

**EMERGENCY RESPONDER EXPERIENCES WITH THE INCIDENT COMMAND
SYSTEM: A QUALITATIVE ANALYSIS**

by

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Abstract

The Incident Command System (ICS) is intended to standardize and improve the effectiveness of incident response. Although ICS was implemented in 2005, the opinions of ICS among scholars and practitioners vary greatly. Furthermore, the literature does not offer a comprehensive evaluation of experiences with ICS among fire services, law enforcement, emergency management, and Emergency Medical Services (EMS) professionals. This study developed emergency responder experiences with ICS by asking: how do normative, regulative, and cultural-cognitive systems influence emergency responder experiences with ICS? A qualitative research methodology, a generic qualitative inquiry, and an Institutional Theory framework were utilized for this study. The population for this study included members of all fire services, law enforcement, emergency management, and EMS organizations in the southwestern region of the United States. The sample consisted of 12 senior fire services, law enforcement, emergency management, and EMS professionals from four states and represented city, county, state, and federal levels of responsibility and an average of 19.8 years of experience in emergency response. The results of this study indicate that the goal of National Incident Management System (NIMS) compliance and the use of ICS is progressing but not fully achieved. ICS has achieved widespread adoption, but the extent of its use is highly dependent on the branch of emergency response service. The results also indicate that pre-existing relationships between individuals and organizations have a strong influence on the experience with ICS during real responses. Nine themes emerged from the data analysis that contribute to the academic field of emergency management and have implications for emergency response practitioners and future scholarly research.

Dedication

This work is dedicated to my beautiful wife and amazing children. Although I was the one at the keyboard, you shared in the sacrifice of my time over the four years it took to complete this doctoral program. As in all my endeavors, your patience, understanding, and encouragement helped carry me through this journey. Above all, I would like to thank God for placing this academic desire in my heart and for the mental stamina it took to complete this rigorous adventure.

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I must offer great thanks to my committee chair, Dr. Mary Lannon. Your patience, wisdom, and encouragement certainly helped me stay the course and complete this work. Your strict adherence to scholarly standards served as a great example of what it means to *be an academic* and I will carry that with me into future endeavors.

I would like to also thank the nameless participants of this study who volunteered their time during the busy COVID-19 response to offer insight on their experiences with the Incident Command System. Your genuine dedication to your profession and concern for those you serve was clear. I hope this work contributes to the emergency management body of knowledge in a way that honors your essential contributions.

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CHAPTER 1. INTRODUCTION

Following the terrorist attacks on September 11th, 2001, President George W. Bush directed government to pursue a comprehensive, nationwide, and systemic approach to incident response (DHS, 2017). Implementation of the National Incident Management System (NIMS) and the Incident Command System (ICS) began in 2005 (DHS, 2017). NIMS is intended to be a “consistent nationwide template to enable partners across the Nation to work together to prevent, protect against, respond to, recover from, and mitigate the effects of incidents, regardless of cause, size, location, or complexity” (DHS, 2017, p. 3). ICS is a command and coordination system of NIMS and is intended to provide a flexible, adaptable, and common framework to assist emergency responder efforts to organize and direct on-scene incident response (Burgiel, 2020). The use of ICS is required for all emergency response organizations, and compliance is tied to federal preparedness funding (Hildebrand, 2015). Researchers suggested that implementation of, and satisfaction with, ICS may vary depending on the branch of emergency service (Jensen & Thompson, 2016).

Background of the Study

This study focused on the ICS experiences of senior members of the fire services, law enforcement, emergency management, and emergency medical services (EMS). These experiences are acquired when emergency response organizations train for, respond to, and recover from incidents which utilize ICS. Organizations may utilize ICS alone or with other organizations and in responses that vary greatly in scale and scope. The long process of implementing ICS as the standard command and coordination system began in 2005 but was not universally accepted across all emergency response organizations (Jensen & Yoon, 2011). The implementation of ICS was also met with significant and ongoing debate (Rose et al., 2017).

Chang and Trainor (2018) cited pre-existing trust and relationship issues as potential challenges to ICS implementation. Martaindale and Blair (2019) concluded that the level of ICS training and experience varied greatly between law enforcement and the fire service. Although challenges with ICS were shown to exist, efforts were made to improve the unified command approach to complex incident response, such as mass casualty incidents (MCIs) and active shooter situations (Martaindale & Blair, 2019).

Greater understanding is needed in the area of ICS implementation (Jensen & Thompson, 2016). The literature on ICS experiences across fire services, law enforcement, emergency management, and EMS was underdeveloped. ICS literature often focused on a single branch of emergency response and did not incorporate groups who may serve critical roles in the ICS structure or a unified command. Fire services, law enforcement, emergency management, and EMS often work together within ICS. Research which incorporates each of these groups may promote common understanding. Gaining further insight of ICS experiences may inform emergency responder scholars and practitioners seeking to understand the complex environment of incident response (Chang & Trainor, 2018).

Institutional theory was selected as a framework to understand how organizational pressures may influence ICS experiences. Institutional theory is thoroughly characterized in scholarly research and is commonly applied to organizational studies, economics, political science, and sociology (Abdelnour et al., 2017; Alvesson et al., 2019; Scott, 2014). There is not a dominant theoretical framework in the emergency management literature. The selection of institutional theory was appropriate for this study because it is transferable the organizational aspects of ICS experiences.

Need for the Study

This study was needed due to ongoing calls for additional research of ICS. Another need for this study is the differing conclusions over the application and value of ICS found in the literature. Over 17 years have passed since the national adoption of ICS. ICS training is commonplace and presumed to be ubiquitous among emergency responder and emergency management communities (Grainer, 2016). DHS utilized the NIMS Compliance Assistance Reporting Tool (NIMSCAST) to measure the permeation of NIMS into the domestic emergency response communities, but the use of that system was discontinued in 2011 (FEMA, 2011). While emergency response organizations have historically reported levels of training and compliance, success in these metrics are not sufficient to enable successful implementation of ICS (Chang & Trainor, 2018). Traditional ICS training focuses on what ICS is, but lacks detail about when and how to use ICS (Grainer, 2016). In practice, Jensen and Youngs (2015) found that there was substantial nationwide variation in county emergency managers' perceptions of NIMS and ICS implementation intent and behavior.

Research also suggests that ICS has not consistently been used as intended (Jensen & Waugh, 2014). ICS was also criticized for limited usefulness and that some assumptions of ICS may be faulty (Jensen & Waugh, 2014). A literature review by Jensen and Thompson (2016) proposed that further research is needed into all aspects of NIMS generally, and ICS specifically. Moreover, the literature indicated potential disagreement between practitioners and scholars in terms of ICS' effectiveness (Jensen & Thompson, 2016). Grainer (2016) suggested that further research was needed to determine if the existing systems and associated ICS training should be updated or revised. Recent scholarly research on that topic was not present in literature. Nowell and Steelman (2019) concluded that highly publicized failures of ICS are examples of the

system's inadequacies in complex incidents and proposes that network governance may be a more appropriate alternative.

Purpose of the Study

The purpose of the study was to contribute to the emergency management body of knowledge by developing emergency responder experiences with ICS. Jensen and Thompson (2016) reported conflicting opinions of ICS among the scholars and practitioners. This study explored emergency responder experiences with ICS to narrow the gap in the literature as previously recommended. This study revealed themes about how senior emergency responders experienced ICS throughout their careers. The primary audience for this study is emergency management students and scholars who seek knowledge about the experiences of ICS practitioners. Results of this study could also inform future research into normative aspects of emergency response organizations, the effects of coercive and regulative power, and the influences of emergency response culture on emergency response outcomes. Analysis of emergency responder experiences with ICS may also provide insight valuable to updating ICS training and educational programs.

Significance of the Study

ICS is intended to standardize and improve the effectiveness of incident response (DHS, 2017). While implementation of ICS among emergency response organizations is complete, it is not utilized in a consistent manner (Jensen & Waugh, 2014). Emergency responders are responsible for making critical decisions under pressure and resource scarcity. If responding organizations utilize ICS differently, there may be detrimental effects on decision making, communication, or utilization of resources. Understanding the human-system experiences of different emergency response organizations could help to improve the approach to and

implementation of ICS. This study provided information about these experiences which can contribute to the emergency management body of knowledge. The findings and recommendations of this study may be useful to emergency management scholars and practitioners who are seeking greater understanding of ICS.

Research Questions

The three research questions for this study were intended to develop emergency responder experiences with ICS. The research questions were:

- (1) How do normative systems influence emergency responder experiences with ICS?
- (2) How do regulative systems influence emergency responder experiences with ICS?
- (3) How do cultural-cognitive systems influence emergency responder experiences with ICS?

Definition of Terms

Incident. An occurrence of natural or man-made origin that caused or threatens harm to life, property, or the environment (FEMA, 2020).

Response. The actions taken by trained emergency responders to minimize consequences of an incident (DHS, 2017).

Research Design

Research designs are plans of action that connect the philosophical and methodological aspects of a research approach to the research methodology (Gelo et al., 2008). Qualitative research that focuses on individual experiences can be an effective means of studying broader phenomena (Tuohy et al., 2014). A generic qualitative inquiry was used to study emergency responder experiences with ICS. Quantitative research methods are less suited to capture the breadth and depth permitted by qualitative methods (Fernandez, 2017). Following purposive

sampling and informed consent, the research questions were addressed through semi-structured interviews with qualified emergency response personnel. Participants were recruited from fire services, law enforcement, emergency management, and EMS organizations.

Alternative qualitative approaches such as phenomenology, ethnography and grounded theory could have been used for this study. Phenomenology is a popular approach but focuses on the inner dimensions and qualities of cognitive processes, not in the circumstances that necessitate the cognitive processes (Percy et al., 2015). This research is focused on the institutional systems of ICS which may be illuminated through interviews with emergency responders about their experiences. Using phenomenology would undesirably narrow the study's focus to the experiences themselves, and not the relationship between experiences and ICS as a system of command and coordination. Ethnography commonly utilizes personal observation by the researcher. The focus of ethnographic research lies primarily with people as objects of attention (Holbraad, 2018; Percy et al., 2015). As with phenomenology, the focus of ethnography is not well-suited because ICS is the subject of this study, not its practitioners directly. Grounded theory uses data to develop an explanation for an observed phenomenon (Percy et al., 2015). Grounded theory focuses on human interaction to explain phenomena (Hall et al., 2013). This study was concerned with the institutional systems that influence ICS, making grounded theory not an appropriate design. The generic qualitative inquiry was selected as the most appropriate way to analyze ICS through the experiences of its practitioners.

Assumptions and Limitations

The source and depth of assumptions are two issues which must be addressed in any scholarly study. Assumptions are unavoidable in research. Acknowledging assumptions and limitations and why they are supported in research are essential elements in pursuit of valid,

credible, and reliable research (Berkovich, 2018). The study was limited by elements beyond the control of the researcher and delimitations which were artificial boundaries within the research design.

Assumptions

Assumptions may be found in many sources, but typically fall into three categories: general methodological assumptions, theoretical assumptions, and topic-specific assumptions (Young & Ryan, 2020). General methodological assumptions deal primarily with the nature of reality of knowledge and how these views are constructed. Theoretical assumptions shape how the study through the formation of research questions, interview guide development, and data analysis. In this study, topic-specific assumptions include participants' ability to communicate their experience with ICS.

General Methodological Assumptions

The qualitative methodology makes assumptions about the relationship of reality and knowledge which represent ontological and epistemological positions (Hall et al., 2013). This study assumed the constructivist ontological position. Constructivism posits that someone's reality may be independent, socially constructed, or different from another's and results from interactions between individuals and the world around them (Gelo et al., 2008). This study consisted of data collected through interviews. Therefore, an epistemological assumption is that the researcher and the participants are co-dependent. Semi-structured interviews attempt to minimize this dependence, but it must be assumed that the interviewer and interviewee influence one another throughout the conversation (Pratt et al., 2020). Another assumption of qualitative research is that participants were forthcoming and truthful (Simon & Goes, 2013).

Theoretical Assumptions

Utilizing a theoretical framework added value in forming research questions, interview guide development, and data interpretation. This study was framed by institutional theory. Institutional theory is well-established in organizational studies (Abdelnour et al., 2017; Alvesson et al., 2019; Jones et al., 2015; Scott, 2014). This study explores the organizational aspects of the emergency response institution and assumes that institutional theory is appropriate for that purpose. The key aspect of institutions is that they constrain and regularize behavior (Scott, 2017). To apply this theory, it was assumed that acceptance and conflict with the system are explained by normative, regulative, and cultural-cognitive elements. This study assumed that institutional theory was appropriate to address ICS experiences within the emergency response institution. Applying Scott's (2014) interpretation of institutional theory, the emergency response institution would include the source of regulative authority and all those organizations subject to those regulations. Recipients of this regulative authority as assumed to include all NIMS-compliant organizations with operational roles during an incident (DHS, 2017).

Topic-Specific Assumptions

The key topic-specific assumption of this study is that emergency response organizations utilize ICS because they choose to, because they feel compelled to, or some blend of those two motivations. This study also assumed that participants have insight to their organization's utilization of ICS. This assumption was addressed through purposive sampling and the requirement for participants to have at least five years of service in emergency response. Completion of specific advanced incident response courses was a requirement for participation in this study. Completion of these courses represents the knowledge and experience required to complete incident action plans (IAPs) during an incident (FEMA, 2019).

Limitations

The limitations of scholarly research should be acknowledged (Velte & Stawinoga, 2017). These limits come in the form of factors outside the control of a researcher, flaws inherent to a research design, and controlled delimitations. Limitations of this study included the participants willingness and ability to communicate their experiences with ICS accurately and honestly. Design flaws also present limitations. Design flaws are often inherent to the research design and should be recognized during research planning and presentation of the results. For example, qualitative research commonly incorporates a small sample size and collects different data than would be available in quantitative research (Creswell & Creswell, 2018).

Design Flaw Limitations

Design flaw limitations threaten to limit a study's validity, credibility, and generalizations (Pratt et al., 2020). Design flaws are greatly under the researcher's control and should be minimized (Simon & Goes, 2013). Design flaws should only be accepted if they do not prohibit valid answers to the research questions, impair the researcher's ability to draw necessary conclusions, or make the conclusions suspect. Use of theory also presents some inherent limitations because researchers may approach the data with a bias (Hsieh & Shannon, 2005).

ICS literature suffers from a lack of generalizability due to a variety of factors (Jensen & Thompson, 2016). Results of this study cannot be generalized to the entire emergency response community. The research design included 12 senior-level participants from fire services, law enforcement, emergency management, and EMS. It is possible that their responses were not representative of their peers or junior emergency responders. An assumption of this study assumed that the experiences of these individuals with ICS were similar to the greater community but results from the data cannot be generalized to the greater population. However, the emergency response community is very diverse in risk, experience, capabilities, and limitations (FEMA,

2018). The participants in this study were primarily emergency responders within metropolitan and rural emergency response organizations from the southwestern region of the United States. Only two participants came from other regions (Pacific and New England). A more geographically diverse group of participants may provide a broader view of experiences. Many other governmental and non-governmental organizations utilize ICS (DHS, 2017). It is possible that inclusion of these groups could likely offer additional insight to experiences with ICS.

