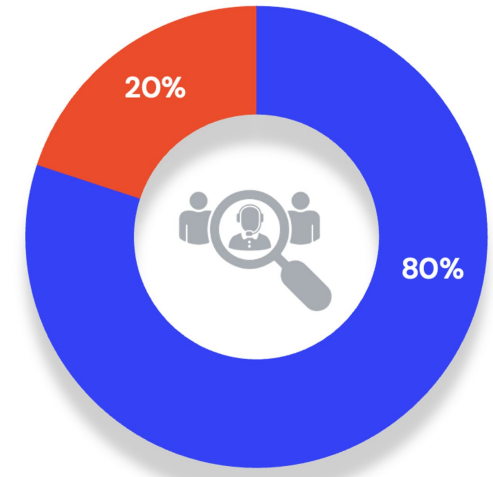
Q Does your center struggle with staffing shortages?



More than **88%** of respondents struggle with staffing shortages, which increases with the size of the center, to **93%** of large centers.

● Yes ● No

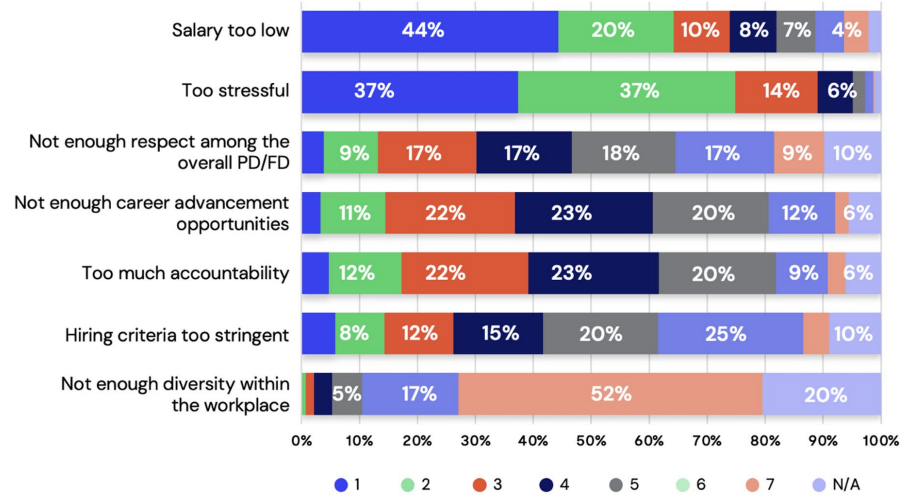
Q Does your center struggle to hire new employees?



● Yes ● No

Q Why do you think people are resistant to working in 9-1-1 centers?

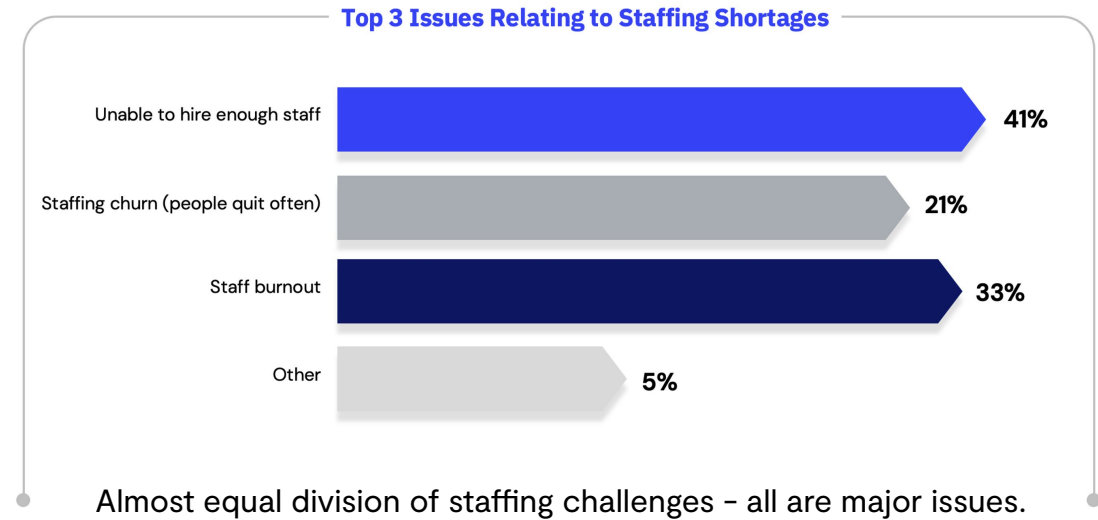
(Rank each, with 1 being the most important)



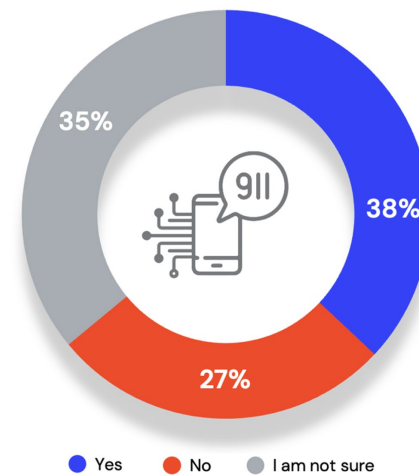
These results are consistent with the IAED NASNA Staffing Survey Report that asked 9-1-1 employees why they left their jobs; the top reasons cited were the work hours, salary and stress.* The result was that when offered what they considered a better opportunity, these employees took it.

*International Academies of Emergency Dispatch (IAED) - National Association of State 911 Administrators (NASNA) Staffing Survey Results 2023, p5, "Reasons Why 911 Employees Left Their Jobs".
<https://www.emergencydispatch.org/in-the-news/press-releases/d1ff0c4c-38ca-4e4f-8a96-cb6d9f2e5f63>

Q Please rank the following staffing challenges that your 9-1-1 center faces.



Q Do you believe technology can make it easier for 9-1-1 centers to manage staffing shortages?



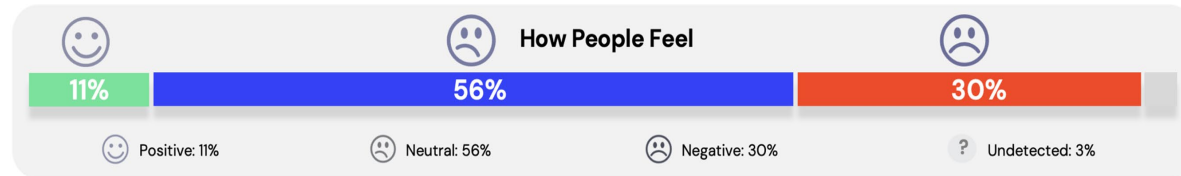
Note: Almost evenly split between unsure or positive about the technology

Technology optimism by role:

Managers and Directors are more optimistic about the potential benefit of technology than other employees.

