# "For Us, It's the Only Way:" Characteristics of ACE Achievement and Barriers to Success

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#### **ABSTRACT**

**Background:** Relatively few dispatch agencies using the International Academies of Emergency Dispatch\* protocol systems have achieved Accredited Center of Excellence (ACE) status. Despite ACE being the gold standard for implementation of these systems, no research exists about either barrier to ACE achievement or drivers of ACE success.

**Objectives:** The objectives of this study were to describe the barriers to achieving ACE and to identify characteristics that indicate success with respect to achieving and maintaining ACE status.

**Methods:** In-depth, semi-structured interviews were conducted using the "success case method." A subset of the most successful ACE achievers was selected to participate in the study; additionally, researchers selected agencies that either never achieved ACE or achieved ACE then lost that status. Representatives from these agencies were interviewed to gain insight into barriers to ACE and characteristics that indicate success with respect to sustaining ACE status. **Results:** Analysis identified many differentiating characteristics between ACE achiever and non-ACE achiever agencies including differences in culture, in approach to ACE achievement, in timeline for ACE achievement, and in

protocol compliance. **Conclusion:** Sustaining ACE-level performance appears to be a team effort, and those agencies that display the characteristics of team effectiveness identified in the study—such as having an external focus or a supportive work environment that promotes employee learning—are more likely to be top performers.

overall attitude to innovation and change. The primary barrier to ACE was

## **BACKGROUND**

The Emergency Priority Dispatch System (EPDS) provides a structured calltaking process for emergency dispatchers. The EPDS is comprised of separate systems that cover four different dispatch disciplines: Fire, Police, Medical, and Nursing. The first three of these separate but interrelated systems are referred to as the Fire Priority Dispatch System\* (FPDS\*), the Police Priority Dispatch System\* (PPDS\*), and the Medical Priority Dispatch System\* (MPDS\*).

An agency that uses at least one of these three dispatch systems is eligible to become an Accredited Center of Excellence (ACE). The ACE designation is reserved for high-performing agencies. To become ACE, agencies must meet the standards expressed in the "20 Points of Accreditation," a set of best practices for implementing one of these dispatch protocol systems. These best practices include the consistent completion of case reviews that meet performance expectations and following a code of conduct.<sup>1</sup>

Becoming ACE has long been considered the gold standard for agencies using the International Academies of Emergency Dispatch (IAED™) protocol systems. However, only a small number of agencies have ever achieved this status. In fact, many never even seek out ACE or put in place the basic policies and procedures, quality assurance practices, policy, or committee structures that are required. Anecdotal reports indicate that agencies are not seeking ACE status for many reasons, ranging from cost and workload to simple lack of awareness that the program existed. At the same time, agencies who achieved ACE tended to maintain it and to claim that it benefitted their agencies. Yet no research exists about either the barriers to ACE achievement or the drivers of ACE success.

#### **OBJECTIVES**

The goal of this qualitative research study is to describe the barriers to achieving ACE and to identify characteristics that indicate success with respect to achieving and maintaining ACE status.

## **METHODS**

In 2018, the IAED research team received Institutional Review Board (IRB) approval to begin this study. In-depth, semi-structured interviews were conducted using the so-called "success case method," which compares those who have successfully accomplished a task or benefitted from a program with those who were unsuccessful.² In this case, the researchers selected a subset of the most successful ACE achievers (predominantly Triple-accredited or "Tri-ACE" agencies and agencies that have re-accredited more than three times) and a comparison subset of agencies that have either never achieved ACE (despite long-time use of the protocols) or have achieved ACE and then lost it. The interviews were transcribed and categorized by the research team, with multiple researchers involved for greater objectivity and cross-checking.

In total, 12 U.S. dispatch agencies participated in the study. The reviewers conducted phone interviews with agency representatives using a semi-structured interview protocol. Agency representatives were a mix of managers and supervisors, often certified as IAED quality assurance specialists (ED-Qs). Of the 12 agencies, 9 (75%) were ACE achievers and 3 (25%)

dispatchers (Table 1). Overall, fewer non-ACE achiever agencies were interviewed than ACE achiever agencies because of their response rate. As a result, the following sections include more examples from ACE achiever agencies, and more descriptions of the approaches of those agencies, than of non-ACE achiever agencies. For reasons of space and redundancy, not all representative quotes are included.

