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2016 EMS Trend Report

The forces shaping the present and future of EMS in the U.S.



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Editors' Note

As the EMS adage goes, "If you've seen one EMS system, you've seen one EMS system." While that statement reflects the diversity of EMS systems across the country, it also creates the false sense that every EMS system is entirely different and that we can't learn from each other.

Clearly that is not the case. As we see in the premiere edition of the EMS Trend Report, EMS systems across the country share many traits. On the other hand, significant differences do exist in everything from clinical care to salaries to operational benchmarks. In this special report, see how your agency compares to others around the country. The issue also features analysis and reaction from EMS experts about the importance of performance measurement and paramedic degree requirements, as well a roundtable discussion about the most interesting findings of the EMS Trend Report, how those findings might be best applied and what we might expect to see in future years.

Share this trend report with other EMS leaders. Discuss the findings and send us your thoughts at editor@ems1.com.

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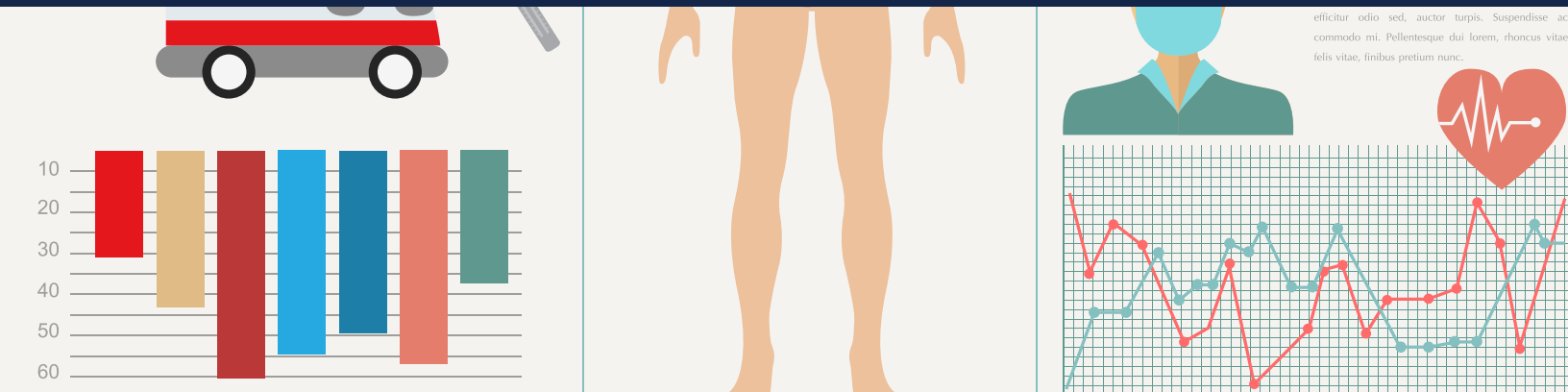
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What we learned in the first year of the EMS Trend Report



This inaugural report sets the foundation for evaluating changes and trends in the emergency care system, including standards of care, educational requirements and performance indicators

By Fitch & Associates

A key principle in physics says you can either know where an object is or how fast that object is moving, but you can never know both at exactly the same time. Trying to take the pulse of the nation's EMS system presents the same challenge: While some things seem to stay stagnant, many aspects are changing so quickly that by the time they are measured and analyzed, they are no longer the same.

The 2016 EMS Trend Report is not only about measuring where EMS is today, but also how fast — or slow — it is moving, and in what direction.

Survey scope

Instead of attempting to survey thousands of self-selected agencies, a group that can change from year to year, we focused on a smaller but still representative group of EMS agencies that agreed to take the time year after year to provide detailed information.

We asked members of this group, which we'll call the EMS Trend Report Cohort, about their clinical care, operations, finances and more in order to examine trends within the industry.

The agencies were not selected because they're the "best" or the biggest. Instead, they represent a range of service delivery models and sizes in diverse geographic and demographic settings. They are diverse in many other ways as well, from clinical protocols to operational procedures.

[Fitch & Associates](#), [EMS1](#) and [NEMSMA](#) thank each organization that volunteered to participate in this effort. Without your willingness to share information for the betterment of patients and EMS systems everywhere, this project would not have been possible.

Highlights from year one

Clinical care

While an expanding research base and move toward evidence-based care has likely created more consistency in clinical protocols used across the country, some significant differences clearly still remain. Certain procedures and equipment are used by only a minority of agencies in the survey. Others have seen rapid adoption or decreased use in recent years.

For example, more than half of the agencies in the EMS Trend Report Cohort now report using mechanical CPR devices, such as the LUCAS or AutoPulse. Yet at the same time, only a quarter report the routine use of impedance threshold devices for cardiac arrest patients. This being the first year of the trend report, it will be interesting to follow whether ITD use increases or decreases in future years, especially as the evidence of its effectiveness continues to be debated by experts in the field.

Perhaps not surprisingly, nearly every agency reported use of CPAP, a device that just 15 years ago was probably used only in a small number of systems. What procedure, medication or device will be the next to so dramatically change EMS care?

Currently, fewer than 5 percent of the EMS Trend Report Cohort agencies use ultrasound in the field. It will be interesting to track that number over the next few years to see if more agencies decide ultrasound is a useful prehospital tool.

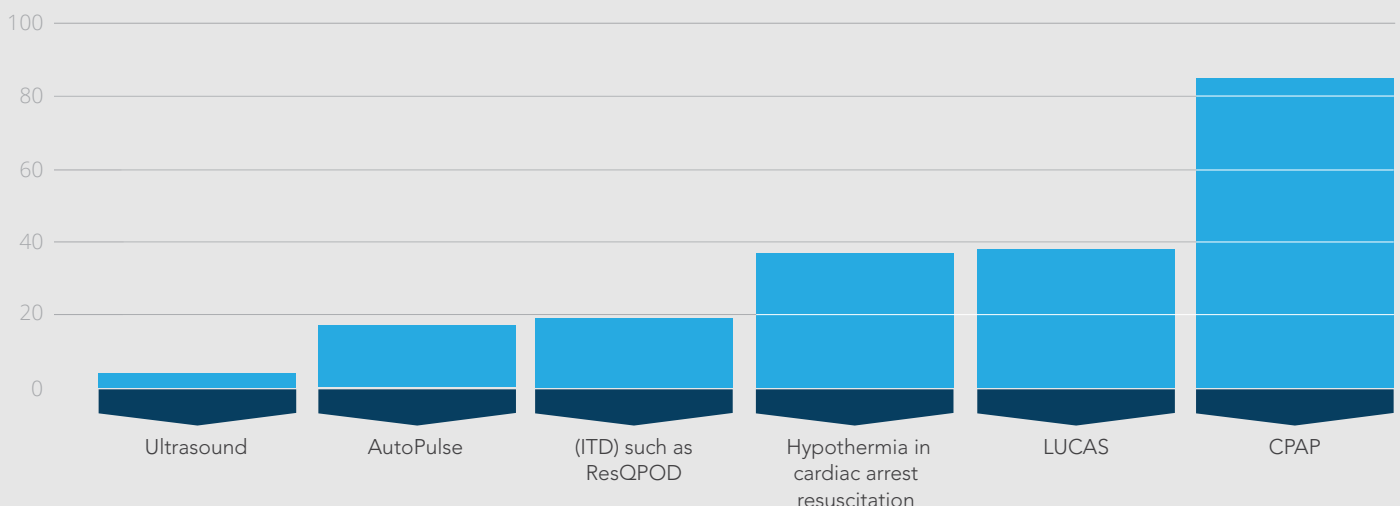
What procedure, medication or device will be the next to dramatically change EMS care?