Only **21-28%** responded No vs. **27-37%** of agencies

Q Why did you answer this way?



Respondents' opinions varied based on whether they believe that technological solutions can be found to reduce the level of stress, including the ability for staff to work from home, without adding to the stress load by having to constantly learn new technology. There is a general agreement that the human touch and intuition can never be replaced, along with the hope that by reducing the number of active calls through triaging and rerouting, telecommunicators will have more downtime, reduced stress and therefore less burnout.

Positive

"If people find out this job isn't as difficult or stressful as it used to be due to newer technology they're likely to be more interested in doing the job."

25 respondents mentioned technology can help staff to work from home: "Ability to answer calls from anywhere. People want to work from home today, that can happen with NG911."

"Hopefully technology can help cut down the amount of unnecessary calls in the future allowing us to get more done with fewer people."

Neutral

"There is a lot more to the issue than technology can fix. Does Technology make it easier? Yes, but I still need personnel in the seats to realize that."

"While technology for 911 centers has grown in leaps and bounds, there is no technology that can replace the human compassion that is required to handle a 911 call."

"Although technology can be a good thing, this job also requires a decent amount of human nature and intuition."

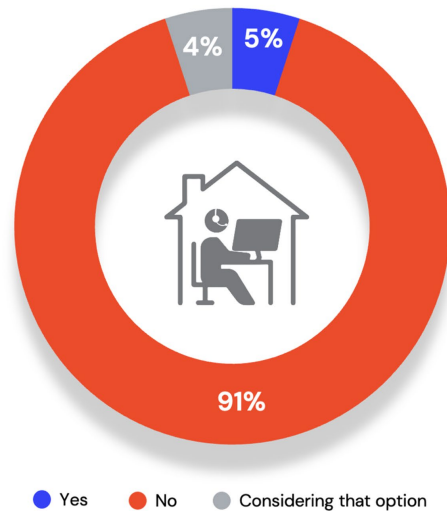
Negative

"While I believe advancements in technology can greatly improve our job, I don't think it solves the most principal issue with the job, which in my opinion tends to be stress and pay."

"Technology doesn't find people that qualify, or change the staffing shortages or the disrespect from others in the workplace."

"It takes a special kind of person to handle 911...You are put under immense stress while being told to multitask and use all of your senses for extended periods of time, without breaks, while being underpaid, under-appreciated and understaffed. Sight, hearing, heart, mind, body, every sense. Not everyone can do that. Not everyone can remain calm and get help when a caller is attempting suicide over the phone, or a woman is screaming her baby isn't breathing. It doesn't matter what technologies you have in place, or how far it advances. If you do not have the mindset for this job, it will reject you."

Q Does your 9-1-1 center allow people to work from home?



Less than **5%** of respondents report their center allowing people to work from home.

In many of the preceding questions, the value of staff being allowed to work from home, at least partially, is frequently considered to have the potential to ease staff hiring and retention issues.

Q What factors prevent your center from allowing people to work from home? What challenges need to be overcome to allow people to work from home?

(Such as Technology, HR Policies, etc.)

Barriers to working from home

- **49%** of respondents refer to Technology, and an additional **6%** of respondents refer to equipment or computers

- **27%** of respondents refer to Policy
- **2%** of respondents refer to teamwork and an in-person support network
- **3%** of respondents refer to a lack of communication (and support)

Challenges to overcome

- **26%** of respondents refer to Technology
- **11%** of respondents refer to Policy
- **8%** of respondents refer to equipment
- **7%** of respondents refer to accountability
- **2%** of respondents refer to team/teamwork - "It takes direct teamwork to make a 9-1-1 Center successful. The team needs to be together in order to know when and how to assist."
- **1%** of responses refer to isolation, loneliness or lack of emotional support

It is commonly assumed that the lack of personal support and interpersonal communication for remote workers would make it difficult for telecommunicators to work from home. These responses suggest that this is actually not a concern for most respondents.

Given that the majority of respondents identify technology and the associated software/hardware requirements as the main barriers to remote work, it can be inferred that new technology could potentially provide the solution.

Section 4

Wellness/Mental Health

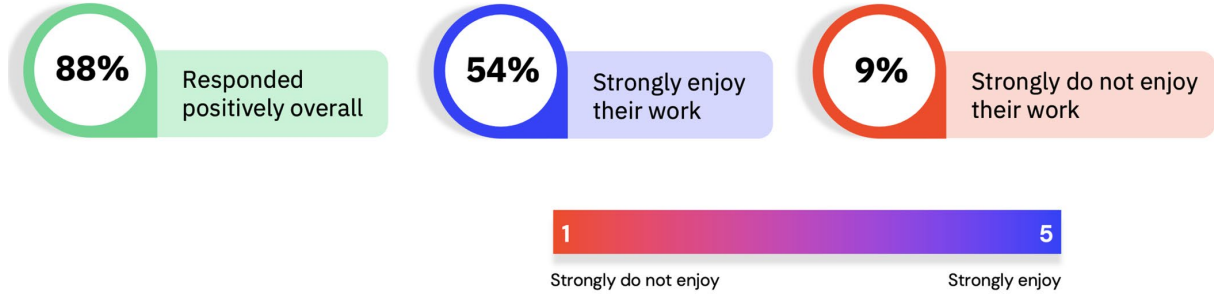


Wellness/mental health issues are reaching a critical level within the 9-1-1 center environment. The survey highlights an extensive presence of stress, burnout, and anxiety across all layers of 9-1-1 professionals in emergency communication centers, impacting everyone from telecommunicators to directors. A wide range of coping strategies, some beneficial and some detrimental, have been adopted by many respondents to deal with job-related stress. These range from negative tactics such as excessive drinking, self-isolation, and escapism to more positive strategies, including engaging in hobbies, exercising, spending time with pets and family, and turning to prayer.

Despite the considerable mental health support provided by many organizations, there is a pervasive stigma associated with seeking help in the industry. This stigma is brought into stark relief by the fact that while more than **90%** of participants say their 9-1-1 employers offer supportive services, a mere **34%** of employees, and an even lesser proportion of telecommunicators at **18%**, take advantage of these resources.