## **RESULTS**

The results of the study, which are presented here, indicate strong and consistent differences in organizational culture and approach between ACE achievers and non-ACE achiever agencies. For this study, organizational culture is defined as the beliefs, values, and practices that influence employee behaviour.<sup>3</sup> Finally, the results point to a few commonly cited barriers and indicate ways to overcome those barriers.

## **Key differentiators**

Interviews revealed clear differences between those agencies who successfully achieved ACE (and successfully re-accredited) and those who were either unable to achieve accreditation or lost their ACE status. Interestingly, the differentiators did not include agency size, type of agency, organizational structure, or type of community served. All types of agencies were represented in both the ACE achiever and the non- ACE achiever groups. However, it should be noted that no agencies with very low volumes—those employing only 1 or 2 dispatchers total—were included in the sample.

	# of Emergency Dispatchers	# of Supervisors	Annual Call Volume	Community Type	IAED Disciplines Used
Agency A	30	6	89,704	Urban	Medical/Fire/Police
Agency B	45	12	78,000	Urban	Medical/Fire/Police
Agency C	20	6	45,406	Rural	Medical Only
Agency D	155	18	661,384	Rural	Medical/Fire
Agency E	30	6	72,000	Urban	Medical Only
Agency F	20	2	7,400	Urban	Medical Only
Agency G	80	20	450,000	Suburban	Medical/Fire/Police

Table 1. Summary of demographic and agency data for a selection of participating agencies

either never achieved ACE or achieved ACE then lost that status. Considering ACE achievers, 2 (22.2%) of these agencies were triple ACE – accredited in all three disciplines. Most of the ACE achievers (55.6%) were medical ACEs. Study investigators collected demographic and agency information from 7 of the 12 participating agencies (7 ACE agencies and 2 Non-ACE agencies.) This information included number of emergency dispatchers, annual call volume, community type (rural, suburban, urban), and number of supervisors.

These agencies represented a diverse cross-section of IAED user agencies, ranging from rural serving (and "extra rural") agencies to agencies serving urban populations and employing as many as 155 and as few as 20 people as emergency

The differentiating characteristics that were identified included differences in culture, in approach to ACE achievement, and in timeline for ACE achievement (Table 2).

# #1: Protocol focus vs. pride focus

One consistent difference between ACE achieving and non-ACE achieving agencies was how ACE achievement was presented to agency staff. ACE achieving agencies uniformly presented ACE in terms of a *culture of pride*, whereas non-ACE achieving agencies nearly uniformly presented ACE in terms of *compliance and protocol adoption*. In general, the non-ACE achieving agencies saw ACE in much narrower terms; both described the importance of compliance, but for unsuccessful

ACE Achiever	Non-ACE Achiever	
Pride focus	Protocol focus	
External focus	Internal focus	
Connected champions	Lone star champions	
"Change your life" timeline	"Baby steps" timeline	

**Table 2.** Summary of key differentiators between successful and unsuccessful ACE agencies

agencies, that was the primary focus. Whereas for ACE achieving agencies, the focus was on overall culture. Protocol compliance was simply one element of that culture.

In other words, in ACE achieving agencies, pride and culture were the drivers, and compliance was the result. In non-ACE achieving agencies, compliance was the driver, and culture change was the—intended but not accomplished—outcome. Moreover, those with a pride focus unanimously described the pride as something to be gained and experienced as a team. Whereas those with the protocol focus saw this as an individual concern to be addressed with specific personnel, and mostly focused on compliance. All in all, ACE achieving agencies presented ACE, from the very beginning of the process, as a "proud day for the team," whereas unsuccessful agencies presented ACE as essentially "a protocol problem." (Table 3)

A Proud Day For The Team	A Protocol Problem	
"It was more of a collective effort [] Everybody saw the common goal."	"You may have them there for a minute and then one or two people slide back."	
"We've looked at this as a win- win. I wanted to allow our staff to have an exceptional sense of pride in our communication center."	"If I could consistently get everyone on the same page for a period of time, then we would be closer to it."	

**Table 3.** Representative quotes that illustrate the "pride focus" of ACE achieving agencies versus the "protocol focus" of other agencies

Finally, almost every successful agency described this team pride focus as a "culture shift" that involved the entire organization, whereas non-ACE agencies represented ACE achievement as a role or task. As a result, ACE achieving agencies made organization-wide changes that drove ACE, while non-ACE achieving agencies assigned a single individual to "get the scores up."