Delimitations

Delimitations are under the control of the researcher and refer to artificial boundaries of a study which are created by topics of potential academic interest which are intentionally not investigated (Simon & Goes, 2013). The interview guide limited this study by addressing only the normative, regulative, cultural-cognitive elements emergency responders had with ICS. There are many other facets of emergency response which influence experiences with ICS. This study does not investigate details of specific incidents from an orthogonal perspective. Each participant discussed experiences with ICS of their choosing. Although this study did not investigate emergency responder experiences at the same incident, the participants expressed similarities applying ICS. Additional delimitations included the sample size, the limited selection of fire services, law enforcement, emergency management, and EMS and recruitment from the southwestern region of the United States.

Organization of the Remainder of the Study

Chapter One introduced the study and provided a brief background and common terms. This chapter also provided the research questions, the purpose of the study, and other foundational details. The remainder of the study is organized into four chapters which detail the literature review, research methodology, presentation of the data, and summary information.

Chapter Two presents the study's literature review. Key topics in this chapter include the analysis and synthesis of relevant scholarly research and an orientation to the study's theoretical framework. Chapter Three presents the study's methodology in sufficient detail to establish credibility and reliability. This chapter introduces the study's procedures for participant recruitment and protection as well as data collection and analysis. Also found in Chapter Three is the interview guide, the role of the researcher, and ethical considerations. Chapter Four includes the data, the coding scheme, and the corresponding analysis. Chapter Five provides a discussion of the results in relation to the research questions. The final chapter also compares the findings to the theoretical framework and existing literature. Chapter Five concludes with a discussion of the implications, limitations, and recommendations for future research of ICS.

CHAPTER 2. LITERATURE REVIEW

Chapter Two reviews the body of scholarly literature that informed this study. The purpose of the literature review is four-fold. First, the literature review demonstrates the comprehensive and rigorous research that shaped the research questions, methodology, design, and analysis of this study. Second, the literature review informs the reader of relevant subjects to advance the emergency management body of knowledge. Third, the literature review synthesizes this body of knowledge into themes which are directly related to this study. The fourth purpose of the literature review is to present a critique of the literature's strengths, limitations, and scholarly qualities or shortcomings. The literature review consists of six sections: methods of searching, theoretical orientation for the study, primary review of the literature, synthesis of findings, critique of previous research, and the chapter summary.

Methods of Searching

An interest and research on Incident Command System (ICS) began before the doctoral journey began with review of a critique of ICS by Buck et al. (2006). Since the National Incident Management System (NIMS) and the ICS are mandated by the federal government, the doctrine was first researched through primary sources (DHS, 2017; FEMA, 2019). The search for scholarly, peer-reviewed sources was conducted primarily through Capella Commons using search terms: *Incident Command System, ICS, NIMS, ICS critique, ICS perceptions, ICS experiences, NIMS ICS implementation, ICS law enforcement, ICS emergency medical services, ICS fire services, ICS emergency management, institutional theory, organizational science, qualitative research methods, generic qualitative inquiry, quantitative research methods, and coding qualitative data*. The search results were filtered to scholarly and peer-reviewed articles within 7 years, 5 years, or 3 years, depending on the number of results returned. The reverse was

true for searches of foundational sources. In these instances, searches were performed to identify the progenitor of modern concepts, theories, and practices. This is most evident in the identification of FIRESCOPE as the origin of NIMS and ICS and the adopted interpretation of institutional theory (Butler, 1997; Malnic, 1987) Prior to submitting this manuscript, similar searches were performed to incorporate new research.

In addition to Capella Commons, *Homeland Security Digital Library* and *ProQuest Central* databases were used to search peer-reviewed journals on homeland security and emergency management for papers about the perceptions, implementation, critiques, and reviews of NIMS and ICS using similar search terms as above. Several academic textbooks, non-scholarly practitioner publications and doctoral dissertations provided valuable direction to deeper concepts and additional scholarly research. The literature search was considered complete when no new scholarly research was discovered, and the search efforts returned papers already contained in the annotated bibliography.

Theoretical Orientation for the Study

Doctoral research should be grounded in an existing theory (Wilkins et al., 2019). Institutional theory was used at the theoretical foundation for this study. The interpretation of institutional theory popularized by Scott (1995) is used in this study. Organizations tend to follow routines in terms or roles, responsibilities, beliefs, and culture (Abdelnour et al., 2017; Alvesson et al., 2019; Jones et al., 2015; Scott, 2014). The normative pillar of institutional theory is used to describe potential reasons for this tendency among emergency response organizations. The regulative pillar of institutional theory provided perspective into the way federal powers compel subordinate response organizations to comply with ICS. The cognitive pillar of institutional theory attempts to describe the ways institutions develop a collective understanding (Scott, 2014).

The cognitive pillar is useful when analyzing how and why organizations make decisions and put those plans into action at an incident.

Selection of the Theoretical Framework

Different emergency response services tend to approach ICS with unique perspectives (Martaindale & Blair, 2019). The literature search indicated there are numerous factors which influence the degree to which organizations utilize and promote ICS within their branch of service and when working with other response organizations (Chang & Trainor, 2018). In addition to institutional theory, network theory and chaos theory were explored for their potential to address the needs of this study.

Chaos theory suggests that certain forces push and pull organizations into ad hoc relationships to best suit their immediate needs (Keyes & Benavides, 2018). Chaos theory appeared to be well-suited to describe the ad hoc relationships between emergency response organizations during an incident (Demir et al., 2019). However, some incidents are handled within a single organization or among well-developed relationships. Chaos theory was rejected because this study is focused on the numerous factors that influence organizational use of ICS, not the creation of ad hoc organizations.

Network theory is widely accepted in various academic disciplines and is rooted in the theoretical history of policy science and organization theory. Network theory has also seen application to phenomena in NIMS and ICS (Jensen & Youngs, 2015). The goal of network theory is to describe the structure and communication of a network that enables coordination toward collective and individual interests. Members of the network are stakeholders and may be individuals, organizations, teams, or governmental entities. There are several core concepts of network theory: interdependent stakeholders, institutional features, and network management.

Mojir, Pilemalm, and Granberg (2019) stated that interdependency between stakeholders is a core motivation to initiate and sustain a network. Interdependency creates patterns of interaction that develop institutional features within the network. The natural progression of this institutionalization tends to result in rules that regulate behavior within the network with the goal of reducing transaction costs and influencing performance (Klijn & Koppenjan, 2012). As an extension of network theory, network management is the deliberate process of facilitating, managing, and improving interactions between stakeholders (Nederhand et al., 2019).

Network theory contends that the attitudes, motivations and predispositions of all stakeholders are important (Jensen & Youngs, 2015). Nevertheless, network theory also recognizes the unique position of governmental entities in a network. The government often controls types and quantities of resources not available from other stakeholders. It also wields democratic legitimacy and the power to make and enforce law. For these reasons, governmental stakeholders typically assume hierarchical leadership in a network and control network management activities (Klijn & Koppenjan, 2000). The application of network theory to organization studies is predicated on several assumptions (Klijn & Koppenjan, 2000). Network theory assumes that stakeholders share interdependence for reaching objectives. These dependencies create sustainable relations where certain stakeholders can exert authority over others. The goal of network theory is assumed to be a stable distribution of resources and a set of rules that regulate behavior and performance (Nederhand et al., 2019).

Network theory was not selected for this study because it is too rigid and implies the desire to optimize patterns of communication. In emergency response situations where ICS is active, organizational structures and communication may evolve rapidly without opportunities to

refine or optimize performance. Institutional theory, however, emerged with strong applicability to this study's research questions.

Review of the Literature

Studying emergency responder experiences with ICS involves a broad range of topics and academic disciplines. To guide the study and provide context for data analysis, a literature review was conducted in the areas of ICS doctrine, the application of ICS in real emergency response, and institutional theory. Topics of importance related to ICS experiences include: the history of ICS and how it was implemented throughout the national emergency response institution; expectations of emergency responders during an incident based on the branch of service; identification of factors which influence experiences with ICS; and the application of institutional theory to this study.

ICS Background and Summary

Modern NIMS and ICS were born out of the FIRESCOPE program and California wildland firefighting community of the 1970s (St. Denis et al., 2020). The goal of FIRESCOPE was to improve interoperability and management of wildland fire response (St. Denis et al., 2020). Following the terrorist attacks of 9/11, the Homeland Security Act of 2002 directed DHS to develop "a comprehensive national incident management system with Federal, State and local government personnel, agencies, and authorities to respond to such attacks and disasters" (Homeland Security Act, 2002, §501(5)). Homeland Security Presidential Directive 5 (HSPD-5) expanded on the Homeland Security Act of 2002 and called for DHS to develop and administer a common incident management system to "provide a consistent nationwide approach for federal, state, and local governments to work effectively and efficiently together to prepare for, respond

to, and recover from domestic incidents, regardless of cause, size, or complexity” (Bush, 2003, para 15).

The scope of NIMS is comprehensive and includes all incidents, whether accidental, malicious, or planned (DHS, 2017). NIMS is guided by principles of flexibility, standardization, and unity of effort to provide structure for emergency management activities related to resource management, command and coordination, and communication and information management (DHS, 2017). ICS is a key component of the NIMS command and coordination architecture.

Fundamentals of the Incident Command System

ICS is a framework for organizing and directing incident response that conforms neither to common network nor hierarchical organizational models (Burgiel, 2020). Schakel and Wolbers (2021) described three modes of organizing for emergency response that apply well to ICS: designed, frontline, and partitioned. Designed mode pertains to the pre-determined hierarchy and structures available during an incident. Frontline mode describes how incident command is delegated to the most qualified personnel who can directly influence the outcome of a rapidly developing incident (Barton et al., 2015; Bye et al., 2019; Groenendaal & Helsloot, 2016). Finally, Schakel and Wolbers (2021) describe partitioned organizing as appropriate for expanding incidents which is similar to how ICS can expand into a Multi-Agency Coordination System (MACS).

Local, state, and federal emergency response organizations must use ICS for all-hazards incident response regardless of the incident’s cause, size, geographic scope, duration, or complexity (DHS, 2017). According to DHS (2017), “ICS is a standardized approach to the command, control, and coordination of on-scene incident management that provides a common hierarchy within which personnel from multiple organizations can be effective” (p. 24). The broad

scope of ICS invited critiques from organizational and emergency management scholars into the system's underlying assumptions (Buck et al., 2006). Others found that establishing an integrated incident command was likely to improve incident response and mitigate challenges (Martaindale & Blair, 2019).

Scheduled pre-planned events are considered separate from incidents that require an immediate ICS response (FEMA, 2019). However, ICS is often utilized by emergency responders for event planning (Burgiel, 2020). NIMS defines an incident as:

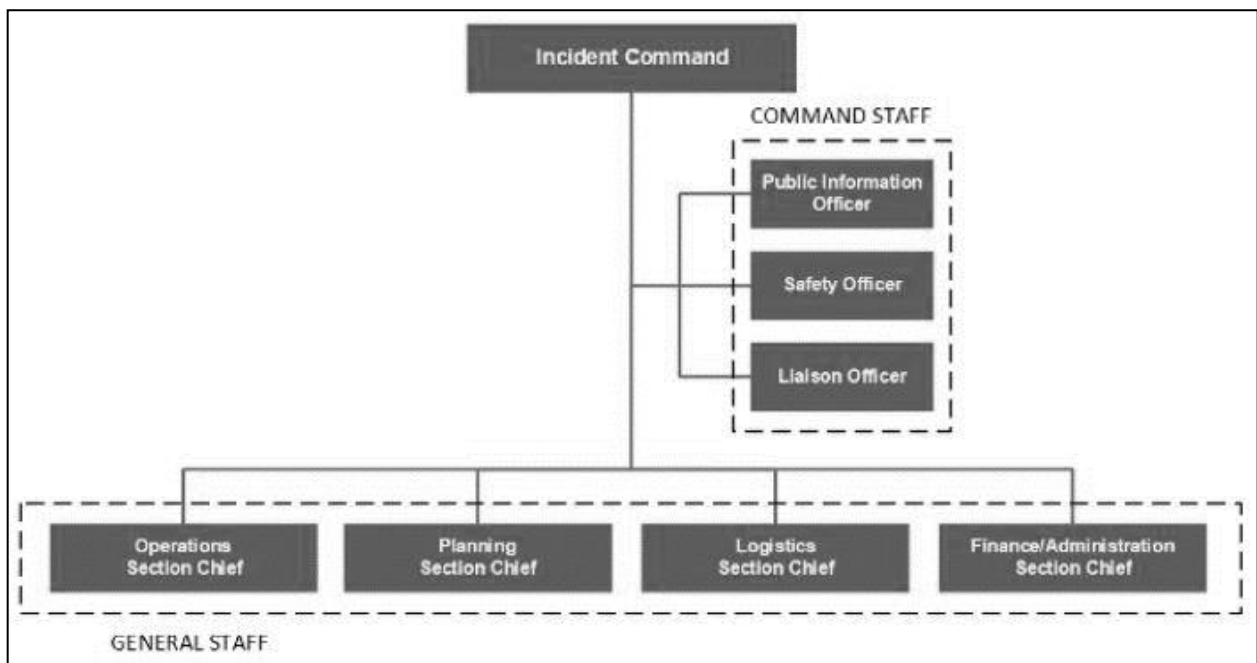
An occurrence, natural or human-caused, that requires a response to protect life or property. Incidents can, for example, include major disasters, emergencies, terrorist attacks, terrorist threats, civil unrest, wildland and urban fires, floods, hazardous materials spills, nuclear accidents, aircraft accidents, earthquakes, hurricanes, tornadoes, tropical storms, tsunamis, war-related disasters, public health and medical emergencies, and other occurrences requiring an emergency response. (FEMA, 2019, p.3.5)

The modular ICS organizational structure can expand to “incorporate all elements necessary for the type, size, scope, and complexity of an incident” (DHS, 2017, p. 81). The organizational structure of ICS, including the Command and General Staff, is shown in Figure 1. NIMS defines the scope of ICS such that every incident involving emergency services should use ICS. Common incidents include car crashes, structural fires, medical emergencies, violent crimes, wildland fires, and floods. According to DHS (2017), all emergency responders, private groups, and volunteer organizations who are expected to participate during an incident must be NIMS compliant and utilize ICS. Although ICS is standardized and intended for use by all emergency response organizations, the literature indicates that the experiences of these organizations vary

greatly (Jensen & Thompson, 2016). Hildebrand (2015) revealed conflicting relationships between the emergency response organizations, ICS as a system of command and coordination, and the federal government. These conflicts could influence the level of response success, integration between different organizations, clarity or response roles and responsibilities, and effectiveness of communication during chaos.