Another trend to follow will be the use of hypothermia in resuscitation. Fewer than half of the agencies reported that their protocols included therapeutic hypothermia for cardiac arrest.

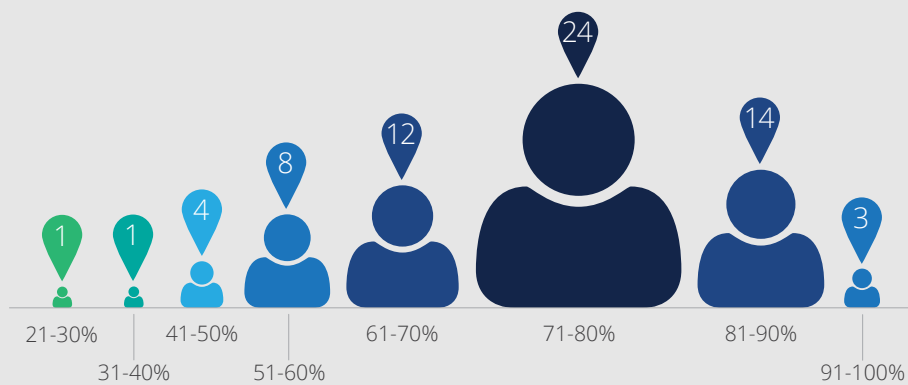
The [release of the most recent American Heart Association resuscitation guidelines](#), which recommended against prehospital administration of cold saline to induce hypothermia, occurred as this survey was being conducted. While the guidelines did not say to stop cooling in the prehospital environment, some agencies likely removed

Which therapies, procedures and devices are used/permitted in your system?

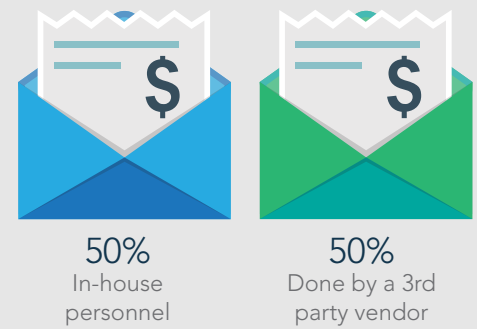
Number of agencies



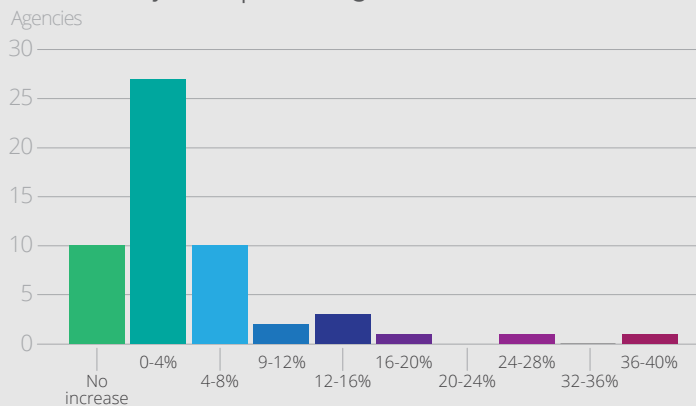
How much of the total budget is spent on personnel?



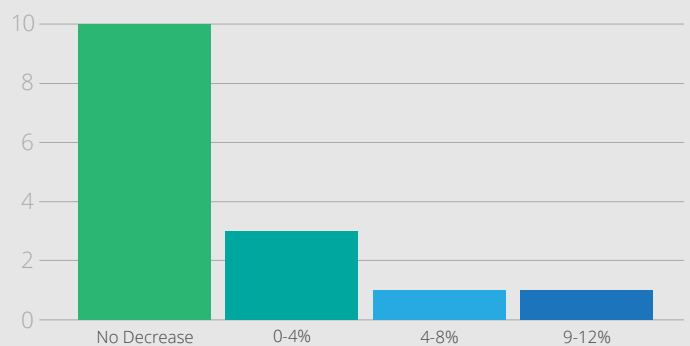
Billing services are performed by:



In the most recent reporting period, the total budget increased by what percentage?



In the most recent reporting period, the total budget decreased by what percentage?



post-resuscitation hypothermia from their protocols completely, while others may have turned to an alternative method, such as ice packs.

Finance

The economy's slow but steady recovery seems to be reflected in EMS budgets. The majority of the agencies in our survey reported either no change or small increases in budget dollars over the previous year, while less than 10 percent reported a decrease. At the same time, almost none increased the budget by more than 4 percent, and with rising expenses and call volumes in many areas, these minimal increases are forcing many EMS organizations to try to do more with less.

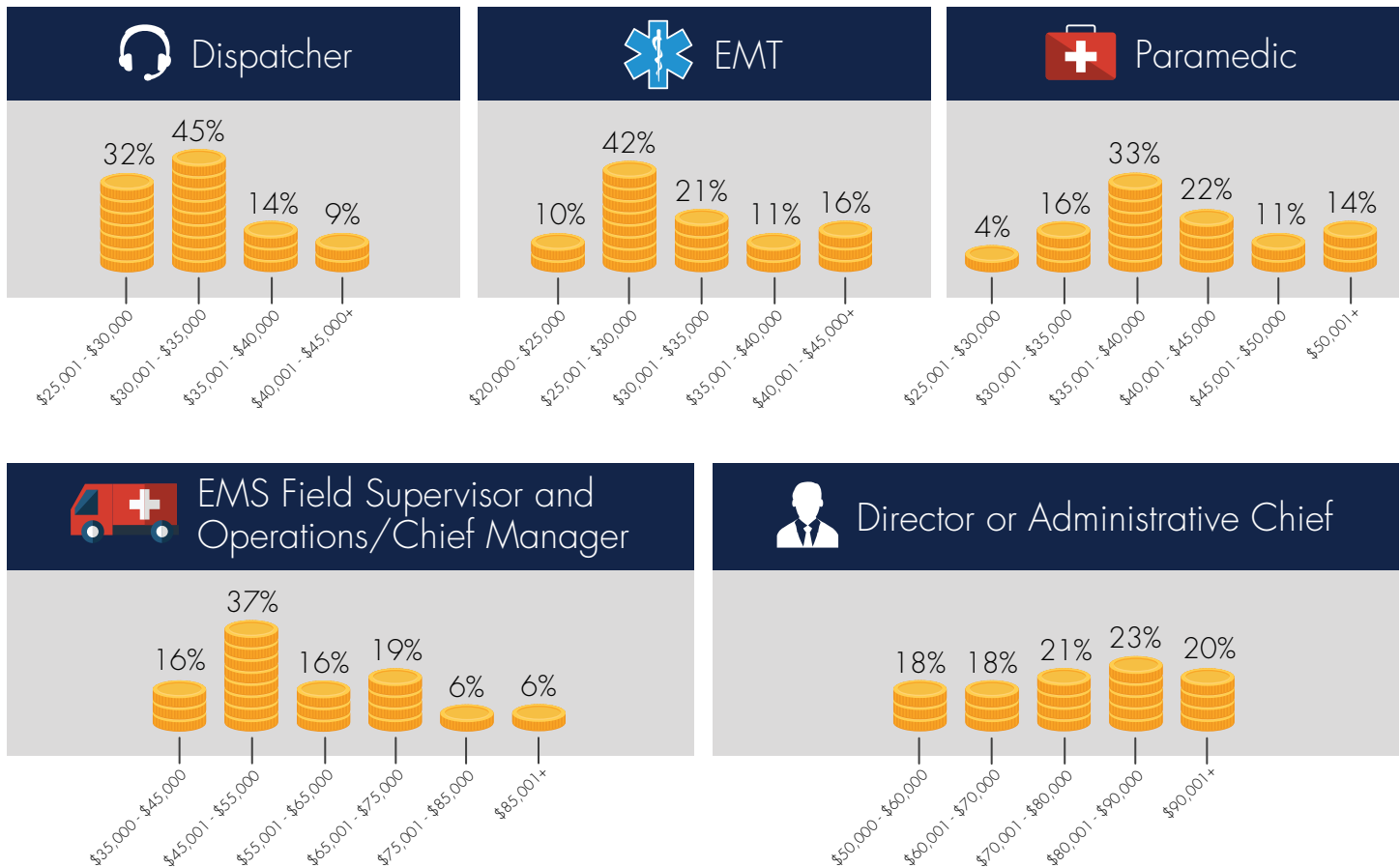
Personnel costs represent the largest chunk of the budget for most agencies, meaning