## #2: Internal focus vs. external focus

Related to the culture shift addressed above, ACE achieving agencies represented their goals, purposes, and achievements as externally focused or outward facing,

specifically referring to patient and customer service and relationships with the community. Non-ACE achieving agencies, on the other hand, presented their work as internally focused, referring to individual staff members, relationships among staff, and internal problems and goals.

In this study, the ACE achievers very often mentioned external customers or patients as the source and purpose of their success. They mentioned community service and described the ways in which ACE achievement both benefitted the community and demonstrated the agency's benefit to the community. They also much more often referred to other agencies in their local areas (often mentioning that those other agencies were not accredited, another source of pride by comparison) and to oversight or governing bodies outside their own organization. Non-ACE achieving organizations, on the other hand, referred almost exclusively to internal sources of feedback, focused more strongly on process development, and rarely mentioned communities or patients/customers.

Likewise, ACE achieving agencies tended to talk more often about best practices, while non-ACE achieving agencies referred to workload—and ACE achieving agencies emphasized their reputation (as one respondent said, "We could, if we wanted to, just have EMDs, but this just looks a lot better"), while non-ACE achieving ones emphasized their procedures. Even in their description of the protocols themselves, and the QA process, ACE achieving agencies framed every decision as patient driven. Because of this focus, many ACE achieving agencies reported conducting outreach and education in their communities, which both enhanced their reputation and increased their focus on customer and patient care. Overall, this difference can be described as "serving my community" versus "managing procedures." (Table 4)

Serving My Community	Managing Procedures	
"The large overall benefit was that we were providing the best service for our community, our county."	"We are strict with our protocols."	
"The patient's what matters. If we can remember that everything else just seems to fall into place."	"We have a policy that says that they will follow and go through ProQA the way it's supposed to be."	
"It was pretty close to my heart figuring out that accreditation will hold us to a standard where customer service is the number one focus."	"There was never anyone telling us all these years that we were doing it right or doing it wrong."	

**Table 4.** Representative quotes of key differentiator "serving my community" versus "managing procedures"

One operational outcome of this difference in focus was that the QA processes necessary to achieve ACE compliance levels were always tied to patient and community outcomes in the ACE achieving agencies, which reduced opposition to the protocols and agency/dispatcher infighting. In the non-ACE achieving agencies, where protocol compliance was presented more as an end-in-itself or as a required procedure without an external purpose, dispatchers were much more likely to see the process as arbitrary or unimportant.

Also important was the obvious difference between enthusiasm and enforcement. The patient focus led emergency dispatchers to want to use the protocols correctly, as demonstrated by the many stories about staff members seeking out feedback. An internal, procedural focus, however, led to more fights between management and staff and a sense that emergency dispatchers felt "forced" to use the protocols compliantly.

## #3: Champions

One of the strongest predictors of ACE success in this study was the identification of an "ACE champion" within the agency. The "ACE champion" is the person (self-appointed or designated) who leads the accreditation effort. Yet a single person, alone, is not able to make the kinds of culture shifts required to be an ACE achieving agency. Each of these champions also had further support, generally from higher levels of leadership in the agency (and often in the jurisdiction).

Several characteristics defined the ACE achieving champions. They had all served long careers in the public service industry, generally within the communication center. All reported broader engagement with the profession, outside their own agencies-often including board membership, conference presentations, engagement with local or regional legislative bodies, or other forms of service that made them visible within the profession and provided them with both networks of support and education about the bigger picture in which their agency was operating. Most were, themselves, at a higher level in the organization, whether an agency director or QA manager, and most also reported additional certifications or training (such as being an instructor). Non- ACE achieving champions reported far less outside engagement with the field, smaller networks, and lower-level positions. Perhaps most importantly, ACE achieving champions reported seeking out ACE-related positions, whereas non-ACE achieving champions often found themselves assigned to the role.

In general, ACE achieving champions reported not only stronger support but more overall engagement from upper management and leadership. Leaders in the successful organizations attended communication center meetings, made appearances in the center, and acted as advocates within the broader agency, often bridging communication centers with responders. Very often, non-ACE achieving champions reported making ACE a priority in a time of leadership change, when new leaders could be convinced to support the process. In many cases, leadership in ACE achieving agencies even brought in new champions—sometimes those who had been successful elsewhere—to indicate the importance of ACE.

Those in ACE achieving agencies could therefore be called "connected champions," whereas those in non-ACE achieving agencies were more often "lone stars." These champions labored long and hard, putting in incredible effort to achieve ACE, but were often appointed to the position, attempting to do it in addition to other roles, and left to their own devices.