Figure 1

Incident Command System Organizational Structure



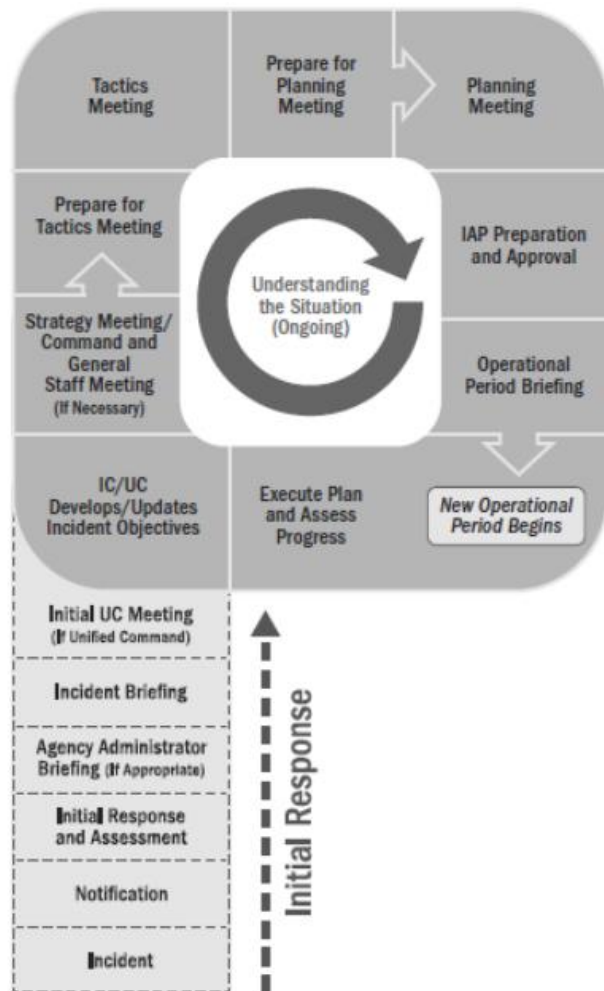
Note. Adapted from: An Introduction to the Incident Command System, ICS 100 Student Manual, by FEMA, 2018. In the public domain.

ICS is guided by five key concepts: unity of command, common terminology, management by objective, flexible and modular organization, span of control, coordination, and incident action plans (DHS, 2017; FEMA, 2020). Utilization of these concepts is intended to facilitate effective and coordinated responses among emergency responders from different specialties and organizations (Burgiel, 2020). Work cycles within ICS responses are known as

operational periods (FEMA, 2019). Planning for the incident occurs within a model called the Planning P (Figure 2). The straight leg of the Planning P represents the initial response actions involved in planning for an incident once identified. The circular portion of the Planning P represents the iterative planning steps that occur within each operational cycle. Consistent with the flexible response framework of ICS, the Planning P model may be adapted as needed to suite the complexity and needs of each incident (FEMA, 2019).

Figure 2

Operational Period Planning Cycle (Planning P)



Note. Adapted from Intermediate Incident Command System for Expanding Incidents, ICS 300 Student Manual, by FEMA, 2019. In the public domain.

Assumptions of NIMS and ICS

A review of ICS requires an understanding of NIMS. NIMS and ICS were implemented based on numerous assumptions (Jensen & Youngs, 2015). The validity of these assumptions was tied to the success of these systems and may influence emergency responder experiences perception of these control systems. According to Jensen (2009), many emergency managers felt that NIMS and ICS were built on false assumptions of emergency management and the influence of local conditions. These may be grouped into assumptions related to the development of ICS and those related to the utilization of ICS.

The inconsistent implementation behavior and attitudes towards NIMS and ICS may be evidence of invalid systemic assumptions (Jensen & Youngs, 2015; Yoon et al., 2014) These potentially false assumptions include: a major structural change such as NIMS was needed at all; NIMS and ICS achieve their intended purposes, NIMS and ICS are effective for all responders and for all types of incident; and that people are willing and dedicated to implementing NIMS (Jensen, 2009). Instead of a new command and coordination system, the greatest need was found to be funding (Jensen & Youngs, 2015). If the underlying assumptions of NIMS and ICS are invalid, the system may lack functionality and create negative perceptions among emergency responders (Moynihan, 2009). There are also assumptions related to the utilization of ICS. Jensen and Waugh (2014) proposed that the mandate to use ICS assumed:

- All entities responding on scene to incidents will use the system;
- All entities responding to on scene incidents will use the system similarly;
- The system is well-suited to coordinating response efforts to any kind of event, regardless severity, geographic scope, speed of onset, or other characteristics; and,

- The mandate to use the system will lead to the correction of common response shortcomings (p. 5).

Emerging Applications of ICS

ICS is recognized for its application to complex multi-jurisdictional incidents, crises, and disasters. The flexibility and scalability inherent in ICS led to its adaptation in non-traditional response efforts (Burgiel, 2020). According to Goralnick et al. (2021), ICS was adapted for hospitals in the late 1980s and is known as the hospital incident command system (HICS). HICS took all the structural and standardization elements of ICS and gave them a medical nexus. Widespread adoption of HICS demonstrated great benefit during the COVID-19 pandemic response, which improved throughout the pandemic (Matear & Hunter, 2020). Traditional emergency responders also adapted ICS for new purposes throughout the COVID-19 response. These emerging applications of ICS demonstrate the potential for wider use of ICS.

ICS for COVID-19 Response

The rapid onset and spread of the COVID-19 pandemic created public health emergencies not seen since the Spanish Flu of 1918-1919 (Agrawal et al., 2021). Many local health departments were greatly unprepared and understaffed to pursue measures meant to slow the spread of COVID-19. One of the public health measures popularized during the pandemic was contact tracing. Prior to the adoption of smart phone-based contact tracing apps, manual contact tracing was manpower intensive and required significant investments of time. In the case of Anne Arundel County, Maryland, the Department of Health (AADOH) was accustomed to performing 20-25 contact tracings per month, but surged to over 100 tracings per day early in the pandemic (Kalyanaraman & Fraser, 2021). The scale of effort required to carry out this task was challenging, even for a large and well-staffed organization. Therefore, AADOH turned to ICS to

provide organization the for contact tracing operation (Kalyanaraman & Fraser, 2021). The adaptation of ICS to the AACDOH COVID-19 response expanded to include testing sites, disease investigations, interagency operations, finances, and various other critical functions. Organizing the contact tracing response within ICS resulted in AACDOH teams initiating isolation in 95.6% of positive tests and over 80% quarantine of contacts (Kalyanaraman & Fraser, 2021).

ICS Adaptation for Hospitals (HICS)

HICS was developed in the late 1980s to provide a NIMS-compliant system for emergency management within hospitals (Backer et al., 2014). Unlike ICS, HICS was not federally mandated. In 2006, HICS was revised by a multidisciplinary group of experts under federal funding (Backer et al., 2014). In 2011, HICS was reviewed for future improvements at the HICS National Stakeholders' Summit, which was staffed by key healthcare and government stakeholders (Deatley, 2011). A new version of HICS was released in 2014 with significant improvements to the 2006 version. HICS 2014 incorporated lessons learned since 2006 and updated planning guides, training scenarios, operational forms, and terminology consistent with ICS (Deatley, 2011).

HICS was put to the test in 2020 (Goralnick et al., 2021). During the COVID-19 pandemic, a desperate and urgent attempt to 'flatten the curve' of new patients was undertaken by hospitals and health care facilities (Nortje et al., 2021). Widespread adoption of HICS demonstrated great benefit during the COVID-19 pandemic response, which improved throughout the pandemic (Matear & Hunter, 2020). Implementation of HICS, similar to non-hospital ICS, also faced barriers and limitations. Shooshtari et al. (2017) conducted a literature review of HICS implementation between 1995-2016. Findings indicated that implementation of HICS was met with organizational resistance and may not always be a good fit for existing hospital structures.

However, HICS documentation presents the need to train and exercise with HICS incident action plans and to tailor the HICS concepts to the individual healthcare center (Backer et al., 2014).

Equity Considerations in HICS

Equity, diversity, and inclusion (EDI) is becoming a popular focus for scholarly research in many fields. The modern EDI initiative is founded in the civil, women's and gay rights movements (Sanchez, 2021). According to Sanchez (2021), equity is the active recognition of the unique challenges and opportunities inherent to an individual. EDI principles provide an opportunity to improve projects and outcomes in the hospital setting. Goralnick et al. (2021) extended the concept of equity principles to HICS by recommending the inclusion of an equity officer (EO) and subject matter experts in health care equity to the HCIS structure. According to Smith et al. (2020), the absence of equity principles in the emergency management response to COVID-19 contributed to slow and incomplete responses to historically marginalized populations. During AARs at the Harvard Medical School in Boston, Massachusetts, Goralnick et al. (2021) observed that equity was the topic mentioned most frequently, including:

- the positive effects of the ongoing equity efforts,
- requests to embed equity experts in the HICS,
- display and use COVID-19 dashboard data that systematically stratify demographic characteristics,
- empower equity experts to lead within and beyond the organization,
- aggressively communicate equity initiatives among staff,
- ensure that all materials are inclusive of various reading levels and languages, and
- actively encourage engagement by frontline staff whose voices may have been previously marginalized.

The goal of incorporating an EO within HICS command and general staff is to improve outcomes for diverse groups during traditional HICS functions, as well as healthcare emergencies, such as the COVID-19 pandemic or major hurricanes (Goralnick et al., 2021).

Critiques of ICS in Literature

Since the adoption of NIMS, there has been “significant and ongoing debate about the implementation and effectiveness” of ICS (Rose et al., 2017, p. S130). Basic ICS is taught throughout the emergency response services but presents several shortfalls centered around: training limitations, atrophy of knowledge, skills, and abilities; and distrust of the system in general (Grainer, 2016).

The need for emergency responders to train in the principles of ICS is a common assertion in the literature. The successful implementation of ICS during emergency response is dependent on the responding organizations’ training (Buck et al., 2006). In recognition of this, the federal government provided training and funding to support exercises involving ICS (Jensen & Thompson, 2016). In most emergency response organizations, NIMS compliance is achieved once distance learning or classroom training in ICS is complete. Additionally, personnel who complete required ICS training often stop training once they complete ICS-300 or ICS-400 (Grainer, 2016). Training in ICS does not impart the ability to use ICS in a real incident response. Steigenberger (2016) asserts that practical exposure to the pressures of time and situational complexity are necessary for all involved in disaster response.

Loss of skills over time is recognized as a tangible challenge for emergency responders. An example of the atrophy of ICS knowledge, skills, and abilities is found in the West Fertilizer Company incident of 2013. An ammonium nitrate fire and explosion at this West, Texas facility injured over 260 people and took the lives of 12 emergency responders and 3 members of the

public (CSB, 2016). The West, Texas fire department consisted of an all-volunteer force, but reported NIMS compliance and appropriate training in ICS (Grainer, 2016). The U.S. Chemical Safety and Hazards Investigation Board (CSB) final report concluded that none of the responding firefighters or senior leadership assumed the role of incident commander (CSB, 2016).

Conclusions from the literature indicate ongoing distrust of ICS in general. The literature has not fully characterized the perceived value of ICS in the emergency services (Jensen & Thompson, 2016). Although ICS is intended to facilitate collaboration by all responders, criminal justice research recognizes that ICS was designed for fire services and that implementation among law enforcement was often met with resistance (Martaindale & Blair, 2019). The benefit of collaboration is supported by the literature, but the collaboration required by ICS came at the cost of responsiveness (Sedgwick & Hawdon, 2019).

In a robust review of scholarly ICS literature, Alkhaldi et al. (2017) found that scholarly literature on ICS presented mixed conclusions. Weaknesses of ICS include: ICS is not sufficiently adaptable to emergent behavior; a single IC cannot manage multiple jurisdiction and agencies; a centralized authority is not well-suited for community oriented crisis management; and that integrating volunteers into ICS is challenging. Alkhaldi et al. (2017) also noted that scholarly literature also concludes that the core principles of ICS are also its greatest strengths: flexibility and scalability; unity of command; common terminology which reduces communication breakdowns; ICS benefits from combined efforts and reduced duplicative work; ICS permits collective approval of operations, logistics, planning, and finance activities; ICS encourages cooperation and collaboration among responders; and it promotes sharing of facilities which reduces costs and increases efficiency.

Utilization of ICS in Emergency Response Services

ICS is often praised for its natural adaptation to complex incidents. Alkhalidi et al. (2017) analyzed the application of ICS during volatile, uncertain, complex, and ambiguous (VUCA) threat environments. A VUCA incident may be informally classified as a crisis, which includes incident and event components (Alkhalidi et al., 2017). During a crisis, the incident is the circumstance which initiates an emergency response, such as a flood, fire, hazardous material release, etc. The event component is a consequence of great concern resulting from the incident. Alkhalidi et al. (2017) asserted that ICS is an effective and efficient framework in which leaders can approach emergency response to a crisis.

ICS was designed to permit a coordinated and unified emergency response (Martaindale & Blair, 2019). Despite this goal, ICS is not equally utilized among fire services, law enforcement, emergency management, and EMS. ICS was also intended to support standardization, yet quantitative research by Jensen and Youngs (2015) suggests there is limited potential for standardization within the field of emergency management. To address this concern, training courses such as the Active Attack Integrated Response (AAIR) help law enforcement, fire, and EMS train together in a coordinated manner (ALERT, 2018). Furthermore, the federal government has provided funding and training to support ICS implementation across the country since 2005. As ICS is approaching 20 years as a national standard, it is reasonable to expect that ICS is being used consistently and positively impacts incident response (Jensen & Thompson, 2016). Exploring the recent history of emergency response services with ICS is important to understanding their expressed experiences with the system.

Utilization of ICS in the Fire Services

ICS is fundamental to the fire services and it is taught in the basic academy to all firefighter candidates (Martaindale & Blair, 2019). In practice, ICS is structurally established as

soon as the first apparatus arrives on scene. This is partially due to the complex nature of firefighting and the diverse roles and responsibilities that are immediately required during an incident. Largely for this reason, incident command is a skill where the fire service is commonly ahead of law enforcement (Martaindale & Blair, 2019). Fire departments maintain reliability by adapting ICS and switching roles as needed (Schakel & Wolbers, 2021).