that stagnant budgets are likely leading to only modest, if any, increases in salaries or benefits.

Historically, emergency telecommunications jobs were considered positions for field providers who could no longer perform those duties or as entry-level positions. But recognition of the critical role of 911 call-takers and dispatchers, and the stressors and demands of the job, has led to a professionalization of the role, and increases in pay along with it. In fact, agencies report higher typical starting salaries for telecommunicators than EMTs in the field; however, paramedics continue to earn more.

Interestingly, the survey respondents were evenly split on billing, with half using a third-party vendor for ambulance billing and half using in-house staff. The impact of ICD-10, along with future changes to Medicare and

Annual starting salary



Medicaid reimbursement policies, will likely drive how quickly and in which direction that answer shifts in future years.

Clinical measures

Certain indicators, such as return of spontaneous circulation in cardiac arrest and the ability to identify ST-elevation myocardial infarction, have been used to measure clinical performance for many years and remain in widespread use in EMS systems. In contrast, other measures have not yet been widely accepted, such as pain management, recognition of sepsis or heart failure and use of physical or chemical patient restraints. About half of respondents reported measuring a patient's pain, for example, while the vast majority said they track their providers' ability to identify STEMI. The clinical indicators used demonstrate that some agencies still struggle to measure the right things, due either to lack of access to

data or simply tradition. Nearly every agency is tracking ROSC, while slightly fewer track survival-to-hospital discharge, even though the latter is considered a more patient-centered and appropriate measure of the performance of the emergency care system.

Clearly, more EMS agencies need to have access to outcome information and other data from hospital systems and other sources in order to appropriately measure and improve the quality of care they provide.

Response time

Response time analysis continues to be somewhat controversial in EMS. In recent years, an effort to focus on clinical and outcome measures has led many to argue that response time measures are outdated and irrelevant. However, response time is still an important measure for any EMS system, as it is critical in certain, rare situations (such

as sudden cardiac arrest), and response time goals are often embedded in contracts and budgets.

Survey respondents differed widely on how they measure response time — a problem given that many compare themselves to each other and to benchmarks, such as the [National Fire Protection Association standards](#). This survey found that 26 percent of respondents, for example, started the clock for response time when the phone was answered in a dispatch center, while 47 percent started measuring when the unit was notified. About two-thirds of the organizations surveyed said they measure 90th percentile times, while the rest measured average

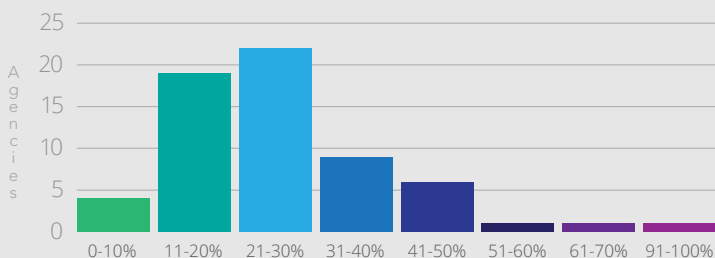
response times. This lack of consistency can lead to unrealistic expectations that often impact budget and resource allocation decisions.

Patient satisfaction

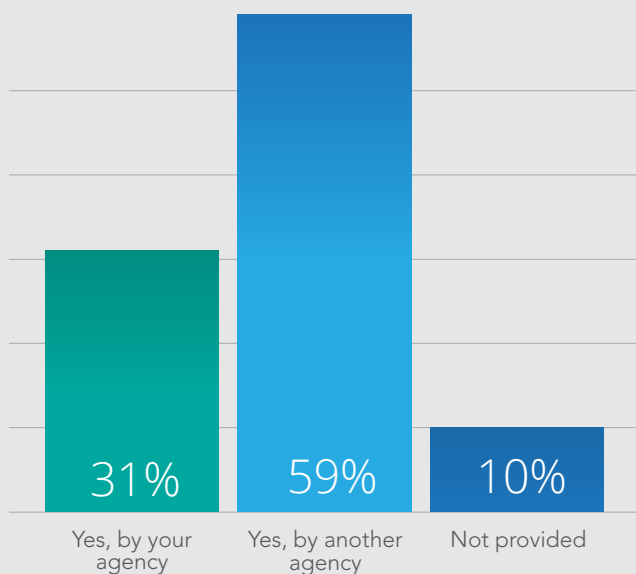
The widespread adoption of the [Institute for Healthcare Improvement's Triple Aim](#) has led to increased use of patient satisfaction as a measure in health care, including for determining levels of reimbursement.

EMS has joined this movement but lags behind its health care partners. About half of respondents are not formally surveying patients, relying instead on unsolicited

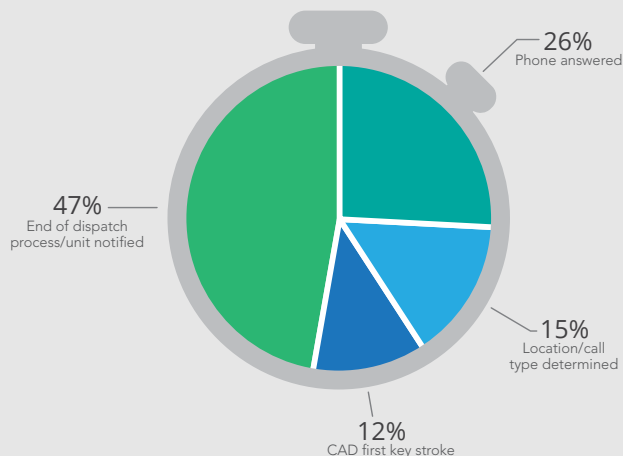
What percentage of 911 patients are not transported?