#### #4: Timelines

The final broad-scale differentiator between ACE achievers and non-ACE achievers was that successful agencies took an "all at once" approach. This approach of ACE achieving agencies entailed moving as quickly as possible toward major, overarching organizational change. Non-ACE achieving agencies, in contrast, tended to separate disciplines, move slowly, take on the ACE challenge piecemeal, or achieve ACE without making any other system changes.

In general, ACE achieving agencies portrayed ACE achievement as urgent and immediate and were willing to make sweeping changes to policies, interactions among agencies, and organizational structures to make ACE possible. Non-ACE achieving agencies were more likely to depict ACE as a separate, discrete operational process, not tied to other systemic changes, and they were more likely to describe a cautious and "one step at a time" approach. This theme also reflected the fact that many agencies attempt—and often achieve—ACE during times of other change or restructuring.

Rather than reflecting the traditional idea that you do not want to undertake too many changes at once, the ACE achieving agencies demonstrated that ACE is often part of, or drives, larger systemic change. Those agencies willing to undertake the large changes all at once, and on a fast timeline, were much more successful. Often, agencies had been "thinking about" ACE (sometimes for years), or had not made progress under previous leadership, but a new champion came on and made big changes quickly.

Similarly, ACE achieving agencies mentioned getting the process started early, rather than waiting until compliance was at ACE levels or other pieces were in place. This contributed to their ability and willingness to move quickly through the process. In sum, these approaches could be called the "change your life" and "baby steps" methods (Table 5).

## Other success drivers

In addition to the broad cultural and organizational differences, there were other methods, approaches, or characteristics that drove success for the ACE achievers (Table 6).

It should be noted that there was also a bare minimum that differentiated the ACE achieving agencies. ACE achieving agencies tended to have dedicated quality assurance staff (not staff who also have to take calls or perform supervisory duties). Additionally, ACE achieving agencies worked with the Dispatch Review Committee (DRC) and the Dispatch Steering Committee (DSC) that met regularly and often and included members from outside the emergency communications center

Change Your Life	Baby Steps
"I was doing a lot of restructuring around the same time."	"We just started our quality assurance program, [] so this is something that has been on the back burner."
"We hit it hard and heavy."	"It's been a process [CAD changes and recent consolidation], and that's pretty much why we haven't thought about ACE until now. We're still in the infant stages."
"It was something they had tried a few times and quit. So, in my first year and a half or so in [that city], we got ACE accredited."	"We're going to go for ACE at some point in time."
"I authorized the overtime—get it done."	"We're just trying to get within compliance levels, so that's kind of where we are now."

**Table 5.** Representative quotes of the successful "change your life" timeline versus the unsuccessful "baby steps" timeline for ACE

Bare minimum success drivers	Dedicated quality assurance staff Active DRC and DSC committees	
Other success drivers	Commitment to change and innovation Self-efficacy Personal connections Transparency and inclusion Using the tools Learning culture	

Table 6. Summary of other ACE success drivers

(fire chiefs, medical directors, etc.). It appears clear that ACE is, if not impossible, at least very difficult without these two basic elements in place.

The success drivers noted below are not minimum requirements but elements that contributed to or predicted ACE success.

## #1: Innovators innovate

Not too surprisingly, we found that agencies—and individuals—committed to change and innovation overall were more likely to be successful in achieving ACE. ACE achievers were much more likely to mention recent technology changes or updates, additional accreditations. Driving this was the recognition that emergency dispatching is not static and that the science and practice change, and agencies must change with them.

ACE achievers were also much more likely to mention the use of data and an understanding of how to use data to make improvements in their agencies.

Similarly, ACE achieving champions were those who expressed the greatest interest in making improvements across the board, and often described incidents earlier in their careers in which they had made similar large-scale agency changes.

Overall, ACE achieving agencies (and individual champions) were those who put a strong overall emphasis on change, innovation, technical updates, and being "first" in everything, not just in ACE.

## #2: Self-efficacy matters

One unexpected finding was that ACE achievement often corresponded with a sense of self-efficacy in relation to the Academies, specifically. Almost all agencies mentioned, at some point in their interviews, difficulties or confusion surrounding the use of the protocols—or changes they wanted to see made in the protocols.

Yet non-ACE achieving agencies tended to leave the difficulties at that, saying for example that there are a lot of "gray areas" in the protocol that are "confusing, and you get a lot of different opinions on that." ACE achieving agencies, on the other hand, almost always reported taking action to

ask questions, correct problems, and recommend changes. Several specifically mentioned submitting PFCs as a basis for their belief in the protocols, as the PFC process made them feel that they had direct input into the system they were asking their teams to use.