Utilization of ICS in Law Enforcement

Contrary to the fire service, ICS is not necessarily fundamental to law enforcement activities. Routine law enforcement activities such as moving violations and responding to non-emergency calls are considered event, not incidents (DHS, 2017). However, events can rapidly escalate into incidents if, for example, a routine traffic stop creates a multiple crash with injuries, or the driver attacks the law enforcement officer. These situations do not require the establishment of ICS. Law enforcement must establish incident command from the ground up when incidents grow out of a single-resource incident (Martaindale & Blair, 2019). Due to the unpredictable nature of incidents, ICS is commonly taught in basic police academies and reinforced through training exercises. Unfortunately, traditional law enforcement training may not prepare officers to assume the role of Incident Commander during rapidly evolving incidents such as terrorist attacks (Sommer et al., 2017). Schakel and Wolbers (2021) found that successful law enforcement responses transition between centralized command and decentralized improvised action. Similarly to the fire service, SWAT teams also adapt ICS through role switching and reorganizing response routines (Schakel & Wolbers, 2021).

Utilization of ICS in Emergency Management

As in the fire service, ICS is also fundamental to the profession of EM. Emergency managers serve in a coordinating role and do not perform as first responders. Instead, EMs may

serve in an enabling role as a broker to create bridging relationships between responder organizations in times of crisis (Jung et al., 2019). This role of EM is intended to improve trust, communication, and resource allocation while reducing risks of collaboration (Jung et al., 2019). Response networks that delineate these relationships in planning documents are more likely to terminate these roles after the incident. EM professionals are expected to be the subject matter experts in ICS and facilitate the expansion of the ICS structure. This helps responders focus on their incident action planning instead of the higher-level coordination and logistical activities.

Utilization of ICS in Emergency Medical Services

During incident response, EMS may be provided by the local firefighter paramedics, hospitals, or private ambulance crews. Regardless of the source, EMS personnel are required to be trained in ICS principles (de Tantillo & Christopher, 2021). In routine activities, EMS priorities are to triage and transport patients to treatment facilities. In these cases, EMS plays an active role in the overall ICS structure but may not serve within the ICS command and staff structure (Backer et al., 2014). During large incidents, such as mass casualty incidents, EMS personnel may serve in ICS roles such as EMS branch director, medical group supervisor, medical supply coordinator, triage and treatment unit leaders, and medical triage and transportation liaison (Benett et al., 2013). There are numerous other roles that may be required based on the complexity and scale of the incident (Shooshtari et al., 2017).

The Role of Normative Systems in Incident Response

Normative systems define institutional goals and objectives by introducing prescriptive, evaluative, and obligatory factors into the institution (Scott, 2017). These factors are supported by the concepts of values and norms which empower and restrain the behavior of its members. Organizational solidarity is a component of normative systems and is composed of management

and peer influences (Maglio et al., 2016). Normative structures may also contribute to the strength and duration of relationships between emergency response organizations (Jung et al., 2019). Values serve as standards of behavior by which members can be compared and evaluated. Norms specify how certain aspects of institutional activities should be performed. Norms are often captured in procedural documents and may exist as unwritten standards of performance. The standards for certification and accreditation are also a normative element. While some values and norms apply to all members of an institution, selected members may operate under special criteria. Therefore, the normative elements also encompasses institutional roles and responsibilities (Scott, 2017).

Normative systems guide institutional behavior through expectations of roles and responsibilities (Scott, 2017). Institutional members who feel a sense of duty, esprit de corps, and trust in the team demonstrate positive aspects of normative systems (Scott, 2017). ICS established a common understanding among emergency responders by standardizing terminology, roles and responsibilities, and operational structures (DHS, 2017). Specific tactics are not part of ICS and rely on realistic training between response organizations. Chang and Trainor (2018) found that the success or failure of ICS during a incident response is influenced by the level of trust between the participating organizations. Trust in the competence of fellow emergency responders is supported by credentialing, professional development, and realistic training exercises (Grainer, 2016).

Credentialing

Credentialing helps ensure that emergency management personnel are trained and approved to perform their assigned roles. The process of credentialing is led by an Authority-Having Jurisdiction (AHJ) and certifies that an individual's academic qualifications, training, and demonstrated performance conform to an established standard (DHS, 2017). Additional

emergency responder qualifications typically include related experience, physical fitness, and medical readiness. Credentials often take the form of documentation, an identification card, or a badge. Credentialing supports normative systems by establishing bona fides among emergency response personnel and represents conformance to institutional standards (Scott, 2017).

Credentialing is expanded through professional development and accreditation.

Professional organizations guide institutional behavior by setting standards for performance and serving as AHJs (Scott, 2017). There are many professional organizations within the field of emergency response. Several examples of accrediting bodies include the Emergency Management Accreditation Program (EMAP), the International Association of Emergency Managers (IAEM), the International Fire Service Accreditation Congress (IFSAC), the Commission on Accreditation for Law Enforcement Agencies (CALEA), and the National EMS Management Association (NEMSMA).

Training Exercises

Normative systems are reinforced through realistic training and exercises. Bailey (2016) found that in the absence of adequate exposure to systems such as ICS, responders were likely to revert to using more familiar structures and tactics. Ruttenberg et al. (2020) found that online refresher training and hands-on drills increased the ability of emergency response teams to maintain skills and build teamwork. Realistic and challenging exercises allow emergency responders the opportunity to make mistakes, overcome obstacles, and refine tactics. Following comprehensive analysis of 50 emergency response exercises, Karagiannis and Synolakis (2018) concluded that training should progressively increase in difficulty and force groups to self-organize into small groups and develop incident action plans to realistic emergencies. Effective training exercises should also ensure ongoing competencies, practice establishment and

succession of command, and address potential confusion or mistrust with ICS (Grainer, 2016). Successful Incident Commanders noted that high quality training, personal development, and socialization are critical (Boyatzis et al., 2017). Training exercises should focus on developing the competencies of organizational awareness, influence, conflict management, achievement orientation, and teamwork (Boyatzis et al., 2017).

Effective training exercises are often followed with a review process that analyzes what aspects of the operation should be sustained, what should be improved, and a process to achieve those improvements (NFPA, 2016). This process is often referred to as an after-action report (AAR). AARs are intended to build trust and develop a common understanding of performance expectations among responders (Chang & Trainor, 2018). According to Russell (2017), AARs highlight lessons learned during training, but that organizations rarely apply those lessons for future activities. Similarly, Drupsteen and Guldenmund (2014) found that the primary reason organizations experience recurrent incidents is because they fail to learn from their previous mistakes.

The Role of Regulation in Incident Response

Within an institution, regulative systems deal with establishing rules and laws, monitoring conformity, and applying sanctions for non-conformity (Scott, 2014). The primary mechanism of control within regulative systems is coercion (Scott, 2017). An example of this would be someone that disagrees with a rule or process but follows it anyway to avoid a penalty for non-compliance. Regulation promotes constraint and control of the institution's members, but regulation can also enable and empower members through delegation of authority, and the conference of licenses, certifications, and role-based powers (Barbour & Manly, 2016). Regulation establishes the basis for chains of command and legitimizes organizational structures within an institution (Scott,

2014). The absence of a regulative system would be a cooperative organization where collective decision making dominates and there are not clearly defined roles or responsibilities (Uhr, 2017).

The literature indicated conflicting opinions about the hierarchical structure required of ICS (Chang, 2015). Prior to the national adoption of NIMS in 2004, Bigley and Roberts (2001) contended that ICS is actually a flexible hierarchy that permits predictable assignments during regular use with the ability to evolve for unforeseen circumstances. Neal and Webb (2006) observed that during the Hurricane Katrina response, responders felt that the prescribed structure and principles of ICS were not well-suited for that dynamic environment. In support of ICS, Chang (2015) found that senior ICS practitioners appreciated the structure, discipline, and common terminologies it encouraged.

The reliance on experts and judgement of certified professionals helps establish legitimacy within emergency response organizations (Barbour & Manly, 2016). Regulative systems establish the basis for chains of command and legitimize organizational structures within an institution. Regulative systems may also create barriers to change through protocol or documentation requirements (Kohn et al., 2016). Regulative systems are likely to influence emergency responder experiences with ICS based on the extent and influence of perceived control (Hildebrand, 2015). The command and coordination approach represented by ICS rejects the cooperative system in favor of financial and legal coercion (Hildebrand, 2015).

Politics adds another layer of complexity to the study of experiences with ICS. Hildebrand (2020) found that satisfaction with federal emergency management policies was associated with the voting behaviors of the jurisdiction. This phenomenon of representative bureaucracy is evident in the perception that local and federal bureaucrats act in an opportunistic manner in support of their constituents' and not necessarily the jurisdiction in whole (Hildebrand, 2020).

Furthermore, while ICS promotes all-hazards flexibility and a broad unified response, the actual policies surrounding the system leads back to centralized federal control (Hildebrand, 2020).

Coercive Federalism

Examining the influence of regulations could inform research on experiences with ICS. Scholars suggest coercion is a key factor of federalism (Hildebrand, 2015). As previously discussed, the creation of NIMS and ICS was directed by federal law (Bush, 2003; DHS, 2017). When NIMS was formally adopted in 2004, all federal departments and agencies were required to implement the system. Research shows that implementation of NIMS and ICS at state and local levels was inconsistent and approached with mixed opinions (Jensen & Yoon, 2011). Implementation of NIMS and ICS was not required for non-federal agencies but was coerced through the control of resources (Hildebrand, 2015). To ensure compliance, the federal government tied DHS grant funding to NIMS compliance after its nationwide implementation (St. Denis et al., 2020). HSPD-5 established that state and local entities must demonstrate NIMS compliance to receive federal preparedness assistance in the form of grants, contracts, or other activities (Bush, 2003; St. Denis et al., 2020).

The National Response Plan (NRP) and the FEMA Strategic Plan insist that national preparedness relies on state and local capabilities (FEMA, 2018). FEMA (2018) clearly stated that the nation relies on a response system that is “federally supported, state managed, and locally executed” (p. 3). State and local governments rely on federal preparedness grants and materiel support (Hildebrand, 2015). State and local emergency response organizations are also essential to the national strategy for domestic incident management (Bush, 2003; FEMA, 2018). This relationship of coercive federalism was criticized for creating pressure on, and curtailing policy learning from, the state and local governments (Posner, 2007).

Hildebrand (2015) studied NIMS implementation characteristics and the perception of control caused by the link between NIMS compliance and federal preparedness funding. Surprisingly, Hildebrand (2015) found that receipt of federal preparedness grants lacked statistically significant predictive power for NIMS implementation. Furthermore, Hildebrand (2015) found no consistent or statistically significant correlation between the receipt of grants and the perception of federal control over local emergency management and homeland security actions. This result contradicted casual predictions based on institutional theory and previous research (Cho & Wright, 2004; Posner, 2007). These contrarian results may be explained, in part, by the weakness of federal policy enforcement or insincere implementation at state and local levels (Hildebrand, 2015).

Research indicated that although state and local government may report NIMS compliance, the specific implementation requirements and implications were unclear (Hildebrand, 2015). Conflict between implementation reporting and the practical application of ICS is known to foster dangerous conditions during incident response (CSB, 2016). While federal declarations hold preparedness grants and materiel support at risk for non-compliance, such threats may not be enforced due to bureaucratic or political reasons (Hildebrand, 2015). If the threat of losing federal preparedness funding is not tangible, the intended coercive power is lost. For example, if state and local government want federal grants but also wish to diverge from NIMS and ICS, they could conceivably report NIMS compliance and use the funds for specific projects or as part of their budget for local emergency response (Hildebrand, 2015). This misuse of funds is mitigated by occasional audits of training records and department finances. Based on this research, emergency responder experiences with ICS could be related to the localized influences of coercion.

Legal Liability

The implementation and use of NIMS and ICS by non-federal organizations could be considered a legal requirement (Pinsky, 2009). Although not specified or likely intended by HSPD-5, an emergency response agency that fails to apply NIMS and ICS could be held legally liable for negative outcomes. The National Fire Protection Association (NFPA) established standards for the fire services which leaves room for interpretation, e.g. NFPA 1500 and NFPA 1561 (Grainer, 2016). NFPA 1500 is the Standard on Fire Department Occupational Safety, Health, and Wellness Program and NFPA 1561 is the Standard on Emergency Services Incident Management System and Command Safety (NFPA, 2020, 2021). These NFPA standards emphasize that fire services need to use effective incident management systems at all incidents but do not specifically direct the use of ICS, which could lead to conflicting approaches to incident response (Grainer, 2016).

The law in many states precludes evaluation of emergency responders' actions involving discretion and split-second choices. However, failure to follow non-discretionary procedures, such as NIMS and ICS, could serve as grounds for legal action (Pinsky, 2009). For example, in a wrongful death suit, the Appellate Division of the New York Supreme Court ruled that a Fire Control Coordinator (FCC) could be held legally liable for failing to adhere to NIMS and ICS and contributing to events that resulted in the death of a firefighter (*Prince v. Waters*, 2008). According to the lawsuit, the FCC failed to check in with the Incident Commander, took actions which implied command authority where none existed, then issued fire suppression guidance which resulted in a firefighter falling into an engulfed basement and dying.

Emergency responder experiences with ICS are likely influenced by legal implications. The ruling of *Prince v. Waters* (2008) opened the emergency response institution to new levels of scrutiny regarding their action and inaction. Expanding the logic of this ruling, paid and volunteer

responders could be held to numerous ICS standards where the term *must* is used for certain incident actions. These requirements include actions to gain and maintain accountability, establish and transfer command, conduct realistic exercises, and ensuring effective systems of communication (DHS, 2017). The doctrine of ICS serves as a framework for incident response which is intended to balance flexibility and standardization (DHS, 2017). By blending legal requirements and doctrinal flexibility, ICS could be perceived by emergency responders as a source of legal liability as much as a response tool (Hildebrand, 2015).

The Role of Organizational Culture in Incident Response

Within an institution, cultural-cognitive systems use symbolism to construct reality among its members (Scott, 2017). Culture is the collective mental programming that distinguishes among groups of people (Yeo et al., 2018). Cultural-cognitive influences could be referred to as the corporate culture of an institution. In the business world, corporate culture is established by branding, logos, mission statements, mottos, dress codes, and routines (Susskind et al., 2014). The orthodoxy found in cultural-cognitive systems is often evident and often taken for granted as *the way we do things* (Scott, 2017).

Responders who think ICS concepts are inseparable from emergency response would be expressing cultural-cognitive motivations. The cultural-cognitive influences of ICS are present in the common terminology, organization logos, duty uniforms, and command structures. Items, such as uniforms, can also carry important symbolic qualities. Harrison et al. (2017) found that among firefighters, dirty response uniforms symbolize machismo and “signify reliability, knowledge, expertise, and professional competence” (p. 173). Maglio et al. (2016) stated that firefighters are aware of societal perceptions, romanticization, and strong organizational traditions with a so-called firefighter image.

The cultural influences of ICS are also embedded in all emergency response training, exercises, and responses. Cultural-cognitive systems of institutions include elements that support shared conceptions regarding the nature and meaning of social reality (Scott, 2017). Emergency management scholars agreed that cultural aspects contribute to collaboration and success in the emergency response institution (Jensen, 2010; Kapucu et al., 2010). Organizational culture can also increase reliability through willingness to continuously learn and change (Kohn et al., 2016).