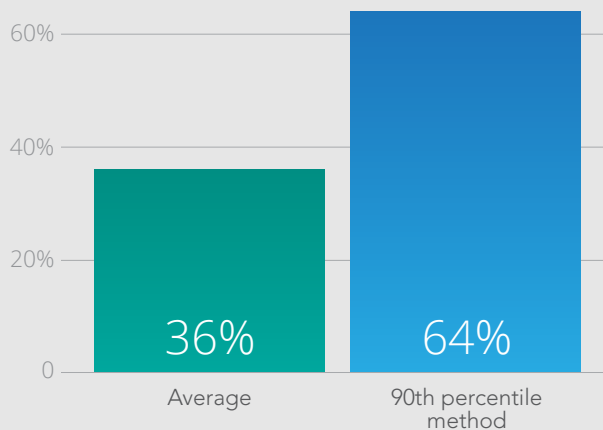
Are emergency medical dispatch (EMD) questions and pre-arrival instructions provided?



When does the clock for response time start?



How are response times measured?



complaints or comments to assess patient satisfaction. About a quarter of agencies are using a third party to measure patient satisfaction. That number is expected to grow as more EMS agencies try to demonstrate community support.

Paramedic education

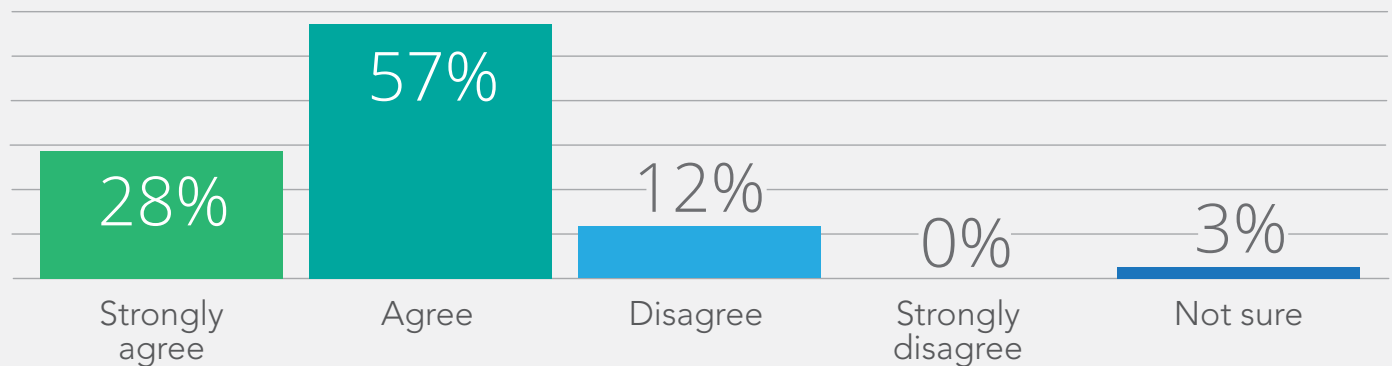
In recent years, the EMS community has debated whether more education should be required for paramedics. Some have argued that paramedics should, at minimum, hold an associate's degree. Others have pushed further, saying that bachelor's degrees should be necessary.

Integrating EMS in health care

Only 11 percent of EMS leaders surveyed disagreed with the statement that EMS is becoming more integrated into the overall health care system. The vast majority agreed with the statement, with 28 percent answering "strongly agree."

While there was general agreement on this question, there was less consensus on whether the term "emergency medical services" still best describes the profession. A handful said "EMS," while many preferred "mobile integrated health care" or simply "mobile health." Others suggested "prehospital care" or simply "paramedicine."

Do you believe EMS is becoming more integrated into the overall health care system?



Among the EMS Trend Report Cohort, fewer than 10 percent of agencies require paramedics to have an associate's degree at this time, and none require a bachelor's. However, it will be interesting to see if that changes in future years, as more than 60 percent of respondents think an associate's degree should be required. Whether reality catches up with those opinions will likely be determined by many factors. Paramedics with degrees likely have higher salary expectations, especially if there is a scarcity of qualified applicants for paramedic positions requiring a degree.

Conclusion

The 2016 EMS Trend Report establishes a baseline for evaluating trends in the EMS profession as organizations in the EMS Trend Report Cohort grow, innovate and mature over the years. With the [EMS Agenda for the Future](#) turning 20 in 2016, and an updated Agenda in the works, the EMS Trend Report will give our profession the opportunity to evaluate our current state and examine our progress toward achieving the goals we set for the next several decades.

Take a look at the survey results and consider what they might look like next year, in five years or in 20. When we look back at this first EMS Trend Report in 2036, what will it tell us about the next two decades of EMS?

About the survey

A wide variety of EMS systems throughout the United States represent an assortment of system models, designs and structures. To reach the largest number of agencies for this survey, numerous outlets were used to solicit voluntary participation. These included the EMS1.com website, email contacts from Fitch & Associates and the National EMS Management Association, social media platforms such as Facebook and Twitter and press releases from industry partners.

The survey was open for a 12-week period in 2015. Applicants were asked to complete a basic intake survey, after which staff at Fitch & Associates provided each applicant with an individualized survey link to complete the data entry process online. Applicants, especially those who did not fully complete the survey mechanism, were contacted with follow-up inquiries.

Staff at Fitch & Associates collected, aggregated and analyzed the data. Every effort was made to ensure that sufficient data points were reported by region and system

configuration while still providing anonymity to the individual reporting agencies.

A total of 94 agencies — the “EMS Trend Report Cohort” — participated in the survey, representing a diverse cross-section of EMS. Not every department was able to provide answers for every question, so some questions reflect the responses of a subset of the agencies surveyed. More information about the survey respondents is available in the [Survey Demographics](#) section later in the report. ■

About the authors

For more than three decades, the [Fitch & Associates](#) team of consultants has provided customized solutions to the complex challenges faced by EMS agencies of every size and service model, both private and public. From system design, objective review and competitive procurements to comprehensive consulting services, Fitch & Associates helps communities ensure their emergency services are both effective and sustainable. For ideas to help your agency improve performance in the face of rising costs, call 888-431-2600 or visit www.fitchassoc.com.



When it comes to measuring the patient experience, EMS falls short



Asking our patients and their families to provide feedback through a formal assessment of patient satisfaction should be a priority of every EMS agency

By Jay Fitch, Ph.D.

How can we know if we're improving EMS if we don't ask the patients and the communities we serve?

The [IHI Triple Aim](#) has become a widely accepted framework for improvement efforts in health care, and one of its three parts is the patient experience. I'm surprised for a number of reasons that the 2016 EMS Trend Report found that the majority of agencies are not truly measuring patient satisfaction.

Risk management

The top reason I'm surprised is that improving the patient experience is basic risk management. Research and common sense both tell us that patients who are less satisfied with their providers will be more likely to complain and possibly to file lawsuits. Especially in EMS, where the public's

expectations of what actual medical care we can provide are often low, our attitude and the way we communicate with a patient might be the most important aspects of the care we provide. We could do everything technically right and save a life, but treat the patient's family with disrespect and we'll receive a complaint.

Another paramedic can literally get everything wrong, but if that medic smiles and provides comfort, he or she may well receive commendations.

Patient care

We also need to understand that the patient experience is part of patient care. We can't separate technical and clinical skills from communication and empathy. They are equal components of providing prehospital medical care.

It was discouraging to see that nearly half of the EMS Trend Report Cohort agencies only track complaints or don't really measure patient satisfaction at all, and that only a quarter of the agencies use a third party to measure patient experience.