Most importantly, ACE achieving agencies seemed to feel that they had both the right and the ability to ask questions and request changes—whether or not those were adopted. The belief that they had a direct say in the development of the protocol, and that their expertise was respected by the Academy, was closely correlated with a belief in and successful achievement of ACE.

Overall, a sense of self-efficacy increased the likelihood that agencies would become ACE.

#### #3: Personal connections

Closely related to self-efficacy was the sense of having personal connections with individuals at Priority Dispatch Corp.™ (PDC™) and the International Academies of Emergency Dispatch (IAED). Every agency, whether achieving ACE or not, was able to name at least one individual with whom they had interacted during the ACE process. However, Non-ACE achieving agencies often mentioned that they "hadn't reached out" to that person (or heard from them) in months. On average, the non-ACE achieving agencies named one to two people, and these were most often their PDC sales representatives.

ACE achieving agencies, on the other hand, not only reported (and named) two to three times more individuals with whom they were connected; they also reported those connections in a different way, referring to PDC and IAED staff as "friends" and even "family." They repeatedly mentioned these close connections as drivers in the ACE process.

Given that even the non-ACE achieving agencies could name at least one individual (often only by first name), having an assigned connection point is not enough. Building lasting, personal connections based on regular contact appears to be one of the most significant drivers of ACE success.

## #4: Transparency and inclusion

As part of building their "culture of pride," ACE achieving agencies tended to be very open with their staff members— as opposed to non-ACE achieving agencies, which tended to see the ACE process as something the QA team and (to some extent) management were involved in, and which would be shared with the team later or in limited doses, mostly relating to compliance.

As one non-ACE agency put it, "We have not [talked to dispatchers about ACE], and I honestly haven't educated them on that and I'm not sure how much they're aware of it." Many non-ACE achieving agencies focused on QA and stated that their communication to emergency dispatchers centered around improving compliance and using the protocols correctly, but they did not communication about ACE or its benefits.

ACE achieving agencies, however, communicated about and shared updates regarding ACE from the first moment—including the challenges or barriers they might face.

## #5: Using the tools

ACE achieving agencies repeatedly mentioned using the tools and resources provided by PDC and the IAED. The most commonly mentioned were Quality Performance Review (formerly National Q), the College of Emergency Dispatch, the Journal of Emergency Dispatch, and the various ACE websites and social media pages and the ACE achieving agencies made use of all, not just some, of these resources.

Agencies that had not achieved ACE were more likely to report "home-grown" training, ED-Qs who had many other tasks, and a lack of familiarity with available tools. In some cases, these agencies reported being aware of the resources but feeling that they did not know how to integrate them into their own procedures.

The most important elements of resource use were the integration of tools and resources and making the resources fit the way they already work and the ability to use the tools to separate direct supervision from protocol compliance review or training.

In addition to resources such as Quality Performance Review, the ACE and supervisor portals, and the Journal, successful agencies were also much more likely to send employees to Navigator.

## #6: Learning culture

As agencies move toward ACE achievement, they appear to replace a "punishment" model of QA with a "learning culture" model. In a learning culture, individuals are not punished for mistakes. Rather, feedback is provided to help improve practice in the future and to better understand

why mistakes occurred. Each of the ACE achieving agencies detailed ways in which they had moved toward a model in which they practiced "curiosity" about why an emergency dispatcher made a mistake to help them do better. All of them described QA as a process of "support" for staff.

Even those agencies that currently do not have ACE but are in the process of attempting it described (often very recently) moving away from the punishment model and embracing the learning culture.

In addition, these agencies represented the learning culture as applying to a set of interconnected employees, not just to emergency dispatchers individually. In general, the learning culture was represented as part of their "team effort" approach—showing that QA, management, and staff were all working together, not against one another.

#### **Barriers to ACE**

Across the board, without exception, the primary barrier to ACE, reported by both ACE achieving and non-ACE achieving agencies, was protocol compliance. How the ACE achieving agencies overcame that barrier has been discussed in detail above (primarily through culture change, external focus, and building a learning organization with a QA focus on training rather than punishment).

Several other barriers were mentioned, mostly by non-ACE achieving agencies—or by ACE achieving agencies in describing what they thought might keep other agencies from achieving ACE (Figure 1).