Within the emergency response institution, cultural-cognitive systems were not necessarily aligned with ICS expectations (Neal & Webb, 2006). While studying the emergency response to Hurricane Katrina the year after NIMS implementation began, Neal and Webb (2006) found that ICS was not fully used and was not perceived as a good fit to existing organizational cultures. Differences between organizational goals, objectives, and cultures influenced perceptions of cooperation and success during emergency response operations (Kapucu et al., 2010). NIMS and ICS are frameworks for establishing common goals and objectives (DHS, 2017). However, research did not indicate if NIMS and ICS influenced the culture of various response organizations. The literature did not explore whether fire services, law enforcement, emergency management, and EMS have unique cultural-cognitive systems that influence their experiences with ICS during a multi-organization response.

Emergency response organizations often present a military-type style of operation (Tyler et al., 2019). Similarly, these organizations tend to be male dominated and culturally maculated. Ericson and Mellstrom (2016) proposed that the firefighting profession celebrates the masculine ethos through practical skills, technical dexterity and a propensity to act. Tyler et al. (2019) found that extremely gendered organizations and cultures are more likely to resist change than those which are not. Due to the inherent risks and physical nature of many emergency response roles,

there is a clear similarity to the traditional policies of not sending female soldiers to the front lines of battle. The cultural aspects of masculinity are also expressed in the culture of fire services in that female firefighters often possess male-type bodies or are held to a male physical standard (Tyler et al., 2019). In the discussion of a masculine hegemony in the fire services, Tyler et al. (2019) does not, however, discuss the potential that standards for physical strength, endurance, and risk aversity may not be truly masculine, but are directly related to the harsh demands and physical nature of the firefighting and rescue profession.

Foundations of Institutional Theory

Institutional theory is thoroughly characterized in scholarly research (Abdelnour et al., 2017; Alvesson et al., 2019; Jones et al., 2015; Scott, 2014). Spirited debate is also prevalent and focuses on institutional theory's scope, assumptions, critical abilities, and generalizations (Lok, 2019; Munir, 2019; Willmott, 2015). Institutional theory is commonly applied to economics, political science, and sociology but is not common in the field of emergency management. However, institutional theory is recognized for its influence of organizational studies (Alvesson et al., 2019).

This research utilized the approach to institutions developed by (Scott, 2014), who stated that institutions create order and meaning to social life and are influenced by regulative, normative, and cultural-cognitive systems. The interaction of these systems establish permanent tension between the instituted and the instituting (Bouilloud et al., 2019; Scott, 2017). The normative pillar describes how organizations develop a shared reality and obtain compliance. The regulative pillar describes how organizations make and enforce rules. The regulative pillar also describes the basis for coercive power (Abdelnour et al., 2017; Alvesson et al., 2019; Jones et al., 2015; Scott, 2017). Finally, the cultural-cognitive pillar describes how organizations develop

collective understanding and enact the processes of deciding and acting. Each of the three pillars of institutional theory could be applied as stand-alone theories but offer greater descriptive power when taken together (Scott, 2014).

Assumptions of Institutional Theory

The assumptions of institutional theory are somewhat dependent on the definition of institutional theory adopted for purposes of research (Abdelnour et al., 2017). For applications to organizational effectiveness, the definition advanced by (Scott, 2014) is assumed to be the most encompassing and valuable. In his definition, Scott (2014) defines institutions as being “comprised of regulative, normative, and cultural-cognitive elements that, together with associated activities and resources, provide stability and meaning to social life” (p. 56). Willmott (2015) holds that institutional theorists tend to take the constructionist social ontology and a neo-positivist epistemology. The most basic assumption of institutional theory is the existence of the institution. The existence of an organization or interdependent stakeholders does not necessarily qualify as an institution under this framework: normative, regulative, and cultural-cognitive forces are required for proper application of institutional theory.

Debate Surrounding Institutional Theory

Institutional theory is critical of rationalism and theories that are “insufficiently attentive to how human behavior becomes institutionalized” (Willmott, 2015, p. 105). In pursuit of those goals, institutional theory is prevalent in the study of grand societal challenges (Munir, 2019). Lok (2019) found that over half of the papers in a 2016 special edition of the *Academy of Management Journal* sought to use institutional theory to address issues of critical societal influence. These issues included income equality, alleviation of poverty, uninsured hospital care,

and PTSD in war surgeons. Scholars of organizational science readily debate the qualifications and shortcomings of institutional theory's relevance to such complex issues.

One particular battle exists between Lok (2019), Munir (2019), and Willmott (2015, 2019). A central point of contention is the critical abilities of institutional theory. Willmott (2015) supports institutional theory's critical qualifications but recognizes the potential blind spot regarding the influence of power. Institutional theory distinguishes itself from critical theory by marginalizing the fundamental role of power in the process of institutionalization (Willmott, 2015). By extension, the exposure of domination, oppression, and exploitation are also minimized. Rather, institutional theory represents a conservative tradition where the social world is the product of externalization and institutionalization.

Institutional theory is a popular school of thought within organizational studies, but it is not without critics. Munir (2020) challenged the critical power of institutional theory. Primary criticisms include the inclination for institutional theorists to overlook larger dominating structures in favor of smaller, more manageable issues (Munir, 2019). The intent of this criticism was to illuminate the potential for institutional theorists to erroneously define man-made phenomena as facts of nature. Munir (2019) also contends that institutional theory overlooks the centrality of power and moral necessity in the course of organizational and social goal seeking. Munir (2019) proposed that a process of self-critique would help prevent the misapplication of institutional theory or legitimization of the structures of domination. Institutional theorists should also shift the emphasis of future research from creative work to the hegemonic operation of power.

The Importance of Research Ethics

The importance of ethical research is not a modern concept. The concept of medical ethics began between the fifth and third centuries BC with the Hippocratic oath, commonly accepted as: First, do no harm (Edelstein, 1943). Following WWII, the Nuremberg Trials revealed grotesque human experimentation in defiance of the Hippocratic oath. The verdict from the military tribunal included a section titled “Permissible Medical Experiments” which consisted of 10 points, becoming known as the Nuremberg Code (Alexander Mitscherlich et al., 1949). The World Medical Association (1964) expanded the Nuremberg Code with the Helsinki Declaration to include research on identifiable human data and established guidelines for oversight by research ethics committees.

The origin of modern research ethics can be traced to the infamous Tuskegee Syphilis Study (Alsan et al., 2020). From 1932 to 1972, the U.S. Public Health Service, deliberately left untreated, 399 Syphilis-stricken African American males to study the natural progression of the disease without informed consent (CDC, 2020). The study even continued past the point where penicillin was developed and could have cured the subjects. In 1979, the National Commission for the Protection of Human Subjects of Biomedical and Behavioral Research published the Belmont Report to establish basic ethical principles and guidelines for the conduct of research involving human subjects (USPHS, 1979).

The intent for the Belmont Report was that it be adopted by research institutions in its entirety, as the official ethics policy. Modern research is typically evaluated against the Belmont Report via the IRB. The Belmont report removed previous ambiguities by distinguishing between the research and the routine practice of medicine and provided three tenets: respect for persons, beneficence, and justice (Adashi et al., 2018). Although its legacy is enduring, the Belmont

Report received criticism for a one-size-fits-all approach and for not accounting for additional ethical factors (Shore, 2006).

Synthesis of the Research Findings

It is commonly said that perception is reality. Perceptions are shaped by a variety of factors, such as experiences, morals, training, and expectations (Maglio et al., 2016). Experiences with ICS are partial indicators of prior successes and failures in emergency response. The way emergency responders describe their experiences with ICS is a view into the value and applicability of ICS. Since ICS was adopted to serve a specific purpose and is applied without direct oversight, additional information about ICS from its practitioners can help indicate if it met that purpose and is being utilized as intended.

There is a gap in the literature in understanding of emergency responder experiences with ICS (Jensen & Thompson, 2016). While it is understood that experiences with ICS are important, the literature indicates more research is required to understand them (Jensen & Thompson, 2016). The literature does not offer a comprehensive evaluation of ICS experiences among fire services, law enforcement, emergency management, and EMS professionals. Grainer (2016) found that negative experiences with ICS are often associated with a lack of adequately trained personnel. Chang and Trainor (2018) found that pre-incident trust and relationships are important for successful implementation of ICS. Soon after NIMS implementation, Buck et al. (2006) proposed that experiences with ICS were influenced by the tactics and vision for the response as well as the level of familiarity among the responders. Experiences with ICS may also be affected by cultural issues (Tsai & Chi, 2012).

The literature indicated that institutions are influenced by normative, regulative, and cultural-cognitive systems (Scott, 2014). Emergency management literature highlighted ways in

which experiences with ICS could be influenced by normative factors. First, emergency responders may feel a sense of duty to support ICS and apply those concepts in their daily duties (Jensen & Youngs, 2015). Second, emergency responders may support ICS because it was developed and administered by a morally legitimate governmental authority. Third, AARs reinforce normative systems by presenting an evaluation of performance and prescribing solutions for deficiencies (Chang & Trainor, 2018).

Emergency management literature also discussed how regulation and cultural factors may influence experiences with ICS. Emergency response organizations rely on the expertise and judgement of certified professionals to establish legitimacy within their organizations (Barbour & Manly, 2016). To coerce emergency responders to implement ICS, the federal government tied DHS grant funding to NIMS compliance (St. Denis et al., 2020). However, Hildebrand (2015) did not find that this financial coercion to be effective. Cultural factors may also help understand ICS experiences (Tsai & Chi, 2012). Finally, Neal and Webb (2006) found that ICS was not perceived as a good fit to existing organizational cultures. That study built on previous research findings which explored experiences of emergency responders with ICS. The literature captured a wide range of experiences from a diverse field of first responder communities but failed to arrive at a consensus. Additionally, the literature is overwhelmingly compartmentalized. For example, a great deal of work is invested in implementation of NIMS (de Tantillo & Christopher, 2021; Hambridge et al., 2017; Jensen & Youngs, 2015). Some work focused specifically on ICS as a system of coordination and control (Chang & Trainor, 2018; Grainer, 2016; Nowell & Steelman, 2019; Rimstad & Braut, 2015). The design of this study incorporated experiences from four primary emergency response communities to provide consistent data collection throughout these groups.

This qualitative study utilized the generic qualitative inquiry research design. This selection was consistent with ICS literature (Boyatzis et al., 2017; Chang & Trainor, 2018; Karagiannis & Synolakis, 2018). Maglio et al. (2016) emphasized the importance of utilizing qualitative data to understand perceptions and organizational norms. Motivation for this study originated from the gap in the literature surrounding experiences with ICS and the unanswered calls in literature for further ICS research. The purpose of this study was to explore experiences and perceptions of ICS among senior members of the fire services, law enforcement, emergency management, and EMS. ICS scholars and practitioners will benefit from the expanded understanding of ICS experiences resulting from this study.

Critique of Previous Research Methods

Scholarly ICS research utilized qualitative, quantitative, and mixed methods. In numerous occasions, the literature did not specify enough methodological details to facilitate replication. A thorough literature review by Jensen and Thompson (2016) concluded that the state of NIMS and ICS literature is not a position of strength and academic rigor. Examples of methodological deficiencies in the ICS body of knowledge include: incomplete reporting of data, underdeveloped correlation between data and study conclusions, survey instruments that diverge from scholarly standards, no inclusion of the interview questions or survey instrument, no discussion of theoretical framework, use of outdated sources, and no discussion about the research limitations (Jensen & Thompson, 2016). Research which lacks academic rigor offers diminished contributions to current and future research. As a young field of scholarly research, emergency management has only produced a small volume of high quality scholarly research (Henkey, 2011; Jensen & Thompson, 2016).

Research Designs in ICS Literature

A comprehensive review of NIMS and ICS literature revealed a wide range of research methods and inconsistent conclusions about NIMS and ICS. NIMS and ICS literature was dominated by generic qualitative inquiry which typically used interviews as the data collection method (Boyatzis et al., 2017; Chang & Trainor, 2018; Karagiannis & Synolakis, 2018). Case studies were a common, but not dominant, research design (Martaindale & Blair, 2019). The body of emergency response and ICS literature did not contain an abundance of scholarly peer-reviewed quantitative research (Jensen & Thompson, 2016). Quantitative research was typically conducted by means of self-developed and validated surveys instead of direct observation. Mixed methods were rarely utilized in EM and ICS research (Ruttenberg et al., 2020). In qualitative research spanning 15 years and, Karagiannis and Synolakis (2018) observed five tabletop exercises, 40 functional exercises, and five full-scale emergency response exercises. Karagiannis and Synolakis (2018) collected data through direct observation, AARs, focus-groups, unstructured interviews, and reviews of archived exercise documentation and transcription of field notes.

The Need for Additional Recent Research

NIMS was first published in 2004 but revised in 2008 and 2017 (DHS, 2017). Significant changes were made to NIMS and ICS in the 2017 version based on feedback from the emergency management community (DHS, 2017). The 2017 update of NIMS changes some existing terminology, modifies planning guidance, and removed existing components (FEMA, 2017). The update also clarifies the role of ICS and its relationship to Emergency Operation Centers (EOCs) and Multiagency Coordination Groups (MACS). Current literature does not often account for the 2017 changes to NIMS and ICS and commonly cites research that even precedes the 2008 changes (de Tantillo & Christopher, 2021).

Underdeveloped Application of Theory

Peer-reviewed research on NIMS and ICS is often normative and is rarely framed in theory (Jensen & Thompson, 2016; Rutenberg et al., 2020). While some authors mentioned theories of NIMS implementation or theories of incident response, the research itself often lacked an apparent theoretical framework. Others mentioned the application of grounded theory for data collection and analysis but did not expand into further detail (Karagiannis & Synolakis, 2018). The predominant form of literature on NIMS and ICS was found in professional journals and essays presenting anecdotal results or personal experiences and opinions (Jensen & Thompson, 2016). Although these normative methods of communicating best practices surely benefit emergency response practitioners, it does not contribute to the body of scholarly knowledge.

Research on emergency management and ICS suffer greatly from a notable absence of theoretical frameworks in scholarly, peer-reviewed literature (Jensen & Kirkpatrick, 2019). The literature does not indicate if this absence was due to the infancy of emergency management as a scholarly discipline, the perceived value of theory, or the available pool of emergency management scholars. Throughout its nationwide implementation, NIMS did not include significant contributions by academic scholars, empirical data, or a theoretical framework (Jensen & Thompson, 2016). The literature on NIMS and ICS was often applied research and framed within normative theory or the application of best practices. Nevertheless, a large volume of scholarly, non-scholarly, and anecdotal work was produced since the NIMS mandate in 2004.

While a large volume of literature was available on NIMS and ICS topics, very little of this research utilized a theoretical framework. In a comprehensive literature review, Jensen and Thompson (2016) found that out of a search of 37 scholarly, peer-reviewed articles specifically about NIMS and ICS, only three used a theoretical framework in a meaningful way, those being

network theory and organizational learning theory. In these papers, however, the authors failed to connect theory to the data analysis (Jensen & Thompson, 2016).