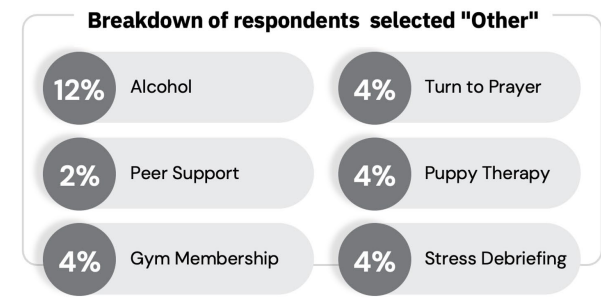
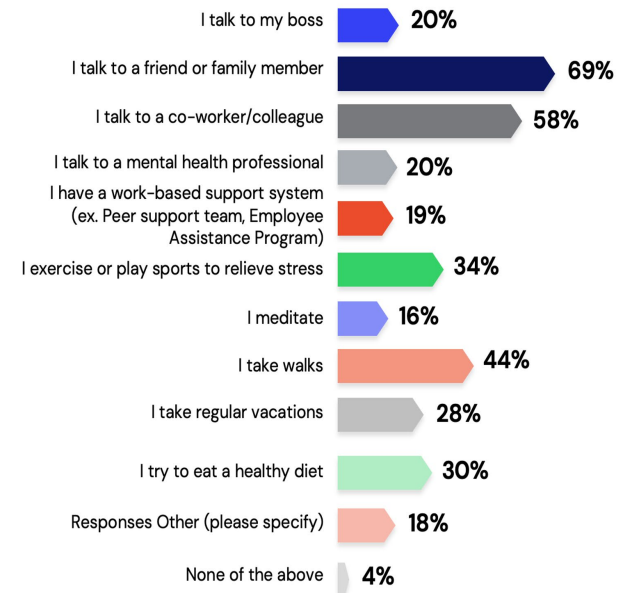
Q How much do you enjoy your work?

(Scale of 1-5, with 5 being the highest)

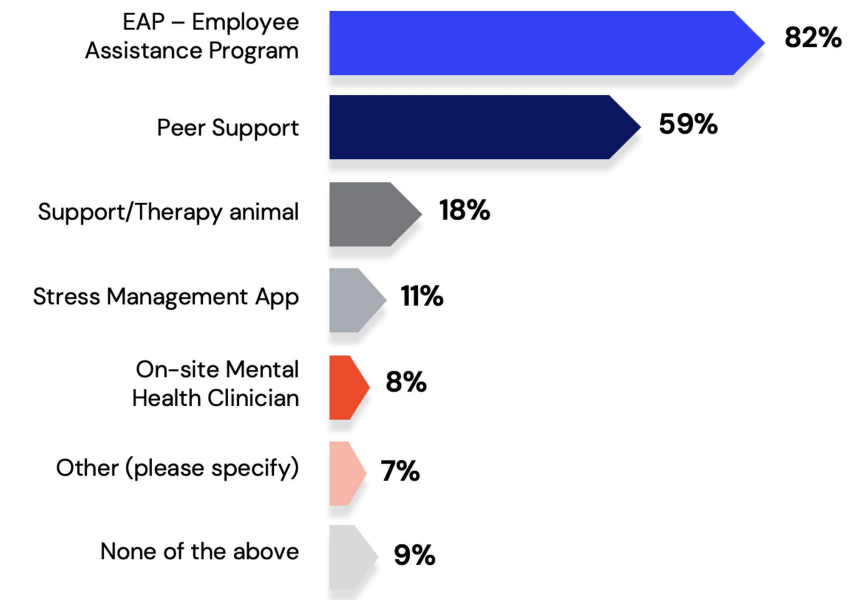


Despite the stress, it is clear that the great majority of respondents, approximately **88%** enjoy their work, while **9%** responded negatively to this question.

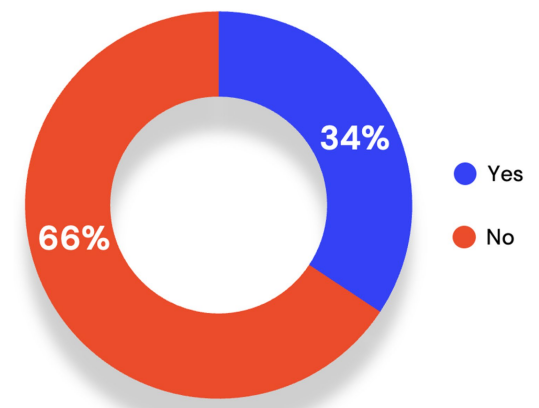
Q How do you process work-related stress?



Q Which of the following stress management services does your employer provide?

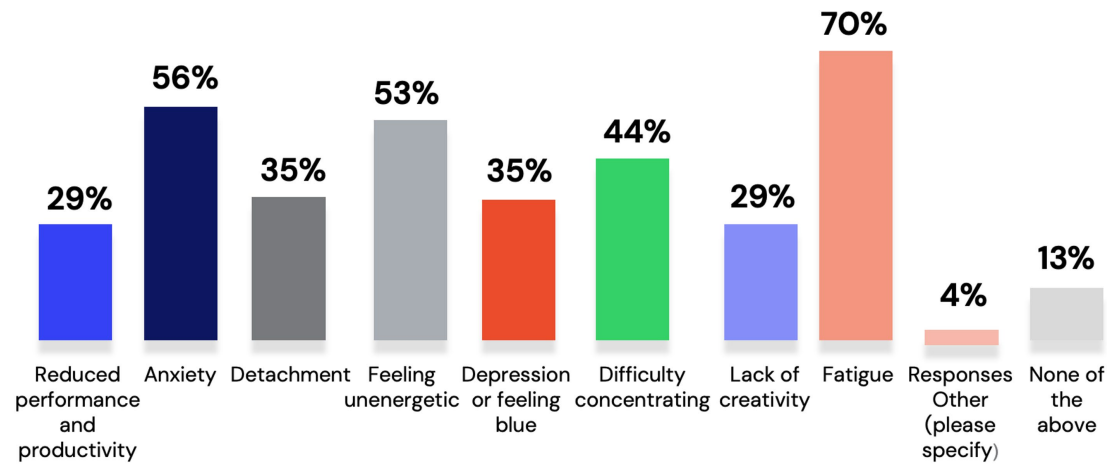


Q Do you use these services?



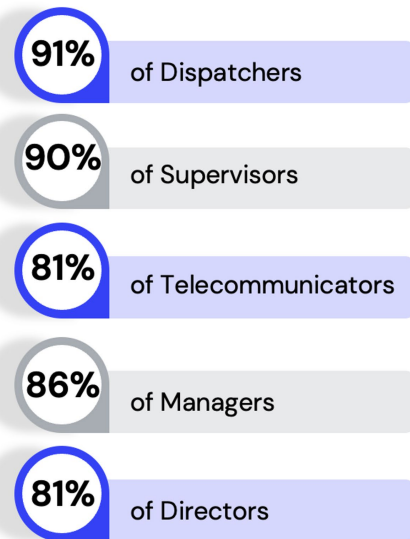
- More than **90%** of the respondents say their employers provide some form of support
- But only **34%** of employees use these services
- Of those employees who use the employer-provides services, only **18%** were telecommunicators compared with other roles

Q Regarding work, which of the following has applied to you within the past six months?