**Figure 1.** Summary of other (i.e., not protocol compliance) barriers to ACE

Interestingly, ACE achieving agencies represented ACE as a way to fix several of these problems. For example, several mentioned having their own in-house instructors as a huge cost savings. Others mentioned the achievement of ACE as a way to generate support within and outside their organizations and as a way to reduce workload over time, after the initial "push." ACE was also specifically mentioned as a way to reduce turnover and attrition—which was also represented as a huge cost savings.

As far as cost, some ACE achieving agencies did mention that ACE was not as expensive as many other accreditations. Another put it more bluntly: "What kind of costs do you put on a human life?"

In many cases, the mention of cost or workload often really represented a lack of organizational support, or a lack of understanding of the benefits of ACE. These are probably more important areas for effort because they affect, and may even overturn, some of the other barriers.

## **DISCUSSION**

Overall, the most significant ACE barrier was protocol compliance. Additionally, the findings of this study suggest that the best predictor of ACE success is well captured in the 2017 Navigator theme, "All In." Overwhelmingly, ACE achieving ACE agencies reported that their ability to achieve ACE was a direct result of their team mentality, their multi-level support, and their organizational culture.

Specifically, being "All In" means involving all staff from the very beginning of the ACE drive and being transparent about the process, the difficulty involved, and the required changes. Other predictors of ACE success include making ED-Q and case review a "team effort" among emergency dispatchers, quality assurance personnel, and supervisors, with a focus on joint improvement and learning rather than punishment or discipline. Another characteristic of success related to "team effort" is focusing outward on community service and patient/caller care, rather than inward on processes and procedures. Furthermore, building personal connections with PDC and IAED staff and utilizing all available resources (and integrating them into existing agency practices) is associated with ACE success. Finally, requiring actual, visible support from the highest levels of their organizations was a key component in the success stories of many participating agencies.

One of the most intriguing findings of this study was that ACE achievers were happy with the difficulty they faced in achieving ACE—it gave the process meaning and value. Every one of the ACE representatives described ACE as something akin to "the measure of our best energies and skills." One and all, they represented their employees as "up to the task" and "wanting to be the best." Non-ACE achieving agencies, contrastingly, described their employees almost unanimously as "the problem." Several agencies specifically noted that the difficulty of achieving ACE was not a barrier, but what made it worth doing.

Many findings in this study are confirmed by the literature on team effectiveness. According to this body of research, team success can be traced to a few "enabling conditions" including the presence of a compelling direction and a supportive context.<sup>4-6</sup> Compelling direction can take many forms, but leaders can give their employees compelling direction if they give them goals that the team considers worth achieving. These results suggest that goals invoking compelling, externally focused ideas such as "serving my community" can be perceived as energizing or motivating to those who work at dispatch agencies. In contrast, goals

only related to internal procedures might not give employees enough motivation to reach higher levels of performance.

Lastly, this study identified many success drivers for the ACE program; however, it is currently unknown which of these success drivers have the largest positive impact on ACE performance. Those success drivers that are the most important could shape interventions that could enhance the ability of agencies to maintain their levels of performance. Therefore, future studies should measure the impact of these success drivers or characteristics of team effectiveness on agency performance levels. As well, these results can be used as the basis for developing interventions designed to improve an agency's chances of sustaining ACE.

## Limitations

The study sample included agencies that were both ACE achieving and non- ACE achieving. However, while 9 ACE achieving agencies participated, many fewer non-ACE achieving agencies were included in the sample. This gap in recruitment was likely a result of it being more difficult to recruit dispatch agencies that have weaker ties to the organization sponsoring the research (IAED). More agencies in the non-ACE achieving group would have strengthened the comparative analysis presented in this paper.

Data was reported by representatives of participating agencies. For each agency, only one representative was interviewed. Since the reporting was not verified by the investigators, the data could be subject to various biases including selective memory, attribution error, and exaggeration. More specifically, explanations that rely on this data might overemphasize the importance of factors related to the disposition of a team rather than other situational factors.

Finally, qualitative analysis is a product of interpretation. Any biases of the analysts might have affected the outcome of the results. However, this bias was mitigated by having multiple analysts categorize the data simultaneously then arrive at a final agreement about the categories.

## CONCLUSION

Sustaining ACE-level performance appears to be a team effort, and those agencies that display the characteristics of team effectiveness identified in the study—such as having a compelling external focus or a supportive work environment that promotes employee learning—are more likely to be top performers.

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