Sampling Considerations

Sampling techniques were a major limitation to the ICS body of knowledge (Jensen & Thompson, 2016). Most ICS literature utilized nonprobability sampling and small sample populations. The impact of these sampling decisions was a lack of generalizability of findings from the individual studies reviewed or the body of work overall (Jensen & Thompson, 2016). These conclusions about ICS still offer contributions to the body of knowledge, but they only offer insight to the confines of specific circumstances or a certain emergency responder group. This study attempted to close a portion of this gap by incorporating senior leaders from four primary responder groups and focusing on their cumulative ICS training and experiences.

Quality of Research Instruments

ICS research does not benefit from a standardized quantitative survey instrument such as the Conner's Adult ADHD Rating Scale in the field of psychiatry. Until 2011, DHS utilized NIMSCAST to measure the national implementation of NIMS within emergency response communities (FEMA, 2011). Although NIMSCAST gathered a large volume of data, it was not a scholarly survey and not used to advance the rigor of emergency management literature. Quantitative ICS literature often suffers from the lack of validated survey instruments and discussions of reliability considerations. High levels of scholarly quantitative research of NIMS and ICS is by Jensen and Yoon (2011) and Jensen and Youngs (2015), who narrow these gaps in the literature by thoroughly characterizing their instruments, discussing instrument reliability, and presenting analysis in accordance with scholarly standards.

Qualitative research methodologies are dominant in ICS literature (Jensen & Thompson, 2016). More specifically, generic qualitative research is most common and consisted of semi-structured interviews. Percy et al. (2015) stated that generic qualitative data collection is effective when eliciting peoples' ideas about external subjects or personal experiences. This data is most commonly and appropriately collected through semi- or fully- structured interviews (Percy et al., 2015). In support of academic rigor, researchers are expected to present their interview guide or interview questions. This expectation was not always satisfied and an area for improvement in future research.

Summary

This chapter presented the emergency response and emergency management body of knowledge as a foundation for the remainder of this study. This review was preceded by a summarized discussion of how the review was conducted and how institutional theory was selected to frame this study. Institutional theory can value to organizational research by addressing provocative questions about why organizations behave and respond in particular ways (Abdelnour et al., 2017; Alvesson et al., 2019; Jones et al., 2015). A key finding was that while ICS is intended to standardize incident response, different emergency response services tend to approach ICS differently (Jensen & Youngs, 2015). It is possible that these differences violate core tenets of ICS, but the literature lacks empirical data to support that possibility across a large and diverse population. Furthermore, the literature suggested that ICS is unlikely to fulfill all expectations and that specific conditions must be met for its successful implementation (Chang & Trainor, 2018; Jensen & Thompson, 2016).

This chapter included a critique of the research methods, designs, and overall scholarly qualities found in the literature. The critique discussed how ICS literature was dominated by

generic qualitative inquiry using interviews as the data collection method. The critique concluded that the body of emergency management and ICS literature did not contain an abundance of scholarly peer-reviewed quantitative research and did not utilize a common validated instrument (Jensen & Thompson, 2016). Instead, ICS literature tends to use existing research as self-justification instead of framing the methodological approach (Jensen & Thompson, 2016). This study provides a step forward for the emergency management and response body of knowledge by basing the methodological approach and research design in the literature.

CHAPTER 3. METHODOLOGY

Chapter One presented the nature of this study with a conceptual and introductory focus. Chapter Two provided an overview of the theoretical framework for this study and discussed the related literature. Chapter Three builds upon Chapter One and provides greater detail regarding the purpose of the study, the research questions, the research design, the target population and participant selection, the procedures used to conduct the study, the instruments used to collect the data, and ethical considerations.

Purpose of the Study

The purpose of the study was to contribute to the emergency management body of knowledge by developing emergency responder experiences with the Incident Command System (ICS). Jensen and Thompson (2016) reported conflicting opinions of ICS among the scholars and practitioners. This study explored emergency responder experiences with ICS to narrow the gap in the literature as previously recommended. This study revealed themes about how senior emergency responders experienced ICS throughout their careers. The primary audience for this study is emergency management students and scholars who seek knowledge about the experiences of ICS practitioners. Results of this study could also inform future research into normative aspects of emergency response organizations, the effects of coercive and regulative power, and the influences of emergency response culture on emergency response outcomes. Analysis of emergency responder experiences with ICS may also provide insight valuable to updating ICS training and educational programs.

Research Questions

The three research questions for this study were intended to develop the experiences of senior emergency responders with ICS. The research questions are:

- (1) How do normative systems influence emergency responder experiences with ICS?
- (2) How do regulative systems influence emergency responder experiences with ICS?
- (3) How do cultural-cognitive systems influence emergency responder experiences with ICS?

Research Design

This was a qualitative study, and the design was a generic qualitative inquiry. Qualitative research that focuses on individual experiences can be an effective means of studying broader phenomena (Tuohy et al., 2014). Additionally, qualitative methods are well-suited to capture data with significant breadth and depth (Fernandez, 2017).

The five primary qualitative research designs are ethnography, grounded theory, case study, phenomenology, and narrative (Creswell & Creswell, 2018; Kennedy, 2016). These designs were not selected for this study. Phenomenology is a popular approach that focuses deeply on inner dimensions and qualities of cognitive processes, not in the external content that may trigger the cognitive processes (Percy et al., 2015). Applying phenomenology would undesirably narrow the study's focus to the experiences themselves, and not the relationship between experiences and ICS as a system of command and coordination. Ethnography commonly utilizes personal observation by the researcher. The focus of ethnographic research lies primarily with people as objects of attention (Holbraad, 2018; Percy et al., 2015). As with phenomenology, the focus of ethnography is not well-suited because ICS is the subject of this study, not its practitioners directly. Grounded theory uses data to develop an explanation for an observed phenomenon (Percy et al., 2015). Grounded theory focuses on human interaction to explain phenomena (Hall et al., 2013). This study was concerned with the institutional systems that influence ICS, making grounded theory not appropriate approach for this study. The case study

approach was not appropriate for this study. Case studies focus entirely on a single event or bounded system using a variety of data collection methods and sources (Kennedy, 2016). According to Kennedy (2016), narrative research is best applied to presenting life stories and follows a chronological order.

The generic qualitative inquiry was selected as the most appropriate way to analyze ICS through the experiences of its practitioners. The generic qualitative inquiry is common in ICS literature (Boyatzis et al., 2017; Chang & Trainor, 2018; Karagiannis & Synolakis, 2018). Maglio et al. (2016) emphasized the importance of utilizing qualitative data to understand perceptions and organizational norms. Generic qualitative inquiry is effective when collecting participants' ideas about external subjects or personal experiences (Percy et al., 2015). Caelli et al. (2003) defined generic qualitative inquiry as that which is not adherent to explicit philosophic assumptions. According to Kennedy (2016), the generic qualitative inquiry is appropriate when other qualitative research designs are not suitable.

Target Population and Sample

Scholarly research requires enough participants to ensure the study reaches data saturation (Caelli et al., 2003). The sampling strategy for this study focused on information-rich participants. In qualitative research, the sampling method and size should be selected to appropriately address the research questions (Creswell & Poth, 2017). This study utilized purposive sampling from a closed list of emergency response fields: fire services, law enforcement, emergency management, and EMS. Purposive sampling is appropriate when a manageable amount of data and specific participant traits are desired (Ames et al., 2019).

Population

Asiamah et al. (2017) stated that the information available to researchers in a study is dictated by the population. Careful selection of individuals for participation is essential to studying the research problem (Patton, 2015). The population for this study included members of all fire services, law enforcement, emergency management, and EMS organizations in the southwestern region of the United States. The population was accessed through a centralized email list that was maintained by the state-level Department of Homeland Security and Emergency Management (DHSEM) offices. The number of people in this population is difficult to estimate because there are many volunteer, corporate, and non-profit organizations that use ICS but are not officially tracked.

Sample

The sample for this study was selected through the application of specific inclusion criteria. The inclusion criteria required participants to be English speakers over the age of 18 who had at least 5 years of experience in their emergency response service, had completed certain advanced incident response courses (ICS-300 and ICS-400), and were currently employment in an emergency response agency that would be categorized within the closed list: law enforcement, fire services, emergency management, and EMS. Determining the appropriate sample size should also account for different groups or sampling sites (Creswell & Poth, 2017). Participants were recruited from several primary groups of emergency response services: fire, law enforcement, EMS, and EM. The desired sample size was 12 participants of senior fire service, law enforcement, EMS, and EM professionals. The exclusion criteria were intended to remove potential participants who did not likely have the training or experience with ICS to provide valuable insight. The exclusion criteria included anyone who was under 18 years old, did not speak English, had less than 5 years of emergency response experience, had not completed

advanced ICS courses, or did not work in a field of emergency response service such as: fire services, law enforcement, emergency management, and EMS.

Procedures

This study's research topic was emergency responder experiences with ICS. Procedures in this study included developing the research plan, recruitment, data collection, and data analysis. Informal data analysis began during the interviews. Formal analysis began with transcript production and thematic coding of the data.

Participant Selection

The recruiting strategy was to contact senior leadership at emergency response organizations with an institutional Review Board (IRB)-approved email and recruitment flyer. The email was intended to provide familiarity with the study. The senior leaders were asked to forward the recruitment flyer to their internal email lists. Since all interviews were conducted over the phone, site permissions were not required. However, the waterfall strategy of involving organizational leadership provided two benefits. First, asking senior leaders to forward the recruiting flyer was intended to improve their comfort with the study. Second, it was assumed that potential participants would take the recruiting efforts more seriously if it came from their senior leadership. Potential participants were provided contact information and instructions on how to proceed with the study. Self-identifying potential participants were emailed an informed consent form and given at least 24 hours to review the form prior to an interview.

This research utilized purposive sampling of emergency responders. Purposive sampling techniques are useful when seeking specific participant traits and experiences (Ames et al., 2019). The desired sample size was 12 participants of senior fire service, law enforcement, EMS, and EM personnel. Inclusion criteria was limited to English speakers over the age of 18 who had at

least 5 years of experience in their emergency response service, have completed specific advanced ICS courses (ICS-300 and ICS-400), and were currently employment in an emergency response agency that would be categorized within the closed list: law enforcement, fire services, EMS, and EM. Exclusion criteria included anyone who was under 18 years old, did not speak English, had less than 5 years of emergency response experience, had not completed advanced ICS courses, or did not work in a field of emergency response service such as: fire services, law enforcement, emergency management, or EMS.

Protection of Participants

Actions taken to protect participants took three forms: participant anonymity, site anonymity, and physical protection. Participants must not be named and must not be identifiable from details revealed in the text (APA, 2020). Throughout this study, participant and site confidentiality was a primary consideration. The conduct of this study exposed the participants to minimal risk. To ensure participant and site anonymity, the discussion of data and analysis does not include specific organizations, departments, titles, or names of participants. Transcripts were anonymized by providing numeric identifiers to participants, such as Participant-1, Participant-2, Participant-3, etc. Personally identifiable information was not disclosed to other participants or to members of participating organizations. Participants' physical safety was considered during the COVID-19 pandemic by conducting phone interviews to reduce the potential for disease transmission.

Expert Review

Three expert reviews of the interview guide were conducted prior to receiving IRB approval of the study. Expert review is beneficial to address a lack of knowledge and reduce uncertainty in research (Hsu, 2017). The purpose of the expert review was to improve the clarity

of each question, ensure the questions were aligned with their intended purpose, and ensure each question was open-ended. The IRB required the three expert reviewers to meet certain qualifications: each must be scholars or practitioners in a field related to EM; one must hold a doctorate degree in EM or a closely related field; and one must have a strong background in qualitative research methodology.

The expert reviewers for this study consisted of three EM scholars who each held a PhD and were professors at the doctoral level. Two were EM practitioners and each were experts in qualitative research. The expert reviewers were sent the interview guide and a summary of the study. Feedback from the reviewers was received through email. All modifications to the interview guide that were made during the expert reviews were documented. Such changes included removing bias, rephrasing of interview questions, and making questions open-ended. Following the revisions, each reviewer approved of the interview questions.

Data Collection

Data collection began after receipt of a participant's completed informed consent form. Once the inclusion criteria were verified and the form was signed, the interview was scheduled. Participants were encouraged to coordinate a time for the interview which minimized distractions and permitted up to 60 minutes of discussion. The only primary source of data collection was semi-structured phone interviews which consisted of an interview guide that was developed specifically for this study. The interview guide contained questions that addressed the research questions using key points from the literature. Interviews that utilize open-ended questions encourage participants to describe their experiences without design limitations (Percy et al., 2015).

Each interview began with casual introductions and the participants were thanked for making time for the interview. The general research goals and the structure of the interview were also summarized prior to the recorded portion of the interview. If participants did not want to answer any question, or the question was not applicable to them, the interviewer moved to the next question. The interviews were semi-structured which permitted open-ended discussion related to the question. The interviews varied in duration between 40 and 90 minutes. This large variation was due to the depth and length of responses the participants provided. The interviews were recorded to the researcher's personal computer but placing a cell phone on speaker mode and placing it near the computer's microphone. The Windows default Voice Recorder app was used, and the data was stored on an internal encrypted hard drive.

The interviewer permitted side discussions if they were relevant to the topic but refocused the discussion when appropriate. The interviewer attempted to adhere to the responsive interviewing model and remain an active listener throughout the interview. The responsive interviewing model emphasizes that the interviewer and participant form a relationship during the interview (Rubin & Rubin, 2012). Since the interviews were recorded, there was no need for distraction by taking copious notes during the interview. When the semi-structured portion of the interview was over, participants were given an opportunity to offer any additional information they felt was relevant to the discussion. At the closing of each interview, the researcher thanked the participant for their input and reviewed the participant protection measures of the study.

Data Analysis

Throughout data analysis, unmodified master copies of the audio files were maintained. Working copies of the audio files were created for the purpose of creating transcripts with improved accuracy. The quality of these audio recordings was improved using features of Adobe

Audition software. The static background noise was removed by capturing a noise print and applying the noise reduction process to the entire file. In cases where there was a large difference in recorded volume between the interviewer and participant, heavy compression was used to reduce the presence of distracting clips and popping sounds.

Initial thematic coding began during the interviews and transcript development as themes became apparent. Transcripts were produced by a professional transcription service that was based in the United States and paid by the researcher. The transcription service did not have access to the participants’ personally identifiable information at any time. The transcription service returned the transcripts in Microsoft Word files. Each transcript was reviewed after receipt for accuracy, typos, and corrections to acronyms. Master copies of the transcripts were maintained. Working copies of the transcripts were made which removed filler information and irrelevant portions of the interview. The remaining statements were organized by interview question number and summarized into bullet points for easier development of themes. Each research question was addressed by three questions in the interview guide (Table 1).