- 83% of staff surveyed have one or more symptoms
- More than 55% have anxiety, and 70% feel fatigued
- Only 13% do not have signs of burnout

The signs of burnout are not limited to only telecommunicators. Exhibiting at least one sign of burnout are:

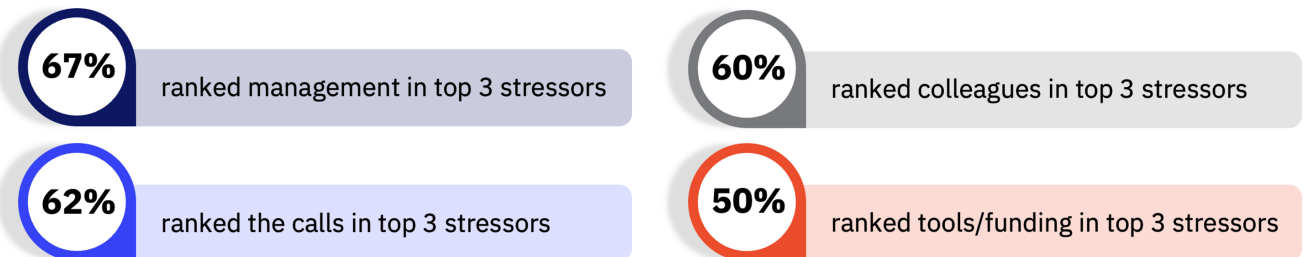
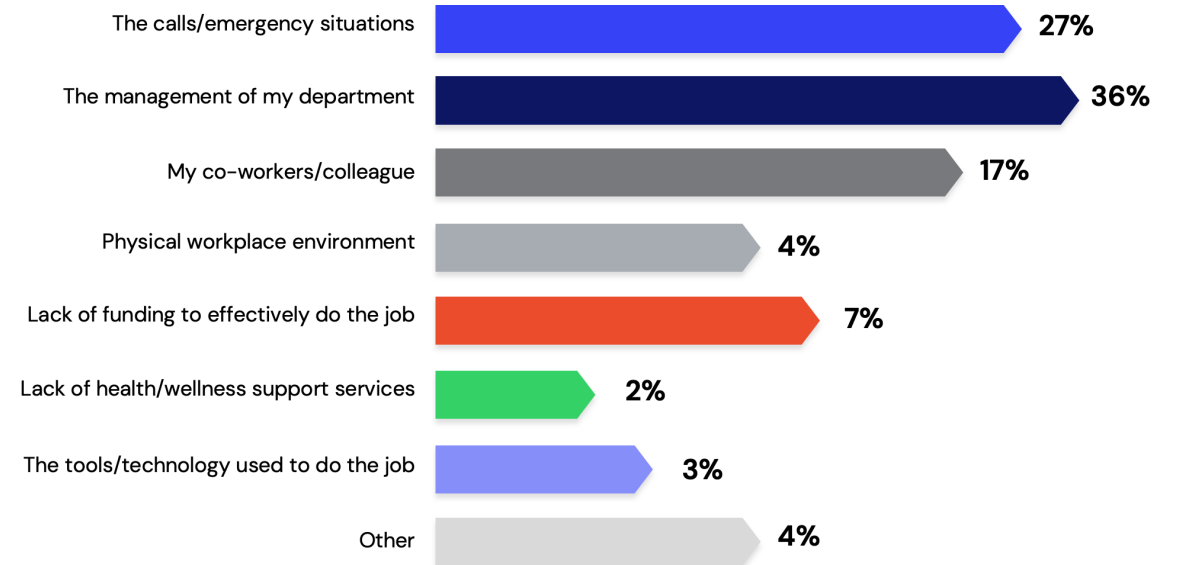


“I dread going into work. I fight the urge to demote or quit almost every day”

“Apathy, resentment, overused and undervalued, stuck.”

Q Rank the top most stressful parts of your job (1 being most stressful)

The stressful parts of the job are due to the **people** - those they work with, report to and try to assist.



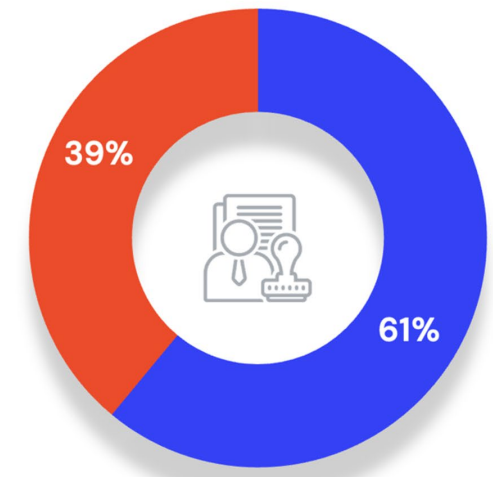
Section 5

Diversity within the Community



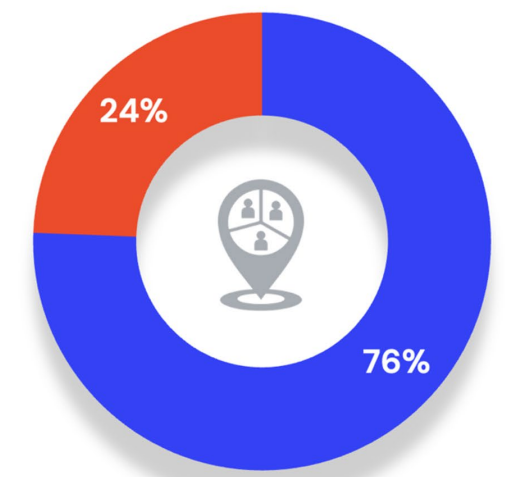
The focus on diversity, equity, and inclusion in 9-1-1 centers is an important element of the survey. An interesting finding pertains to the demographic alignment between the communities and the 9-1-1 center. Despite significant instances of demographic mirroring, there remains a sizable portion of responses that is notably misaligned. This discrepancy is significant, with a quarter of respondents acknowledging that their center's demographics do not accurately represent the communities they serve. Moreover, it is worth mentioning that nearly **40%** do not reside within the jurisdiction they serve, further emphasizing this demographic misalignment.

Q Do you live in the jurisdiction you work for?



● Yes ● No

Q Do the demographics of your center mirror those of the community you serve?