Tracking only complaints leads to a punitive view of improving the patient experience, looking only for the worst examples and often chastising the caregivers involved. Truly measuring patient satisfaction and trying to improve it often involves seeking out the good examples.

One of our clients noticed one practitioner consistently received great feedback from patients. Instead of focusing on punishing the bad apples, the organization's leaders focused on what that one paramedic did differently and how they could replicate those actions throughout the agency.

Reimbursement

Perhaps measuring the patient experience

has yet to catch on in EMS because people fail to see the financial incentive. Unlike hospitals, whose reimbursement levels could be impacted by patients' responses to the Hospital Consumer Assessment of Healthcare Providers and System survey, EMS providers do not see an obvious tie between economics and patient satisfaction.

Tracking only complaints leads to a punitive view of improving the patient experience.

In fact, leaders might perceive an economic disincentive. There is a small cost to measuring patient satisfaction using an outside vendor, which is the best way to ensure an objective response that can help your organization improve.

Some agencies may have started measuring the patient experience only because they expect the Centers for Medicare and Medicaid



Services to expand use of patient satisfaction measures from hospital reimbursement to other areas, like ambulance transport. But predicting the precise future of health care reimbursement remains a murky proposition, and many agencies would rather wait and see.

Regardless of future financial incentives, EMS leaders should recognize that in some ways, measuring the patient experience is the best way to measure the performance of an EMS system. Many agencies rely on operational measures such as response time to assess their system, but we have come to realize that response time is only clinically important for a small number of critical conditions. On the clinical side, the most common measures are cardiac arrest survival or intubation success rates — metrics that examine important processes and outcomes, but look at only a tiny fraction of total calls.

Measuring patient and family satisfaction is a way to look at performance of the entire system on every call. Patients, families and bystanders will judge the overall experience with EMS from the time they dial 911 until they are in a bed in the emergency department and talking to hospital staff.

How we demonstrate not just clinical care, but people care — through our interactions, our ability to explain what’s happening, our efforts to provide comfort — is just as important as our IV success rates or whether we obtained two sets of vitals.

How we act on each call, especially in the first and the last few minutes, can make a lasting impression on our patients and probably a difference in how they feel about their caregivers. Calling 911 is usually an anxiety-filled event, and when we take people from their homes to a strange and stressful environment like the emergency department, wheeling them in on their back, feet first — well, it can be a terrifying experience.

Whether or not the patient experience impacts an agency financially or not shouldn’t be the only motivator for asking patients for feedback and measuring satisfaction. At the end of the day, alleviating patients’ fears, reducing their anxiety and displaying compassion should be part of our core mission. And if we’re not actively measuring whether we’re achieving that mission, we’re probably not going to know when we fall short — or how to do it better. ■



About the author

Jay Fitch is the founding partner and president of the public safety consulting firm Fitch & Associates. Recognized as an EMS/public safety operations and design expert, Jay leads a number of the firm’s more complex projects. He has also spoken at international conferences and written textbooks and articles on topics including leadership, performance improvement and system design. Jay has received numerous honors, including the National Association of EMTs’ Lifetime Achievement Award. Contact Jay directly at jfitch@emprize.net.

The need for higher education in EMS is greater than ever



EMS leaders promote the importance of a degree, but too few agencies require higher education as part of their hiring practices

By Art Hsieh

The debate about the minimum education requirements for paramedics has been going on for decades. Many continue to argue vociferously that the possession of a degree is unnecessary and poses a threat to the viability of the profession.

As a long-term practitioner, professional educator and future recipient of field care services, I will reiterate what I have said for many years: The argument that higher education is unnecessary is shortsighted and continues to hinder our industry from expanding its role in health care and public safety.

Apparently many respondents to the 2016 EMS Trend Report agree: Nearly two-thirds of agency representatives believe that an associate's degree is the minimum level of education needed to be a paramedic field provider.

This stands in stark contrast to the reality of minimum job requirements. Nearly three out of four survey participants indicate that only a high school diploma is required to practice.

Given the increasing complexity of field care being delivered in a dynamic and often uncontrolled environment, it's critical that future paramedics earn a college degree in order to begin practice. Allow me to explain.

1 Higher education equals a better-prepared paramedic

In order to achieve a degree, a student must complete a basic series of English classes. Having command of English fundamentals is critical to paramedic student success. Many Americans read comfortably at the sixth or seventh grade level. Paramedic textbooks are written at the 12th grade or college freshman level. This doesn't mean that paramedic students won't be able to read the textbook, but it does make a challenging course of study that much more difficult for students with lower grade-level reading skills.

As an educator, I supplement my classes with narrated slideshows, online videos, interactive activities and the like. But it will never substitute for student self-directed reading and learning.

In medicine — and in society — we continue to communicate deeply through the written word in textbooks, trade journals or research papers. Paramedics need to be able to comprehend the content but also analyze it, question it and integrate it into their practice. College English classes can provide the tools necessary for true understanding of the printed word.



Paramedics must be able to communicate quickly, succinctly and accurately, both verbally and in writing. Many institutions require a communications or public speaking course as part of the associate's degree track. The student learns how to choose words wisely, to articulate points of view with clarity and defend opinions with thoughtful arguments.

Math and accounting courses train the brain to work logically through difficult problems, making decisions whether to go this way or that way depending on what is known and unknown. Rational decision making is critical for making sound medical judgments without the crutch of protocols. Drug calculations become simpler to understand and execute as a paramedic's math skills sharpen. Determining destination decisions when time, distance and mode are involved become less biased and more objective.

History and other liberal arts courses also contribute to the ability to think critically and reason logically. Knowing and understanding that what has happened in the past influences what will happen in the future is a key lesson for EMS leaders.

Coursework in philosophy and the arts forces students to think about diversity of opinion, ideas and concepts. The diversity of our patient population demands that paramedics remain open to divergent viewpoints and able to appreciate them rather than pass judgment.

2 Paramedicine has become more complex

EMS old-timers will tell you just how much the industry has changed. Greater understanding of anatomy, physiology and pathophysiology is required. Many systems have increased the number and complexity of the medications paramedics are authorized to administer. Technologies such as multi-lead ECGs, waveform capnography, infield labs, lactate monitoring and ultrasound require greater

proficiency in using and interpreting the data.

Research is driving the EMS evolution. Transport mode and destination decisions are forms of treatment and are being scrutinized as such. Deciding when not to perform certain procedures is just as critical as when to do so. Data from well-designed studies, combined with a sound medical education and enriched by reflective practice brings forth a paramedic who manages patients beyond the reach of well-meaning but simplistic protocols.

Most EMS systems depend at least partially, if not entirely, on private health insurance and Medicaid/Medicare reimbursement. The EMS industry has taken a financial beating over the past decade, as it has not been able to demonstrate its concrete value to patients, public health and payors.

The rise of mobile health principles and community paramedicine programs appears to work not only from a financial perspective, but also from the viewpoint of pure clinical outcomes. Future paramedics have to be as well versed in public health concepts, short term and chronic care and non-urgent clinical issues as they are in emergency medicine.

That translates to more studies to better understand and incorporate these knowledge areas. Courses taught by subject matter experts contribute to the greater body of knowledge that the paramedic needs to possess. Independent study or research projects, in the form of a capstone degree project, are an opportunity for paramedic students to broaden or gain knowledge in rapidly developing areas of health care.