Table 1

Organization of research question topics and supporting topics

Research question topic	Supporting topics
Normative systems	Sense of duty
	Support for the ICS
	Federal requirements
Regulative systems	Conflict resolution
	Certifications
	Federal funding

Organizational roles
Cultural-cognitive systems Organizational culture
Absence of ICS

Participants often described their experiences with common themes but expressed them in different ways. The themes were not over-generalized for ease of analysis. In some themes, dissenting views were expressed and included in the discussion of the results.

Instruments

The data collection instruments used for this study were the researcher, phone interviews, and audio recording devices. Researchers are a common instrument used in qualitative research. It is important for qualitative researchers to develop skills as an effective research instrument that is capable of collecting rich data and developing an appropriate and meaningful interpretation of the data. (Xu & Storr, 2012).

The Role of the Researcher

Qualitative research is founded on trust and confidentiality (Pratt et al., 2020). As the primary instrument in qualitative research, the researcher's personal interactions during data collection are influential. These interactions include the researcher's involvement with the participants, the qualifications to conduct those activities, and potential biases. In the present study, the researcher only interacted with participants through email and phone interviews. The researcher was trained in advanced ICS and public information officer (PIO) interviewing techniques. The researcher also had experience as an interviewer through military and civilian hiring boards. The researcher worked within the structure of ICS for 12 years of military service but never served in fire services, law enforcement, emergency management, or EMS. The

interviewer must be self-aware of biases and expectations that may influence the participant (Rubin & Rubin, 2012). Researcher objectivity is a crucial step to remove bias from the collected data (Alison et al., 2013). The researcher had previously interacted with emergency responders during ICS operations but does not have personal experience or strong opinions that would influence the participants' feedback. The influence of any preconceptions was avoided by using neutral wording of interview questions and attempting to not lead the discussion in a certain direction.

Interview Question Guide

1. What is your branch of emergency response service?
2. What is your role in the organization?
3. What type of ICS training have you attended (local and/or FEMA/EMI, etc.)?
4. How long have you been in the emergency services?
5. Do you have any military service?
6. When I mention ICS, what are three descriptive words that come to mind?
7. Please summarize your experience with ICS?
8. In what ways have you experienced success or failure with ICS in your branch of emergency response service?
9. To what degree are you motivated by a sense of duty to utilize ICS as directed by NIMS?
10. Please describe the extent to which you agree or disagree with this statement: "ICS provides the "right way" for my organization to accomplish its emergency response or management goals."
11. In your experience, how do the federal requirements to utilize ICS influence your implementation of this system?

12. If you disagree with aspects of ICS, please explain how you would approach that conflict in the performance of your duties.
13. What value would you place on the requirement for members of your emergency response service to obtain official certifications of ICS training or performance?
14. What is your opinion of links between utilizing ICS and federal preparedness funding?
15. Based on your experience, how has ICS clarified or confused response roles and responsibilities in your organization?
16. Please describe any cultural aspects of your emergency response service that influence your incident response actions, effectiveness, or interoperability with other organizations.
17. How would you describe emergency response without ICS?

Ethical Considerations

Research involving human subjects requires strict adherence to ethical protections (Creswell & Poth, 2017). Research ethics are present as an epistemological condition throughout the entirety of an study and its manuscript (Johansen & Frederiksen, 2021). Since the reach of ethical considerations touches many aspects of a study, careful planning was taken throughout the research design to incorporate concepts and methods that promote ethical data collection and analysis. Research ethics were described by Johansen and Frederiksen (2021) as having procedural and particularistic considerations. Procedural ethics include the pre-stipulated guidelines that form the principled basis for research. Particularistic research ethics is “ the form that makes a concrete, context-dependent evaluation of the specific ethical problems and dilemmas, as manifested in practice throughout the research process” (Johansen & Frederiksen, 2021. p. 280).

The responsive interviewing model by Rubin and Rubin (2012) was utilized in this study. This model emphasizes that a relationship is formed between the interviewer and the participant during the interview. Qualitative research is founded on trust and confidentiality (Pratt et al., 2020). The interviewer must be self-aware of biases and expectations that may influence the participant (Rubin & Rubin, 2012). Remote interviews were utilized which permitted narrative responses within a semi-structured format. Narrative interviews are an effective way to collect peoples' stories about their experiences (Anderson & Kirkpatrick, 2016). This type of interviewing encourages participants to provide deeper explanations of their experiences that may be achieved by a closed list of choices via quantitative survey instrument (Scarborough, 2017). The narrative interviewing technique starts with an open question lets the participant control the direction, content, and pace of the response (Anderson & Kirkpatrick, 2016). This method contributes to ethical data collection by inviting responses that are almost entirely controlled by the participant with minimal input from the interviewer.

The interviews did not expose participants to psychological or physical harm. Potential participants were provided with an IRB-approved Adult Informed Consent form. In addition to being the foundation for ethical human studies research and a legal obligation, obtaining informed consent contributed to positive participant experiences. The Adult Informed Consent form provided pertinent information about the study that was likely to influence a potential participant's decision to volunteer. Elements of informed consent included the study's purpose, interview procedures and protections, considerations for participant confidentiality, and the right to withdraw from the study.

A primary ethical concern was participant confidentiality. Participants must not be named and must not be identifiable from details revealed in the text (APA, 2020). The participant

recruiting and data collection procedures did not expose the identities within participant organizations or between other participants. Although emergency response organizational leaders were utilized to distribute the recruiting flyers, the participants were neither required to notify their leadership nor request their approval to participate in the study.

Conflicts of interest exist when a researcher is in a position to personally benefit from the participants or the study itself. This study did not present any conflicts of interest. The researcher was serving on active duty in the military and all participants served in civilian emergency response organizations. No other relationships or financial arrangements were in place that threatened the ethical position of this study.

Summary

The purpose of the study was to explore emergency responder experiences with ICS and to narrow the gap in the literature as previously recommended. Jensen and Thompson (2016) reported conflicting opinions of ICS among the scholars and practitioners. This study explored how normative, regulative, and cultural-cognitive systems influence emergency responder experiences with ICS.

The conduct of this study included IRB approval, recruitment, data collection, and data analysis. An expert review of the interview guide was conducted prior to receiving IRB approval of the study to improve the clarity of each question and ensure the questions were aligned with their intended purpose. Asiamah et al. (2017) stated that the information available to researchers in a study is dictated by the population. The population for this study includes all people who are expected to use ICS in the conduct of their duties. The desired sample size was 12 participants of senior fire service, law enforcement, EMS, and EM professionals. This study exposed the participants to minimal risk and adequate efforts were taken to ensure their safety and anonymity.

This study's design addressed participant protection in three forms: participant anonymity, site anonymity, and physical protection. Participant anonymity is crucial for research involving human subjects (APA, 2020). Data collection consisted of phone interviews which were recorded and transcribed. The transcriptions were analyzed through thematic coding.

CHAPTER 4. PRESENTATION OF THE DATA

Chapter Four contains a description of the obtained sample and the process used to analyze the data. The chapter also presents representative highlights from the data organized into themes. The generic qualitative inquiry was used to explore emergency responder experiences with the Incident Command System (ICS). Through one-on-one semi-structured interviews, data were collected that provided the researcher a deep look at how emergency responders view ICS. As career professionals in the fire services, law enforcement, emergency management, and emergency medical services (EMS), the sample demonstrated they are subject matter experts in their fields and offered valuable contributions towards the goals of this inquiry. Chapter Four is organized into four sections: the researcher's role, interests, and biases in this study; a description of the sample; the methodology for data analysis; and the presentation of the data.

Introduction: The Study and the Researcher

The interest in this research topic throughout 14 years of military service supporting ICS and emergency responders. The researcher observed that in some cases, the application of ICS during an incident diverged from the doctrine to varying degrees. This observation led to questions about the completeness of ICS, responders' understanding of ICS, and the influences that drive the use of ICS principles during an incident. The researcher was trained in NIMS and ICS, including ICS-300 and ICS-400. The researcher also participated in dozens of incidents with emergency responders and was certified as a hazardous materials (HazMat) Technician.

The research required review of current scholarly literature to understand the body of knowledge on Emergency Responders' experiences with ICS and the specific guidelines of ICS as a command and coordination system. Previous experience in conducting literature reviews for three Master of Science programs aided the researcher in this process. The research also required

recruiting and interviewing participants, then analyzing the data. The researcher had previous experience with these tasks from a previous interview-based thesis and the conduct of over 20 employment interviews as a hiring manager. The potential for researcher bias existed in the interview guide development, the conduct of interviews, and the interpretation and presentation of data. As previously noted, the researcher was trained in the application of ICS and had experienced ICS first-hand during real incidents. Bias was minimized to the degree possible by avoiding leading questions during the interview and seeking to represent participants' view in their own words. Additionally, the researcher expressed to participants that the interviews were not intended to search for a correct answer but sincerely designed to elicit their true opinions and experiences.

Description of the Sample

The research participants were members of fire services, law enforcement, emergency management, and EMS. Inclusion criteria was limited to English speakers over the age of 18 who had at least 5 years of experience in their emergency response service, have completed specific advanced ICS courses (ICS-300 and ICS-400), and were currently employment in an emergency response agency that would be categorized within the closed list: law enforcement, fire services, emergency management, and EMS. Recruitment emails were sent to leaders at city- and state-level emergency response organizations and distributed throughout their organization. It is not known how many potential participants received the recruitment emails. The researcher was contacted for participation by 21 individuals. Six individuals were sent the Informed Consent form but never returned it and did not proceed to interviews. One individual returned the Informed Consent form but declined to move forward to the interview.

The sample consisted of fire services, law enforcement, emergency management, and EMS professionals from four states and represented city, county, state, and federal levels of responsibility. The sample represented an average of 19.8 years of experience in emergency response. Four participants had military experience with an average service length of 20.5 years. Nine participants claimed they only worked in one branch of emergency response service while three had experience working in more than one branch. To maintain confidentiality, participants were identified by a number and the designator for their primary emergency response experience: FS (fire service), LE (law enforcement), EM (emergency management), and EMS (emergency medical service). In three cases, participants had a significant amount of experience in two branches of emergency response and is reflected in their designator. After 12 interviews, data saturation was reached, and no further participants were recruited. In agreement with Caelli et al. (2003), the evidence of saturation will be given through the presentation of data and analysis.

The interviews were largely conducted without unplanned interruption. However, the interview with P2-FS ended early due to scheduling conflicts and resumed the next day. This did not appear to influence the participants' responses or willingness to participate. No other influence on the participants was evident that could bear on the findings.

Protection of Participants

Actions taken to protect participants took three forms: participant confidentiality, site confidentiality, and physical protection. The conduct of this study exposed the participants to minimal risk. To ensure participant and site confidentiality, the discussion of data and analysis does not include identifiers such as specific organizations, departments, titles, or names of participants. Transcripts were coded by providing numeric identifiers to participants, such as Participant-1, Participant-2, Participant-3, etc. Personally identifiable information was not

disclosed to other participants or to members of participating organizations. Participants' physical safety was considered during the COVID-19 pandemic by conducting phone interviews to reduce the potential for disease transmission.

Research Methodology Applied to the Data Analysis

A generic qualitative inquiry was used in this study. According to Kennedy (2016), this research design is appropriate when other qualitative research designs are not suitable. Caelli et al. (2003) defined generic qualitative inquiry as that which is not adherent to explicit philosophic assumptions. Since the researcher understood some considerations of the research problem prior to beginning the study, the generic qualitative inquiry was deemed appropriate. The research used semi-structured phone interviews to solicit the experiences of 12 professional emergency responders with ICS. A professional human-based transcription service was utilized, but the researcher validated the accuracy of the transcripts.

The data were analyzed in a stepwise process. The researcher read the transcripts and highlighted any sentences, phrases, or paragraphs that appeared to be meaningful. During this process, the researcher became immersed in each participant's data. The 12 interviews generated approximately 240 pages of transcripts, so the highlighted data were transferred to a spreadsheet for simplified viewing. The spreadsheet was organized by interview question and participant. Data that did not conform to a specific interview question was still included in an additional section titled Additional Notes. The data on the spreadsheet was reviewed for substantive phrases and concepts. Data that was valuable for inclusion in the manuscript was highlighted. A copy of the spreadsheet was created, and as highlighted sections were used or removed from consideration, the highlights were removed to reveal which data still needed inclusion or down-selection. Some data were interesting, but not related to the question. Common examples of such

data included department-specific actions taken during major incidents that would be more valuable for a case study than this generic qualitative inquiry.

The interview guide contained 12 questions that addressed the three research questions. This provided an initial level of organization for patterns in the data. The patterns were used to elucidate overarching themes. For each theme, the researcher noted how many participants provided supportive or dissenting statements. A detailed analysis describing the scope and substance of each theme was supported by representative quotations.

Presentation of Data and Results of the Analysis

Qualitative approaches build their results from the intensely particular toward the general (Tuohy et al., 2014). Through an inductive analysis, the focus moves from the data themselves to higher clusters of similar statements (patterns), to thematic abstractions from those clusters. In Chapter Five, these data and themes are interpreted for central meaning. The three research questions for this study were intended to develop the experiences of senior emergency responders with ICS. The research questions were:

- (1) How do normative systems influence emergency responder experiences with ICS?
- (2) How do regulative systems influence emergency responder experiences with ICS?
- (3) How do cultural-cognitive systems influence emergency responder experiences with ICS?

Answering the Research Questions

The themes identified in the data directly contribute to answering the three research questions. Seven of the nine themes informed more than one research question. Research question 1 was addressed by Themes 1, 2, 3, 4, 5, 7, and 9. The influence of normative systems is strong across the four participating emergency response services. However, a key variable is the extent

to which the normative influence supports ICS. Participants expressed that their support for ICS is strongly aligned with the generalized opinions of ICS within their department and among their peers. This is summarized well by P12-LE's observation that "I have noticed fire departments are phenomenal with ICS. They live and breathe it and utilize it constantly. Law enforcement is not in the same boat." Regulative systems were not reported to have a strong influence on emergency responder experiences with ICS. Themes 1, 3, 5, 6, and 9 reflect that responders don't utilize ICS strictly because of the NIMS mandate. There is some evidence that ICS is supported by the relationship between NIMS compliance and Federal preparedness grant funding, but that the requirement to use ICS is not necessarily the strongest motivation for everyone. Instead, the more dominant influences appear to be normative and cultural-cognitive systems. P3-EM/FS stated,

You have to adopt (ICS) and it has to be in an emergency response plan that we are meeting NIMS requirements. Of course, we do it because we also want to see that federal dollar come in because that helps us, but that is not what makes us do this. It is the common-sense approach.