● Yes ● No

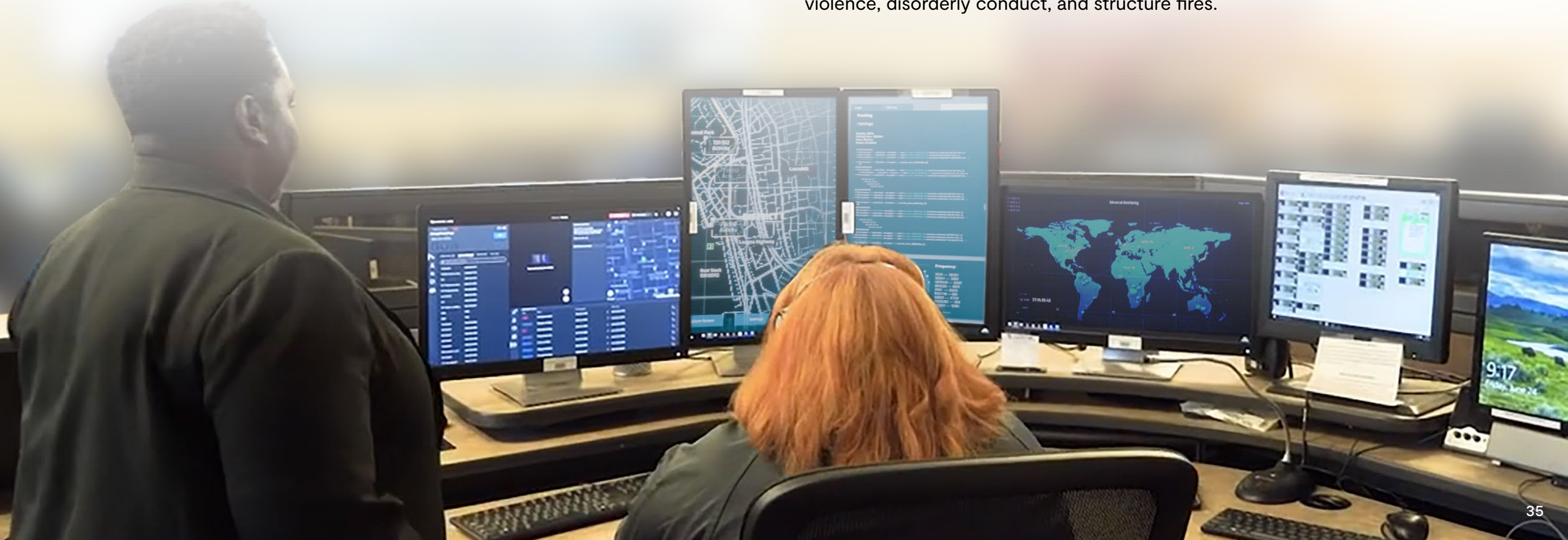
- **39%** of 9-1-1 center staff do not serve within their own jurisdiction and **24%** feel their center doesn't mirror the community it is assisting.
- **73%** of directors live in their own jurisdiction, which is the highest percentage of all roles.

Section 6

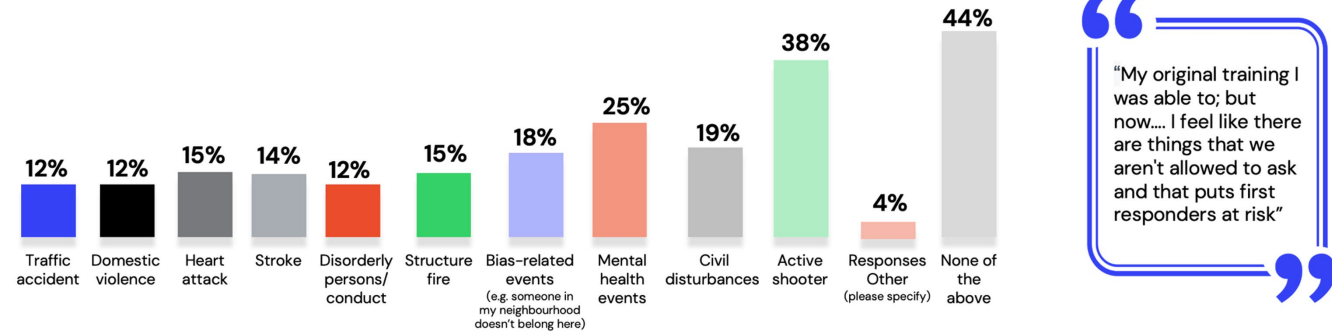
Training and Preparedness



Another area of interest revolves around staff training and preparedness. It was quite startling to discover that less than half of the respondents felt adequately equipped to handle any given incident. A substantial number of respondents felt ill-prepared to manage not only highly critical situations – such as active shooter scenarios, where approximately **38%** felt underprepared, or bias-related events, which **18%** were uncomfortable managing – but also regular, day-to-day incidents. Between **10%** and **15%** even confessed to lacking sufficient training for handling routine daily incidents like traffic accidents, medical calls, domestic violence, disorderly conduct, and structure fires.



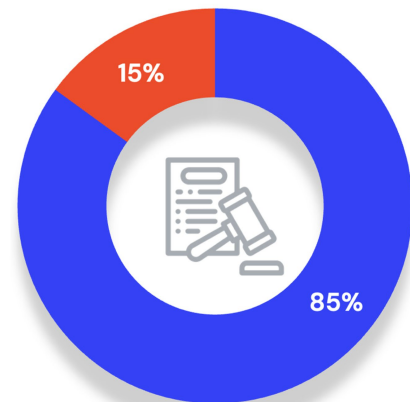
Q Of the events listed, which do you feel inadequately trained to handle?



“My original training I was able to; but now.... I feel like there are things that we aren't allowed to ask and that puts first responders at risk”

- Only 44% of respondents feel adequately trained to respond to most crises. Telecommunicators in mid-sized (11-30) 9-1-1 centers have a higher feeling of inadequacy.
- More than one in three telecommunicators don't feel trained to handle an active shooter, and one in four are unsure on how to handle a mental health event.
- 1% referred to feeling inadequately prepared for a mass/high call volume event.

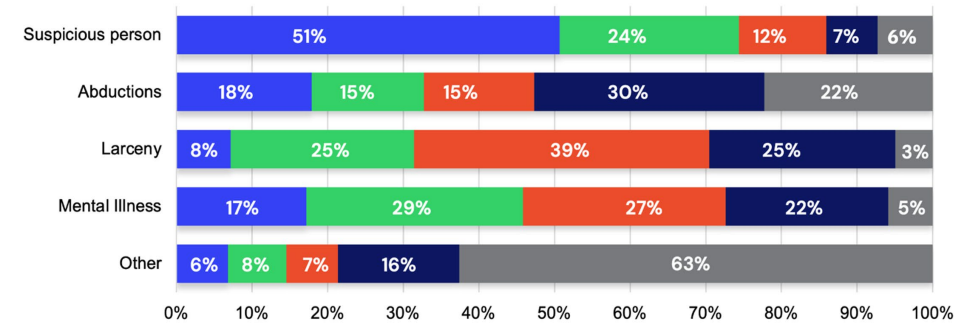
Q If a caller insists on a field-unit response no matter the situation, do they get one?