3 **Eagles or ostriches will drive the future growth of field medicine**

As the data from the first year of the EMS Trend Report shows, most of the respondents believe that an associate's degree should be required for paramedics to practice. The fact that most employers and regulatory

agencies don't require a degree for licensing paramedics is not a deterrent to what must happen; it's merely reflective of what is happening today.

The industry has done an admirable job in adapting to the evolving world order of medicine and reimbursement, but it's not sustainable without a strong foundation of well-prepared practitioners — both clinically and academically — to carry out new missions.

Moreover, with more responsibilities and greater autonomy will likely come greater recognition and better benefits. That, in turn, will allow field providers to grow old in the EMS profession, contributing their expertise and experience rather than fleeing to greener pastures. To soar with eagles is to think like one — otherwise, it's much easier to be an ostrich and try to ignore what must be done.

Many of the variables in the equation of health care provision and reimbursement are not within the reach of EMS leaders to change. Education, though, is one that leaders can change. Trends report data from next year and subsequent years will be revealing in how quickly the EMS profession increases degree requirements for new paramedics. ■

About the author

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Roundtable:

Experts discuss key findings from the 2016 EMS Trend Report

A panel of EMS leaders shares their top surprises, concerns and suggestions on how other leaders can apply the EMS Trend Report findings to improve their agencies

The first-year findings from the EMS Trend Report set a foundation to track change in EMS and ignite discussion among EMS leaders and field providers about our future. We asked EMS1 editorial advisors, columnists and contributors to review, react to and reflect on EMS Trend Report data. The panel includes:

- Dr. James MacNeal, EMS physician
- Sean Caffrey, EMS manager/administrator
- Chris Cebollero, EMS consultant
- Rob Wylie, fire chief
- Catherine R. Counts, EMT, graduate student

1

Which EMS Trend Report finding surprised or interested you most?

Dr. James MacNeal: It is interesting that such a large percentage of respondents think paramedics should have an associate's

degree as a minimum requirement. These same respondents reported an extremely low number of associate's degree-prepared paramedics working for them.

It will be interesting to follow this trend over time as the next generation of paramedics enters the profession. While the associate's degree may seem to be a surrogate for achieving professional status for paramedics, it causes me some concern. Is it fair to ask an entry-level paramedic to take on two years of college debt to enter a career that pays less than minimum wage in some areas?

The perpetual chicken-or-egg situation is occurring here. Do we get the degree to justify better pay, or offer better pay so providers get the degree? My guess is that it will be a slow combination of both that will ultimately lead to a larger proportion of associate's degree-trained paramedics.

Sean Caffrey: I also found it most interesting that almost two-thirds (64 percent) of respondents believe that paramedics should

hold at least an associate's degree; however, less than 8 percent of organizations actually required that of their applicants. This is a clear disconnect that actually represents our own organizations holding us back as professionals.

It's also interesting to note we've been concerned about 24-hour shifts, and longer, for many years. We also have recent evidence that 12-hour shifts may, however, be among the worst of all in terms of fatigue and recovery. Interestingly, almost 40 percent of services report shift lengths of 24 hours or more, while half of all services surveyed use 12-hour shifts.

We have much work to do to better understand shift length and fatigue, including the research published in *Prehospital Emergency Care*, "[Recovery between work shifts among Emergency Medical Services clinicians.](#)"

Chris Cebollero: It was interesting to see the differences in how systems are conducting clinical care. More than half the agencies involved in the cohort are using an AutoPulse or LUCAS device. You can argue that these systems are trying to be on the cutting edge of care and trying to increase their cardiac arrest survival rates. But only a quarter of reporting



agencies are using the impedance threshold device. This seems to be a disconnect in using resources in concert with each other to achieve a high rate of ROSC. If you decided to go with a mechanical CPR device, take the next steps and use the ITD to ensure maximum effectiveness.

Rob Wylie: The survey finding that surprised me the most was the lack of consistency in medical care practices. I realize that there is and always will be a significant divide in the service area types — for example, rural versus urban — but with the advent of available technology, such as software for patient tracking outcomes, along with increased grant availability and more professional certification and education requirements, I would have

Is it fair to ask an entry-level paramedic to take on two years of college debt to enter a career that pays less than minimum wage in some areas?

thought that the gaps would narrow. There will always be outliers, but I expected a more homogeneous prehospital health care system.

I was also surprised by the disparity in clinical measures being utilized by different agencies. With the widespread distribution of best practices, I expected more agreement on critical clinical measures that all agencies should track as a standard.

Catherine R. Counts: Two things stood out to me. First, almost half of the organizations were able to implement hypothermia protocols, which is a relatively quick uptake of a new clinical procedure versus other interventions. Note that the 2015 AHA guidelines do not recommend prehospital initiation of therapeutic hypothermia.

Second, I am surprised that nearly half of respondents are surveying patient satisfaction – although I think we need to define the word “survey” to better understand the effort to collect and analyze satisfaction data.

2 Which additional finding was either most affirming or most concerning?

Sean Caffrey: I was pleased to see a very diverse list of organizations surveyed, an uncommon occurrence. Overall it shows that while we often pride ourselves on variation, we are generally similar as organizations and as a profession, dealing with similar issues and seeing similar trends. Despite the variation in agency type and geography, little in the survey was particularly surprising.

James MacNeal: The funding issues continue to concern me. As health care becomes more integrated, are we placing increasing demand on some of the lowest-paid members of the health care team with the least amount of training in care management and long-term care?



This is unfortunate, but it might also prove a huge opportunity for EMS to step into a role that no other provider can assume in such a rapid fashion. Mobile integrated health care needs to be properly funded before we can

expect our agencies to continue to pursue it as a viable care option. Expecting EMS to develop training programs, educate providers and provide care is a lot to ask when there is no dedicated funding stream.

Chris Cebollero: It was interesting that there is still so much reliance on response times as a component of an effective EMS system. This old way of measuring system effectiveness has to finally be debunked and replaced. The EMS systems of today need to also focus on outcome measures, including measurement of patient satisfaction.

First responders are getting on-scene on average in four minutes. Care is at the patient’s side faster today than when response time compliance was put into place decades ago. The clock should then stop and the team needs to deliver the best patient care possible, focusing on outcomes, navigating the patient to the most appropriate treatment facility and ensuring that patients feel they received excellent care.

Rob Wylie: The most affirming finding was the overwhelming agreement by the respondents that EMS services are becoming more integrated with the overall health care system. The complexity of the regulatory environment, coupled with the pace of clinical change in medicine in general, dictates that we have a cohesive, comprehensive and symbiotic relationship between EMS response agencies, hospitals and the medical education system.

Catherine R. Counts: It is affirming that clinical measures are being used by agencies to measure appropriate application of care, but the amount of variation is worrisome.

3 How do the findings of the first year align with other trends in EMS and health care?

Catherine R. Counts: It makes sense to me



that there is variation in how “success” and “good care” are measured. The U.S. health care system as a whole can’t agree on what constitutes good care, so it’s no surprise that EMS can’t either.

