

Current Methods and Factors Influencing Successful Training of Emergency Dispatchers in Emergency Communication Centers

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ABSTRACT

Introduction: Based on known unpublished sources (e.g. emergency communication center managers, training officers, dispatchers), emergency communication centers (ECCs) around the world provide training for new emergency dispatchers and continuing dispatcher education. However, little information has been collected, or shared, between ECCs regarding specific training methods that are being used, which methods are successful, and what factors influence their success.

Objective: The objective of this study was to describe what training methods are currently being used in emergency communication centers and what factors influence their success.

Methods: This non-randomized, non-controlled, prospective cohort study was conducted using an online electronic survey. The survey link was sent to specific individuals at International Academies of Emergency Dispatch (IAED)-accredited centers in the USA.

Results: 184 respondents completed the survey. The most common and most favored training methods were identified, as were the most needed topics for training and factors involved in successful versus unsuccessful trainings.

Conclusions: This study helped to generate a baseline understanding of the scope and type of training currently being conducted in emergency communication centers, as well as training methods and practices that have been successful or unsuccessful.

INTRODUCTION

It has been established (mainly through unpublished sources) that emergency communication centers (ECCs) around the world provide training for new dispatchers, as well as continuing dispatcher training.^{1,2,3} However, little information has been collected, or shared, between ECCs regarding specific training methods that are being used, which methods are successful, and why they are successful. More research and communication on the topic of emergency dispatcher training may help to discover best practices that can be shared with the broader emergency dispatching community.

In order to begin researching the effectiveness of specific training methods, it is important to generate a baseline understanding of the scope and type of training being conducted. Previous studies have identified training method commonalities in other training-related fields, such as Higher Education, Corporate Training,⁴ and Management Training.⁵ This study followed a similar methodology, using a survey to identify the most favored and the most needed methods and topics for training, as well as the factors respondents perceived as important in making trainings successful or unsuccessful.

OBJECTIVE

The objective of this study was to describe what training methods are currently being used in ECCs, and what factors influence their adoption and success.

METHODS

Design and Setting

This was a non-randomized, non-controlled, and prospective cohort study. An online electronic survey, created using the Survey Monkey software (Survey Monkey, Palo Alto, California, USA, ©1999-2014) was used for data collection from specific individuals at all of the International Academies of Emergency Dispatch (IAED)-accredited centers in the USA. The targeted survey participants included communication center managers, shift supervisors, quality assurance personnel, training supervisors, and active emergency dispatchers at International Academies of Emergency Dispatch (IAED)-accredited centers in the USA.

Survey Process

The survey link was sent to specific individuals in the communication center. These individuals were asked to respond to survey questions focused on trainers' and trainees' perceptions about what training methods have been most successful, what training topics were most important, and what training preferences emergency dispatchers tended to have.

Outcome Measures

The outcome measures included the types of methods used for dispatcher training, training topics, and factors influencing successful implementation of the training methods.

Data Analysis

Qualitative data was summarized. STATA for Windows® software (STATA Statistical Software: Release 13.0 ©2013, StataCorp, College Station, TX, USA) was used for quantitative data analysis. Descriptive statistics such as frequencies and percentages were used to profile the distributions of the types of dispatcher training methods, factors influencing their success, and dispatcher-preferred training topics. In addition, the open-ended responses to survey questions regarding successful training experiences were analyzed to discover common themes. Similar methods of analysis have been used in other survey-based studies. In such studies a "theme" is defined as, "general propositions that emerge from diverse and detail-rich experiences."⁶

RESULTS

The survey was initially emailed to 421 people, and it was then made available to all registered participants at the 2015 IAED Navigator Conference. 184 people responded to the survey. Of these, 66 (35.9%) were communication center managers, 30 (16.3%) were quality assurance managers, 28 (15.2%), were shift supervisors, 19 (10.3%) were active calltakers, 15 were (8.2%) training

supervisors, and 26 (14.1%) had other responsibilities. A majority 124 (67.4%) of the participating communication centers used only medical calltaking protocols. Others used both medical and fire (14.7%), medical, fire, and police (13.0%), medical and police (2.7%), police only (1.1%), fire only (0.5%), and fire and police (0.5%). Overall, communication centers had a median 20 dispatchers (minimum-maximum: 4 - 160) per center.