Note: Respondents report that the reason for sending a field-unit when one is requested, is likely due to enforcement of a legal policy.

● Yes ● No

Q Rank the following events on a scale of 1-5, with 5 being most often, which are misreported by callers most often.



Video/photo technology (and identification in future) can have huge impact on reducing misreported calls.

Suspicious Person reported 75% by 1st or 2nd rank

Mental Illness reported 46%

Abductions reported 33%

Larceny reported 33%

Section 7

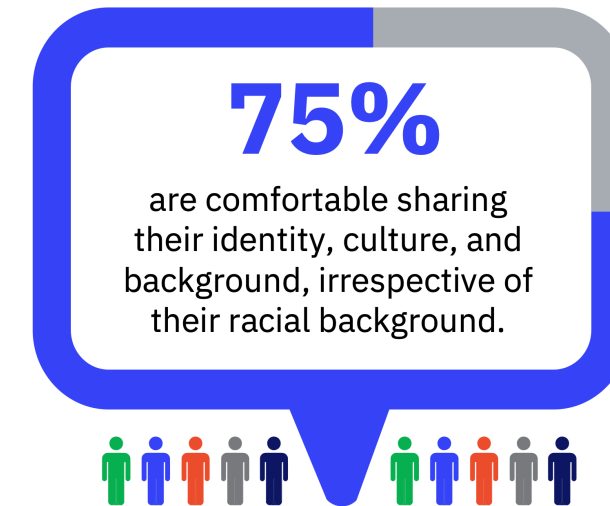
Diversity & Inclusion

The Diversity, Equity, and Inclusion (DEI) section of our survey focused on assessing the perceived diversity and inclusivity within 9-1-1 centers, particularly within their workplace environment and executive leadership. The findings offer a nuanced view of the current DEI landscape in these centers.



Interestingly, while respondents generally feel their workplace is diverse and inclusive, the same sentiment does not extend to their perceptions of management. Indeed, **42%** of staff do not perceive the executive team as diverse. This suggests a potential disconnect between the composition of the broader workforce and the executive leadership.

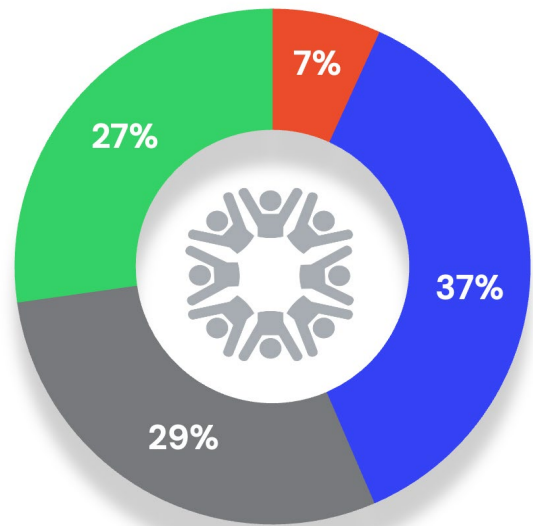
However, there are positive indications of inclusivity at the workplace level. Although **56%** of respondents believe their workplace is mostly or very diverse, a notable **75%** are comfortable sharing their identity, culture, and background, regardless of their racial background. This suggests a welcoming environment that promotes individual expression, even in less diverse workplaces.



Regarding gender, men and women responded similarly, with no discernible differences. However, it's important to note that respondents identifying as non-binary exhibited a lower level of comfort in sharing their identities, with **33%** stating they're mostly or very comfortable, **44%** somewhat comfortable, and a significant **22%** not comfortable.

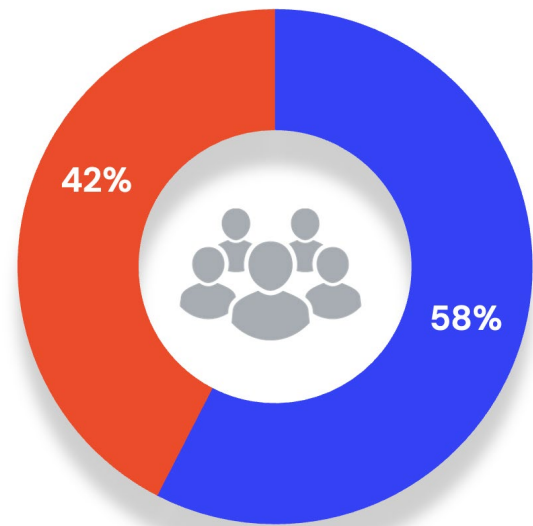
These insights reveal a mixed picture for DEI in 9-1-1 centers. While there are signs of a positive, inclusive culture, there is an opportunity for greater diversity in executive leadership.

Q In your personal opinion, how diverse and inclusive is your workplace?



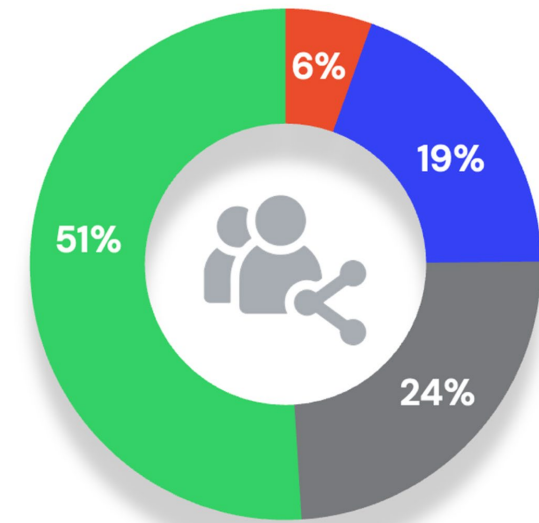
● Not inclusive at all ● Mostly inclusive
● Somewhat inclusive ● Very inclusive

Q Is your executive team (supervisors, managers, directors) diverse?



● Yes ● No

Q How comfortable are you sharing your identity, culture, and background in the workplace?



● Not comfortable at all ● Mostly comfortable
● Somewhat comfortable ● Very comfortable

- Overall, respondents believe their workplace is diverse and inclusive, but they do not believe the same about management.
- 42%** of respondents do not feel that the executive team is diverse.