James MacNeal: The likely increase in patient satisfaction scores tied to EMS reimbursement is a very scary prospect. Patients are often most anxious and least likely to understand the care that is being provided to them in the first minutes of their emergency. Poor experiences in the emergency department and in the hospital may translate to lower patient satisfaction scores for EMS by the time the patient receives the survey. In a model where EMS providers must have pancake breakfasts, fish fry dinners and bingo night (to raise needed funds), it is very scary thinking that if their patient satisfaction isn’t good, their reimbursement might be lowered more than the barely afloat level it is at already.

Chris Cebollero: It seems to me that the status quo is alive and well in EMS. The adage, “that’s the way we have always done it” comes to mind when looking at the first year of data. We now have the opportunity to challenge our processes, determine what the EMS systems of tomorrow will look like and transition to new models. Health care is changing daily. It is time for EMS to be in the forefront of change to help patients get healthier.

Rob Wylie: The findings of the first year point in a couple of directions. First, patient outcome-centered care. As we see the growth of community paramedicine to prevent patients who could otherwise be treated at home by highly trained medics — supervised by doctors, physician assistants or nurse practitioners/APRNs — from returning to the hospital.

Second, we have an opportunity to refocus more of the services we provide to be patient-centric. Why do we transport diabetics who return to a normal (blood sugar level) after treatment? Why are COPD patients transported when all they may need is an adjustment in their medications? Home-based care is less expensive, less invasive and in many instances more than adequate.

Sean Caffrey: The variation in clinical care was not particularly surprising. As with any medical practice, the level of care being provided and the adoption of new treatment modalities occur at various speeds throughout the health care system.

It was also interesting to see some clearly outdated items still around while some newer therapies had gained substantial adoption. This is comforting in the sense that it represents that we advance in a similar way to our colleagues throughout health care and that removing therapies is perhaps harder than adding them.

4

What specific actions, based on the trend report findings, do you recommend to EMS leaders?

Chris Cebollero: It is always a best practice to benchmark your system, processes and clinical care with the career field. This project lets EMS leaders look into the EMS mirror and gauge how successful their EMS system truly is. As leaders, we need to meet, exceed or set the standards for others to follow and hopefully come to some consensus on how “gold standard” EMS systems should operate. This is going to be a long road, but it begins with the sharing of data.

James MacNeal: Engage with your local hospitals now. Mobile integrated health care is not a right of EMS. Many hospitals don’t even know EMS providers can do these things. By getting in on the front end of this, EMS will be in a better position to control their destiny. Engage your medical director for EMS activities as well as hospital liaison duties. Integration is paramount to all of our success, but if you are not a full partner, bundled billing will be your nemesis.

Catherine R. Counts: Recognize that no EMS organization is an island, while at the same time no two organizations are exactly alike. Protocols and procedures can have variation across organizations, but said variation must come from a place of good intentions.

EMS is a changing field, but different organizations have the capacity to change at various rates. Don’t try a new idea just because a famous EMS agency or service

did it. Do your own research and come to a decision that is best for your organization’s economic and cultural situation.

Rob Wylie: I am reminded of the adage, “The only two things emergency response agencies hate are change and the way things are.” We need to focus on best practices, evidence-based medicine and clinical measurements that truly gauge the value of the service we provide. “We’re too small” or “We’ve always done it this way” are crutches and excuses that do not hold water.

Look around at those that are doing it right. Educate your community and its leaders as to the kind of service your customers deserve and that those services cost money. Adopt evidence-based clinical measures that show the great work you are doing, not just how fast you are leaving the station after a 911 call.



Sean Caffrey: The [IHI Triple Aim](#) will continue to be the rallying cry of health care moving forward. We know health care is too expensive, far less effective than it should be and very disconnected from the patient.

EMS leaders must do a better job of measuring from the customer’s perspective. Obscure metrics, such as measuring response time intervals from the time of dispatch, something no patient would care about or benefit from, puts us in a position of peddling self-serving nonsense that will likely come back to haunt us. We must also do a much better job of measuring and providing good customer service. It won’t be long until we can read about ourselves in a Yelp or similar-style review.



5

What else would you add to the discussion?

James MacNeal: EMS providers need to be active learners and participants in the EMS system. Encourage your medical directors, nurses, emergency physicians and law enforcement personnel to spend time with you. You need to carry the torch of your profession and spread the word of our undying commitment to saving lives and serving our communities.

Chris Cebollero: As EMS leaders we often talk about how splintered the EMS career field is, or we wonder when some person or agency is going to unite all of EMS so we finally get the recognition and respect our career field deserves. It is through efforts such as this that will bring recognition to common care and operational practices.

Sean Caffrey: An overwhelming majority of respondents want paramedics to have a degree, many EMS organizations invest over half their budgets on staff and we claim to be very concerned with their safety. Our actions, or perhaps our need to get trucks on the street at any cost, however, show that we are not yet aligning our practices with our preaching — issues which are squarely under our control as EMS leaders.

Catherine R. Counts: The fact that Fitch, EMS1 and NEMSMA teamed up to do this

report is fantastic. Although prior attempts at surveying EMS organizations have been made, the long-term goals of this survey set it apart from those efforts. By committing to seek out responses from the same organizations year after year (and with such a large response rate), this survey will only become more valuable both within and outside the EMS industry.

Concepts like mobile integrated health care and community paramedicine, paired with the continued focus on ensuring that health care is effective while being patient-centered, noted in this report and subsequent surveys will ensure that EMS is able to keep pace with the trends, changes or alternative markets coming our way.

Rob Wylie: I would recommend that all EMS leaders become involved in professional associations and organizations such as the National EMS Management Association, the International Association of Fire Chiefs, and the National Association of EMS Physicians (you don't have to be an MD to join!).

Most of all, I would encourage leaders and their personnel to look hard at what their communities expect from them now, and then educate them as to what is possible with a collaboration and support in the future.

Find the need and create the solution!
Become the “agency of first resort” in your community. ■

THE PANEL

Dr. James MacNeal, EMS physician

James MacNeal, MPH, DO, NRP, began his career in emergency medicine as a paramedic. He holds an American Board of Emergency Medicine/Emergency Medical Services certification and completed an EMS fellowship at Yale University. He is the MercyRockford Health System's EMS medical director.

Rob Wylie, fire chief

Chief Rob Wylie has been in the fire service for 29 years, serving first as a volunteer firefighter and then as a career firefighter, rising through the ranks to become the fire chief of the Cottleville FPD in St. Charles County, Missouri, in 2005. During his tenure, he has served as director of the St. Charles/Warren County Hazmat Team and as president of the Greater St. Louis Fire Chiefs Association. Wylie has served as a tactical medic and TEMS team leader with the St. Charles Regional SWAT team for the last 19 years and serves on the Committee for Tactical Casualty Care guidelines committee. Chief Wylie is a member of the [Fire Chief/FireRescue1 Editorial Advisory Board](#).

Chris Cebollero, EMS consultant

Chris Cebollero is a nationally recognized emergency medical services leader, author and advocate. He is a member of the John Maxwell Team and available for speaking, coaching and mentoring. Currently he is the senior partner for Cebollero & Associates, a medical consulting firm, assisting organizations in meeting the challenges of tomorrow. Cebollero is a member of the [EMS1 Editorial Advisory Board](#).