Overall, the top three most preferred training methods were Direct Instruction (37.0%), On-the-job Coaching (24.0%), and Computer-Based Training (e-learning) (17.0%) (Table 1). The most commonly used training methods for newly hired dispatchers were On-the-job Training (59.5%), and In-House Classroom training (58.8%). Notably, the most common classroom training courses mentioned by respondents were the IAED certification courses (EMD, EFD, EPD). In-house classroom training was also the most common method used for ongoing training of emergency dispatchers (48.4%) followed by Out-of-House courses/conferences (25.5%) and Protocol Review/Refresher courses (20.3%).

The leading factor for successful training was the selection of Relevant, targeted training topics (14.6%). However

Measure	Top categories	n (%)
Preferred training method (N=100)	Direct instruction	37 (37.0)
	On-the-job coaching	24 (24.0)
	Computer-based training (e-learning)	17 (17.0)
	Practice scenarios	16 (16.0)
	Group discussion	6 (6.0)
Training for newly hired dispatcher (N=153)	On-the-job training	91 (59.5)
	In-house classroom training	90 (58.8)
	Tethered/mentored by CTO	47 (30.7)
Ongoing training (N=153)	In-house Classroom training	74 (48.4)
	Out-of-house Courses/Conferences	39 (25.5)
	Protocol Review/Refresher	31 (20.3)
Successful training experience (N=164)	Relevant, targeted training topics	24 (14.6)
	Training by outside expert	16 (9.8)
	Protocol scenario practice	11 (6.7)
	Consistent, one-on-one, monitoring and feedback	8 (4.9)
Unsuccessful training experience (N=123)	Bad hire/not a good job fit	15 (12.2)
	Dispatchers didn't transfer learning to their job	14 (11.4)
	Ineffective instructor	12 (9.8)
	Inadequate time	12 (9.8)
Training participation motivating factors (N=115)	Relevance of training topic to job	28 (24.3)
	Communications Center-paid training	25 (21.7)
	Engaging, interactive training	17 (14.8)
Top 3 most important non-protocol related training topics (N=100)	Customer Service	41 (41.0)
	Dispatch software	21 (21.0)
	Caller management	18 (18.0)

CTO: Communications Training Officer

Table 1. Types of emergency dispatcher training methods and factors influencing their success

the factors leading to unsuccessful training were Bad hire / not a good job fit (12.2%) and Dispatchers did not transfer learning to their job (11.4%). The leading factors that increased motivation to participate in training were selecting training topics Relevant to the job (24.3%), and Communication center-paid training (21.7%). Finally, Customer service (41.0%) topped the list of non-protocol-related topics rated as highly important.

Overall, the top three training topics respondents believed were needed in their centers (rated either “moderate” or “high” need) were Using Diagnostic Tools (88.5%), Providing Dispatch Life Support (DLS) Instructions (87.3%), and Chief Complaint selection (81.0%) (Table 2). However, topics that were most commonly rated specifically as “high” need for training were Obtaining location of emergency (59.4%), and Providing DLS Instructions (56.9%).

Training topic	N*	Agency’s need: n (%)		
		Moderate	High	Total
Providing DLS Instructions	102	31 (30.4)	58 (56.9)	89 (87.3)
Chief Complaint selection	94	29 (31.0)	47 (50.0)	76 (81.0)
Using Diagnostic Tools	87	45 (51.7)	32 (36.8)	77 (88.5)
Key Questioning	89	29 (32.6)	41 (46.1)	70 (78.7)
Completing Case Entry	94	26 (27.7)	41 (43.6)	67 (71.3)
Obtaining location of emergency	106	10 (9.4)	63 (59.4)	73 (68.9)
Determinant Code selection	86	21 (24.4)	30 (34.9)	51 (59.3)

*Excludes neutral ratings DLS: Dispatch Life Support

Table 2. Training topics respondents rated as needed in their communication centers

DISCUSSION

The study results suggest that there is a distinct difference in focus between training methods used to train newly-hired emergency dispatchers versus their more experienced counterparts. New hires receive on-the-job training more often, along with mentoring from Communications Training Officers (CTOs). For experienced emergency dispatchers, the methods are focused on offline, and in some cases off-site, learning venues. In-house classroom training was a commonly-used method for both groups.