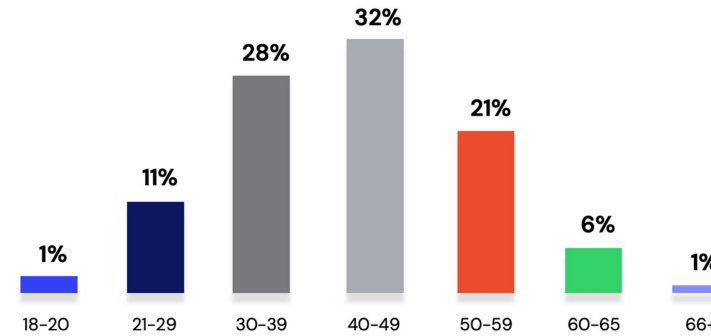
Despite **56%** of the respondents believing their workplace is mostly or very diverse, **75%** are mostly or very comfortable sharing their identity, culture and background, with no major differences based on race.

Section 8

Demographics



Q What is your age?



Rising Concern



The number of young people joining, is not nearly enough to replace the number not only retiring, but also those burning out and leaving in their 50s.

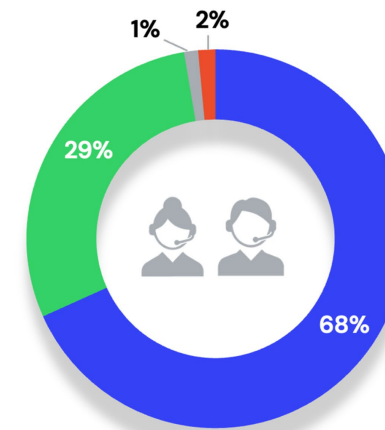
The older, more experienced call takers are leaving the industry.



Demographically, 9-1-1 center staffing is aging. The number of young people joining is not nearly enough to replace the number not only retiring, but also those burning out and leaving in their fifties. The older, more experienced call takers are leaving the industry.

This leaves a void, clearly borne out by current staffing issues, and only likely to worsen.

Q What is your gender?



Female Male Non-Binary Prefer not to say

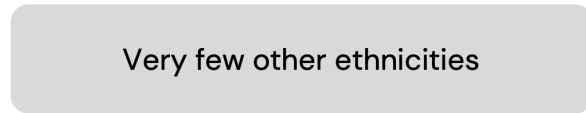
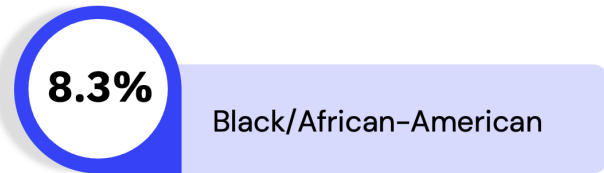
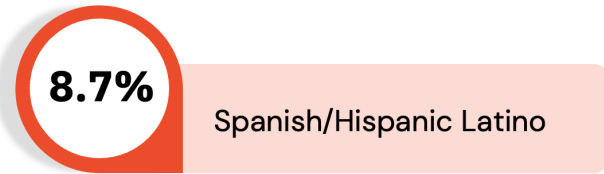
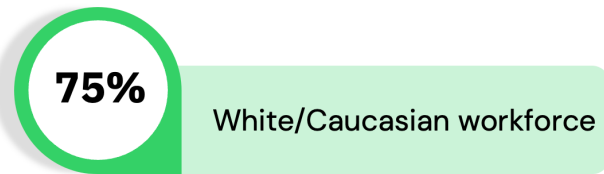
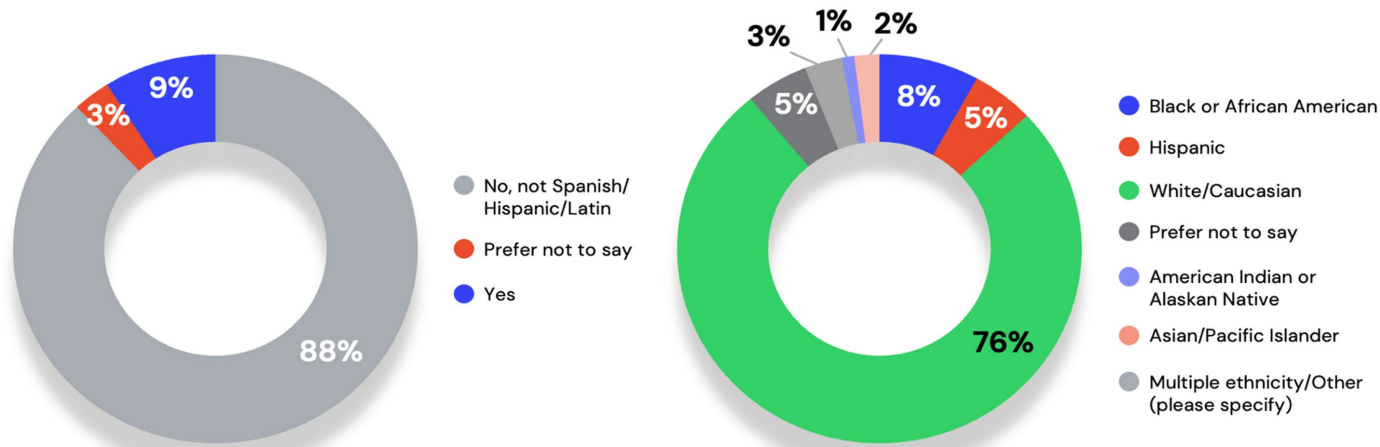
68%



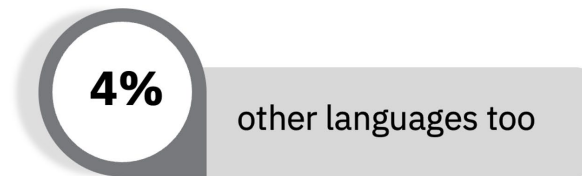
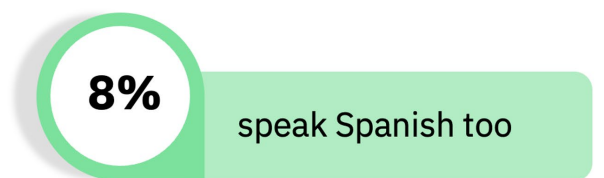
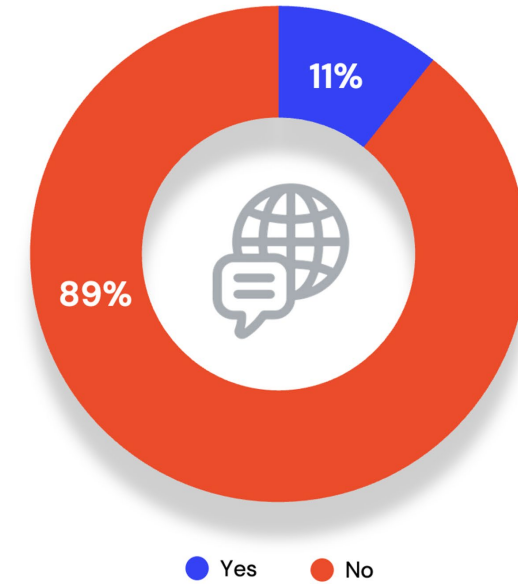
Female-dominated industry

- 47% of Trainees
- 70% of Dispatchers
- 63% of Telecommunicator
- 62% of Supervisors
- 53% of Managers
- 42% of Deputy Directors
- 56% of Directors

Q Are you of Spanish, Hispanic or Latino origin or descent? Which race/ethnicity best describes you?