Catherine R. Counts, EMT, graduate student

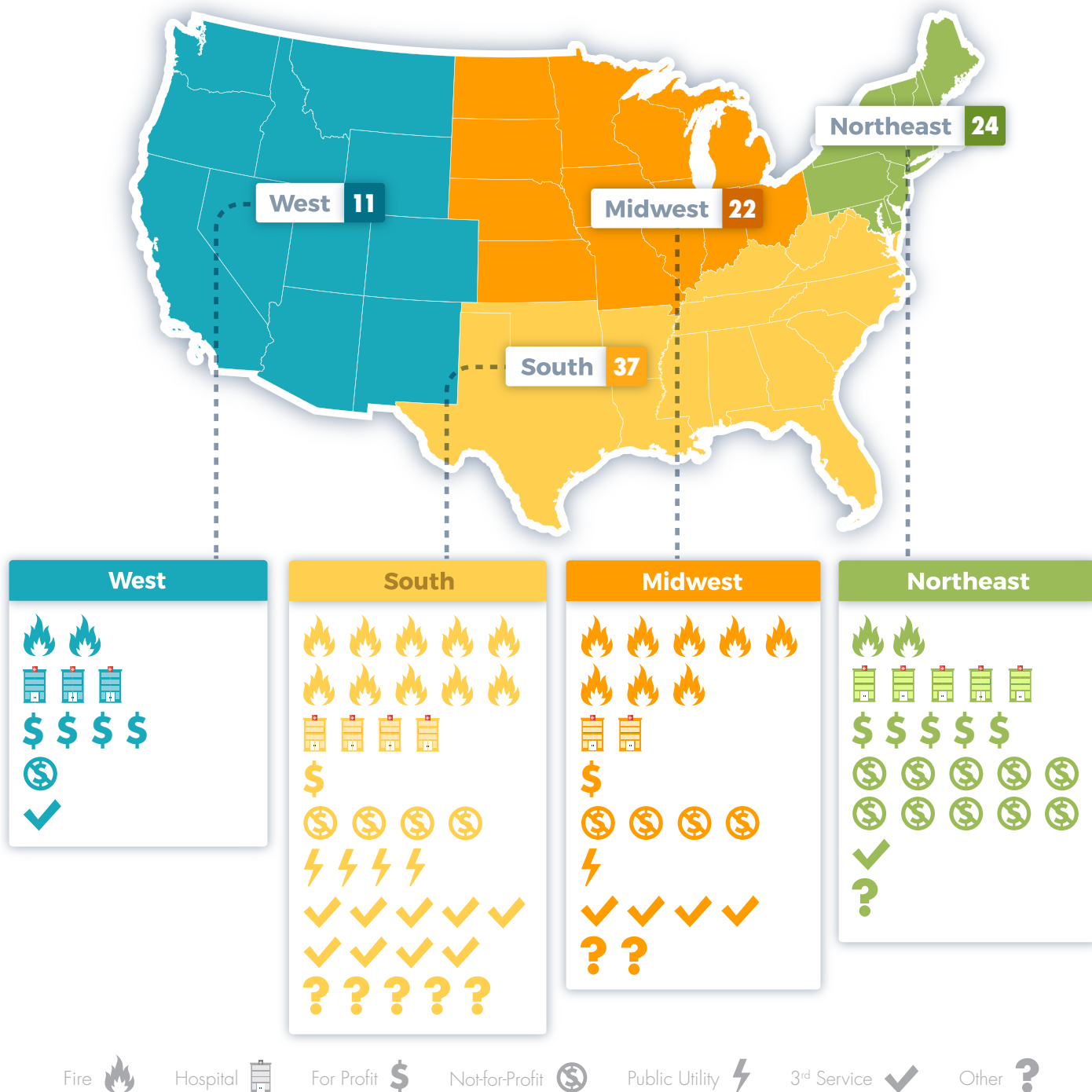
Catherine R. Counts is a doctoral candidate in the department of Global Health Management and Policy at Tulane University School of Public Health and Tropical Medicine, where she also previously earned her master's degree in Health Administration. Counts has research interests in domestic health care policy, quality and patient safety, organizational culture and prehospital emergency medicine. She is a member of AcademyHealth, Academy of Management, the National Association of EMS Physicians and National Association of EMTs.

Sean Caffrey, EMS manager/administrator

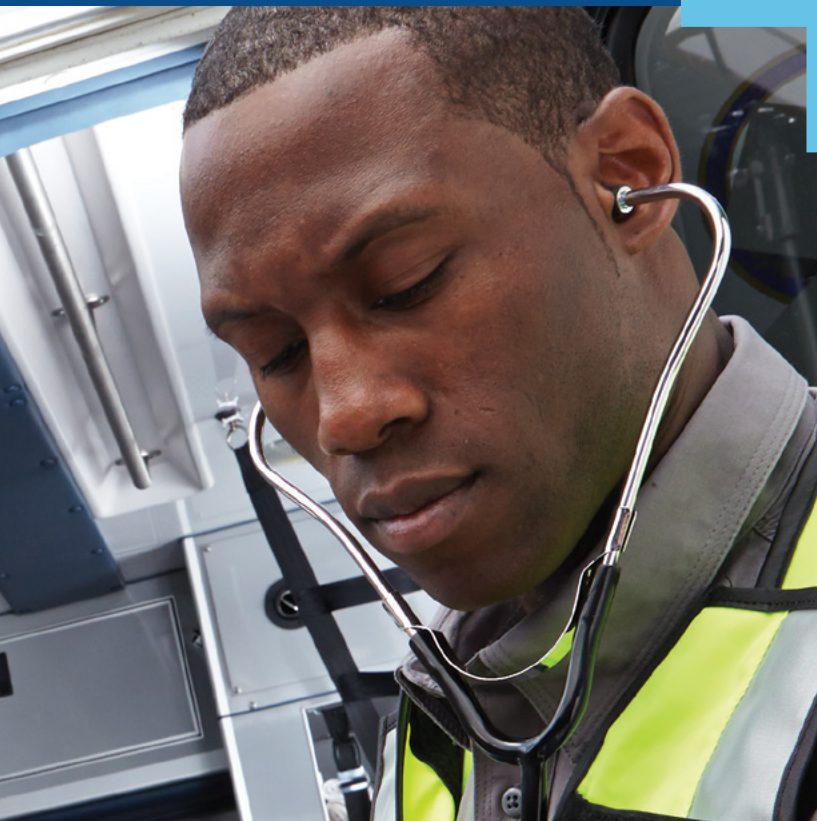
Sean Caffrey, MBA, CEMSO, NRP, currently serves as the EMS programs manager for the University of Colorado School of Medicine, Pediatric Emergency Medicine Section. He has been certified as a paramedic since 1991 and has worked in volunteer, private, hospital-based, fire-based and third service EMS systems in roles from provider through department head. Caffrey currently works in conjunction with the state EMS office in Colorado, is the vice president of the EMS Association of Colorado, is a board member of the National EMS Management Association and a member of NAEMT, NASEMSO and NAEMSP. His interests include EMS system design, pediatrics, public policy, professional development and research.

COHORT DEMOGRAPHICS

Surveys were sent to 100 agencies around the United States. Nearly three-fourths (74) of the agencies provided relatively complete information, and another 20 agencies provided partial information in varying degrees of completeness.



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IT'S ABOUT
WHAT YOU'RE
WILLING TO DO.



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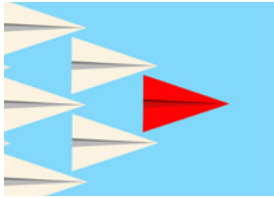


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