This survey was intended to help inform communication center managers and trainers of various training practices that have been successful at other centers. One potentially useful finding involves the leading factor for successful training: the selection of relevant, targeted training topics. Interestingly enough, the relevance of the training topic was also shown to be the leading factor for increasing dispatchers’ motivation to participate in training. This knowledge may prompt trainers to examine their

own methods for selecting training topics and discover new ways to improve. For example, a training officer might decide to put more effort into discovering training needs at their center and then tailor new training topics to meet those needs. In some instances, trainers may determine that their topics are indeed relevant, but their communication of that relevance needs improvement. In other words, trainers may need to do a better job of teaching how the topic applies to their dispatchers.

Additionally, these study results can help to reveal unsuccessful training practices that should be avoided. For example, the study showed that one of the leading factors that contributes to an unsuccessful training experience was inappropriate timing (i.e. not enough time, or too much time). With this in mind managers may reevaluate the timing of their own trainings and discover ways to match training times to specific topics and methods.

This study also revealed which specific training topics (protocol-related or otherwise) were most needed in the communication center, according to respondents. Again, the top three topics were: Obtaining location of emergency (88.5%), Providing DLS Instructions (87.3%), and Chief Complaint selection (81.0%). These topics are perhaps the most fundamental and critical elements of the emergency calltaking process, suggesting a need for more training and emphasis on these essential skills.

Finally, since this study was designed to be a baseline study upon which future training-related studies can be built, it provided findings which future studies could examine in more detail to identify best practices for dispatcher training. For example, future research could examine methods for selecting relevant training topics or what the optimal timing is for training.

LIMITATIONS

Some limitations to this study could also lead to future study topics. For example, one limitation was that there were relatively few respondents who were calltakers and /or dispatchers. Therefore, future studies could focus on surveying calltakers (the learners) and then comparing their responses to those of the managers and trainers. Interestingly, the respondents to this study perceived successful training as the result of topic selection, while they saw unsuccessful training as the result of human factors (such as trainees not being a good fit for the agency). Future studies could shed light on whether line calltakers and dispatchers (the learners) agree with this assessment.

Another limitation was related to the design of the survey questions. In some instances, responses to the open-ended questions may not have supplied as complete a picture as was hoped for. For example, when it came to methods for ongoing emergency dispatcher training, the fourth most-mentioned method was use of the IAED’s EMD Advancement Series (EMDAS). However, even

though the EMDAS was not always explicitly mentioned, it may have been utilized to conduct in-house classroom trainings (a practice that has often been reported regarding the use of the EMDAS). Therefore, the EMDAS may actually be in the top three methods for ongoing training, but this was not completely apparent based on the open-ended responses. Another example involved the questions that asked respondents to rate training topics according to need. Some of the respondents' comments seemed to suggest that their rating may have been based on how important they felt the topic was, instead of how much training was needed on that topic.

While these limitations may be only slight misperceptions, they could certainly be corrected in a future survey.

CONCLUSION

This study helped to generate a baseline understanding of the scope and type of training being conducted in the communication center as well as training methods and practices that have been successful or unsuccessful. Factors that led to increased motivation were also discovered. According to the survey, the most common factor that led to a successful training experience was the practice of tailoring training topics to specific needs in the communication center (14.6%). On the other hand, the factors that lead to unsuccessful training experiences were Bad hire/not a good job fit (12.2%), and Dispatchers did not transfer learning to their job (11.4%).

Finally, this study revealed training topics that were most needed in the communication center, according to respondents. The results of this study can help communication center managers and trainers to re-examine their own training practices and discover areas for improvement.

The results of this study have also uncovered training methods, practices, and topics that can be topics for future dispatch training-related studies.

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