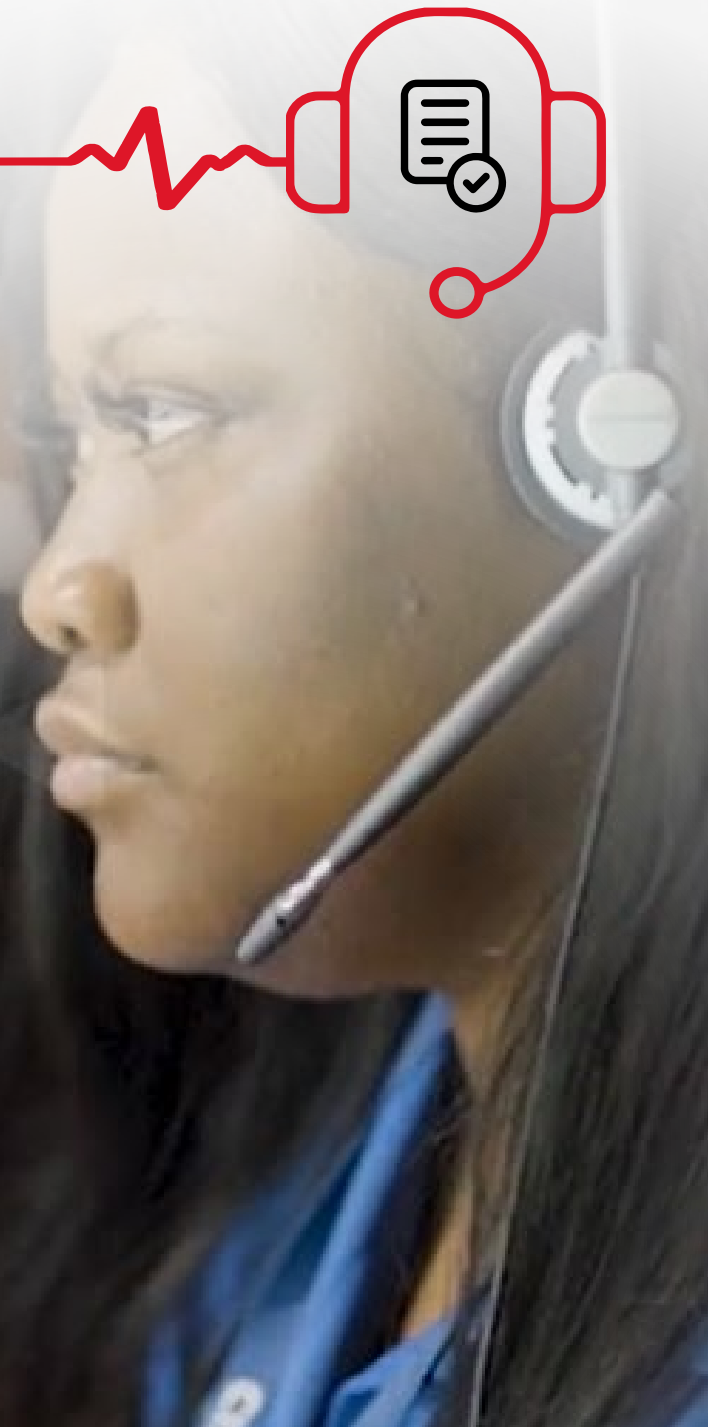


Q Do you speak another language in addition to English? Do you use multiple language skills at work?



Conclusion

This survey reveals pressing issues in the 9-1-1 industry, primarily recruiting challenges due to modest wages and high stress, which contribute to significant wellness/mental health concerns. Staffing shortages are a prime problem, compounded by job stress and low salaries, making talent attraction and retention challenging.



Wellness/mental health remains a substantial worry in this high-stress environment. Stress, burnout, and anxiety are pervasive at all levels. Despite most employers offering wellness/mental health support, stigma and under-utilization of these resources suggest a need for more proactive approaches to wellness/mental health.

We analyzed Diversity, Equity, and Inclusion (DEI) within 9-1-1 centers and their communities. The results show room for improvement in demographic alignment and staff preparedness. This implies a need for better workforce representation and training enhancements to improve incident response capacity.

The survey also reveals a DEI dichotomy in the workplace. While most staff appreciate an inclusive environment, there is perceived scarcity in leadership diversity, signaling potential areas for DEI enhancement.

Despite these challenges, the potential of technology and cultural transformation for industry improvement is acknowledged. Even the most skeptical admit that technological solutions could ease the workload on frontline personnel. Innovations like Geolocation Services, Video/Photo, Silent Texting, Call Triaging and AI-based Language Translation/Transcription tools are viewed as valuable resources for enhancing service efficiency.

Management plays a crucial role in driving cultural change, not only to attract new talent, but also to nurture and support existing staff, particularly in light of the fact that relationships with management were identified as a significant stressor in our survey. By leveraging technological advances, advocating for a transformative shift in culture, and harnessing tools like reclassification and federal funding, management could effectively initiate a crucial evolution in the 9-1-1 sector, fostering an environment that is more supportive and appealing to all employees.

Methodology



In May of 2023, NENA and Carbyne surveyed a random sample of 841 Emergency Communications Center personnel across North America, including the United States, Canada, and Mexico. The respondents included dispatchers and telecommunicators, managers and shift supervisors, Assistant Directors and Directors, as well as Deputy and Sheriff titles.



About NENA: The 9-1-1 Association

NENA: The 9-1-1 Association empowers its members and the greater 9-1-1 community to provide the best possible emergency response through standards development, training, thought leadership, outreach, and advocacy. Our vision is a public made safer by 9-1-1 services delivered by highly trained emergency-communications professionals and powered by the latest technologies. Learn more at nena.org

About Carbyne

Carbyne (Headquartered in New York, NY) is a leading global provider of cloud-native mission-critical contact center solutions. Carbyne is one of the largest rich-data providers for emergency response centers, delivering over 250M data points per year, all in a unified platform. Our technologies enable emergency contact centers and select enterprises to connect with callers as well as connected devices via highly secure communication channels without needing to download a consumer app. With a mission to redefine emergency collaboration and connect the dots between people, enterprises, and governments, Carbyne provides a unified cloud-native solution that provides live actionable data that can lead to more efficient and transparent operations and ultimately save lives. With Carbyne, every person counts. Learn more at carbyne.com



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