Cultural-cognitive systems appear to heavily influence emergency responder experiences with ICS. Themes 2, 3, 4, 5, 7, and 8 summarize how cultural-cognitive systems facilitate positive or negative experiences with ICS when working intra-organizationally. From the perspective as an Emergency Manager, P5-EM stated that

Working with the cops and the firefighters, two different cultures there, they have their own way of doing things, you know they are not going to veer too far from that. Cops have their own (ways), they do not use ICS, but they do have their own form of what they do and when you work with them, they do not change what they are doing to accommodate you, it is the other way around.

However, from the perspective of a 33-year Law Enforcement officer, P10-LE said that

In everything that we do, every single call for service now if it's violent or it meets a certain criteria, by SOP now, we are following (ICS). We are going through the seven critical tasks where you know establishing communications, we are setting parameters, we are doing all of these things and so all of these things are set up in place in our SOP, so interdepartmentally we do follow that.

P10-LE also placed great importance on building relationships to help overcome differences in organizational culture and that “the biggest success we ran into is the more that we use this ICS format, the more we foster and nurture these relationships.”

Theme 1: Descriptions of ICS

The most common descriptor of ICS among participants was the term *communication*, *standardization*, *modular*, *organization*, and *accountability*. Table 2 presents the descriptors of ICS that participants used and their frequency.

Table 2. Descriptors of ICS that participants used and their frequency

Descriptor	Frequency	
	(29 responses)	
Communication	4	14%
Standardization	3	10%
Accountability	2	7%
Modular	2	7%
Organization	2	7%
Allocation of resources	1	3%

Chain of command	1	3%
Command and control	1	3%
Complex	1	3%
Expandible	1	3%
Flexible	1	3%
Framework	1	3%
Interoperability	1	3%
Misunderstood	1	3%
Networking	1	3%
Removes chaos	1	3%
Scalable	1	3%
Span of control	1	3%
Structure	1	3%
Unified command	1	3%
Unified response	1	3%

Grouping similar descriptors of ICS revealed three broader categories that include coordination, structure, and qualitative terms.

Table 3. Common descriptors of ICS, grouped by general category.

Coordination	Structure	Other
Accountability	Expandability	Complex
Chain of command	Expandible	Misunderstood

Command and control	Flexible	Removes chaos
Unified command	Framework	
Unified response	Interoperability	
	Modular	
	Organization	
	Scalable	
	Span of control	
	Structure	

Theme 2: The Emergency Response Community is Receptive to ICS

All 12 participants made comments that directly demonstrated support for ICS in varying degrees. The weakest support for ICS appeared to come from participants who had less experience using ICS in training and during the line of their work. Alternatively, the participants who had broad experience using ICS in training and throughout the course of their duties tended to make strong statements of support for ICS.

P1-LE commented on the national level of acceptance for ICS and stated

Everyone is involved from the public, the government agencies, nonprofits, private sector, so we are all in this together. This is why we have the National Incident Management System and there are certain things we have to follow and one of them is incident command, so we are bought in. Everyone is bought into this. They understand why it has to be done.

P2-FS said, “we have to have a unified command structure because people would get hurt, people are dying if the operations are counterproductive to each other.” P3-EM/FS provided several examples of support for ICS and said that the system “removes chaos. It helps immediately with personal communications to actual formal communication that establishes what we need. [ICS also helps with] resource accountability.” P5-EM said they are “just a firm believer” in ICS and that they “could really not see a response in any other right.” P6-EM said that “ICS provides a consistent and predictable process for people who do not live, breath and eat either response or emergency management on an everyday basis” while P7-EM/FS said he could not “think of a specific place ICS needs to improve or specific place ICS has ever let me down.”

Although each participant expressed support for ICS, some of the support was qualified. For example, P7-EM/FS said, “you cannot say (ICS) is absolutely the right way because if we are being honest rules gets broken out of necessity.” P6-EM provided a similar comment that ICS does not provide the right way to accomplish emergency response and management goals, but rather,

ICS provides a framework and a foundation and a process for your organization.

Ultimately, organizations who would be exercising that are going to learn what is effective for them and is ineffective for them and the concept of ICS is it is scalable, it is adaptable and organizations should not look at it as the law and it has to be followed to a T or is considered a failure in more of treated like a tool and exercise that tool and utilize that tool to achieve their ultimate mission.

P6-EM provided detailed examples of applying ICS during the nation’s COVID-19 response and observed that

ICS works really great or has some perspective during that initial short response.

However, when we look at a long-term response like with the COVID-19, it is a very long stretched out period of time. I think the sense of urgency changes. During a long-term incident, I think it loses some of its effectiveness when it is stretched out over a long time.

Theme 3: ICS is Not Applied Consistently Among Different Emergency Response Services

Nine out of twelve participants (P2-FS, P3-EM/FS, P4-EMS, P5-EM, P6-EM, P7-EM/FS, P10-LE, P11-LE, P12-LE) offered statements that ICS is applied differently in other emergency response services. Three out of four LE participants believed that ICS is not utilized consistently across LE. P12-LE said that ICS

Is not utilized enough. I have noticed fire departments are phenomenal with ICS. They live and breathe it and utilize it constantly. Law enforcement is not in the same boat... Generally speaking, law enforcement is investigating specific events, not managing large scale incidents. I would say it is a bit of a different mission and that probably is largely the reason for it. It is a much rarer occurrence, so I would say that that is one of those things where people tend to think it is not going to happen.

Within an example of LE response to a large fire, P-12 also stated that,

One of the things that stood out is that the responding law enforcement agencies were very far behind the curve in the fact that fire departments operate within (ICS). So, they were able to immediately start checking people in, identifying resources, logging equipment of everything that was being utilized, and law enforcement was not doing that.

An additional observation of LE came from P6-EM, who said “when you look at law enforcement organizations...there is not a good operational utilization of ICS...even in incidents where it really should have been used.”

P3-EM/FS, who never worked in LE, feels there is a relationship between team structure and the successful implementation of ICS by stating,

Some people just do not have the whole concept. I always stated that the Law Enforcement are always so used to being a team of one. If you work in a team, (ICS) works. If you do not work in a team, it does not.

The use of ICS during EMS response appears inconsistent. P2-FS said

We attempt to implement ICS basically on any type of call with the exception of the standard EMS call, which some departments actually will use ICS, even on their EMS calls. In the fire department, we use it very heavily on the fire side, not so much the standard run-of-the-mill EMS calls. We don't really typically use it on our day to day EMS calls really, and maybe, we do a little bit, we just do not announce it loud basically the most qualified provider on scene, the paramedic usually is the first one to get involved and then if his or her services aren't needed, and a lower ranking EMS member is available to perform those services then that is permissible, it is just not verbalized, I guess, over the air like it is with the fire and the high acuity incidents, but it is a known practice and it is standardized through all shifts.

P2-FS provided a startling example from a mining incident where a participating EMS organization created a dangerous situation because they "were not familiar with (ICS) and what it was is."

P7-EM/FS felt that utilizing ICS was a critical part of maintaining commonality with other Emergency Response organizations. The participant offered a practical example for how divergent operations could negatively impact emergency response. P7-EM/FS stated,

The other thing is part of it is just out of it is what everyone around us uses. Anytime people go out in this business and do their own thing without looking at what their neighbors are doing, they are making a massive mistake. We have got one fire department in the county that uses (a particular brand of) self-contained breathing apparatus. Literally, every single other fire department in the county except for that one (uses a different brand). We all have compressors, fittings, and cascade systems for (our common brand). They went out one day and did their own thing. If I were to do the same thing with the Incident Management System, I would be totally screwing my agency over to a massive degree. So, again with being lazy, having to develop your own system because you do have to have a system or you will be dead in the water and then everyone else uses one thing why would we do anything different and be, I do not want to sound like I am preaching anything, but it is the best.

As a career paramedic and EMS professional, P4-EMS said

If we are talking every day in 99% of our calls, I would say it is nonexistent. It is just not viewed as a part of our role if that make sense or a part of our training or a part of how we react. In mass casualty incidents (MCIs), the importance grows certainly again only through a small extent.

(ICS) would be very successful and very functional in small scale mass casualty incidents.

I think it is really difficult to implement in EMS especially in the moment and would require a known structure, which is something I have never seen.

P3-EM/FS provided a more positive outlook on the application of ICS among EMS by stating “typically your most EMS units flock to the banner of the ICS or the fire service because we do it more.”

Theme 4: There is a Lack of ICS Training and Exercises

Six out of twelve participants (P1-LE, P2-FS, P4-EMS, P5-EM, P6-EM, P12-LE) believed that their training in ICS was insufficient. P1-LE said,

Training is the huge thing. We do not do enough of it. The more exercises we do and training we do, the better we are getting at it. (During a large training exercise that utilized ICS), it was almost seamless. It worked so well, and it is because all of the tabletops leading up to it and all that, everyone was ready for it and the whole ICS system worked perfectly. If you do not train in this, it is not going to work.

P12-LE said

(I've seen) a failure to implement because it was due to a lack of training and education, lack of understanding of it. The concepts of it existed and it could have been turned on but really this was not a forethought for anybody in the command position of that incident. (Sometimes) there is a gap (between) knowledge and execution.

There was strong support for refresher training. P9-EM/LE said one major improvement would be development of refresher trainings, specifically for 200 and 300. P11-LE said that "I think what would make (ICS) less confusing is not have such a lapse of time (between training). This thing probably needs to be refreshed annually if not semi-annually."

P4-EMS agreed that ICS provides a right way to accomplish organizational goals for the private EMS service, but,

The hard part is actually training, utilizing it, and preparing to use it. So, it is a failure on us and not on the ICS. It was driving me crazy that we did not have regular tabletops, we did not have regular drills. (We) struggle with ICS and understanding what our roles are and having the resources and the training to really implement those kinds of things. We

have talked about like we really should do more drills together, we really should do more tabletops together and things like that, which I believe everyone, knows is important just does not happen.

P4-EMS offered one possible reason for low EMS training levels in that “priority EMS tends to have very high turnover. There are very, very low numbers of career EMT and paramedics.”

Theme 5: Pre-Existing Relationships Influence Application of ICS

Nine out of twelve participants (P1-LE, P2-FS, P3-EM/FS, P4-EMS, P6-EM, P8-EM, P10-LE, P11-LE, P12-LE) believed that pre-existing relationships influence application of ICS. The comments generally imply that more interaction between emergency responders leads to improved performance during training and real incidents. Participants that expressed frustration with some aspect of ICS also made comments that they appreciate ICS for large pre-planned events. P6-EM said,

Where I have seen ICS really shine is in a pre-planned event. ICS provides an excellent template and process for pre-planned events that brings all the associated partners together prior to an event occurring, work through that kind of process, develop an operational game that everybody is on the same page with. In that process, you also have built those relationships, hopefully if you have not already established them prior. You know exactly who is where and what is happening and what capabilities exist, what contingencies exist. From a LE perspective, P12-LE said.

If we ever have to use (ICS), that is where you get that big distinction between fire and police. How does it plug in to day-to-day life? There is a big gap on the law enforcement side of understanding of how we do that.

P8-EM said that implementing ICS is “not a big issue with us because staff fought fires with us about every year and they work very closely with each other.” P8-EM also recommended that elected officials complete basic ICS training to support relationships during large emergencies and stated,

If you are an elected official, it does not matter what position, if you are elected, whether you are senator or representative or governor or whatever, then you should take 100 and 200, but definitely 700 and 800. It is imperative that elective officials understand their role in the response.

Theme 6: Mixed Support for the Link Between NIMS Compliance and Federal Preparedness Funding

Seven out of twelve participants (P1-LE, P2-FS, P3-EM/FS, P6-EM, P7-EM/FS, P9-EM/LE, P12-LE) supported the link between Federal Preparedness funding and NIMS compliance to varying degrees. Three participants (P4-EMS, P10-LE, and P11-LE) were not familiar with this issue and P12-LE mentioned that his LE department generally does not know of this issue. P3-EM/FS was a strong advocate for this link and stated,

From the Federal looking down to make sure we implement NIMS and ICS, it is a very useful tool for them. Because ICS is so readily used by all of us, you do not hear a lot of people saying this is just stupid. I never heard that. I have heard plenty of times about State laws, Federal laws, regs, rules, this is just stupid. I have never heard that about ICS in 30 years, so that has got to tell you something right there. It is a useful tool for them to say it should be done. Luckily, this one is a win-win.

P1-LE said that

If the federal funding was not a part of it, we still would be using (ICS) anyways because this is what the nation does. You know, these are the guidelines we receive, this is how we are supposed to respond to incidents, okay. But the federal funding, you know, is just that extra little, you know, encouragement that you need to get this done and that we have basically 100% participation.

Several participants used the metaphor of a carrot on a stick, with the funding as the carrot and the coercive power of the federal government being the stick. The point of the metaphor was that if the federal government wants you to be NIMS compliant and use ICS, you can take the carrot or you can be hit with the stick. P3-EM/FS also added that there are still benefits for everyone under this relationship,

Obviously (the grant money) is a good carrot, and if they learn along the way, then you know it is a win-win for everybody on that, but I think when the resources are out there and these counties do not have the money to buy that resource, they have to go through this process to get it. Ultimately, I think that they are after the resource, but you know, they are just not going to give it to them.

P6-EM took the concept of NIMS compliance further by addressing the *intent* of NIMS compliance.

I think as the leader of an organization it is that leader's responsibility to build that mindset and those functions into the culture of the organization, so to be NIMS compliant does not necessarily mean you are running through a checklist with everything, but it is to that organization's best capability they are meeting the intent of what NIMS compliance is looking for.

P2-FS expanded on the implications of this issue by stating,

I think that it is obviously a requirement, you have to show, you have to be in compliance with it to apply for federal funding. One of the things that I will say about it though is that well, I mean, I guess the link is, I can't go on to grants.gov or any you know FEMA's website and look up different opportunities without acknowledging in some way, shape or form that I am NIMS compliant and you know, in addition to that, a part of the NIMS compliance and part of the process of compliance is ensuring like, you know, our fire charts are reported to the state and then subsequently to the feds. We do not get any State funding without being compliant with that, which follows the NIMS structure, and the data collection structure, and a lot of that, I think sometimes is the feds are really trying to, I think it is a cash funding too, because I think the feds are really trying to require it, so that you have that uniformity throughout the country, which I actually support, but I think they also are trying to do it because it is good data collection and data collection drives decisions.

P7-EM/FS provided an example of how their NIMS compliance was strengthened due to the link with Federal Preparedness funding. P7-EM/FS said,

I need money. I am sure if you ask someone from (the nearby metro area) who has money, they would probably tell you they need more money. (My department has a small budget), so anything we need outside of that we need to beg or borrow or get grant funding for. We put in for the State Home and Security Grant Program last year for a \$350,000 Incident Command and Communications Trailer which we could not buy otherwise, and we are not eligible for that grant without having an ICS or NIMS resolution on the books with the county. So, it is super important at the base level if we need money and they will not give it us unless we follow their rules. Not to oversimplify things or sound selfish or silly or

childish, but at the end of the day in terms of doing things the right way that is why we do it, everything else operationally is because it is the easiest way to do it.

P7-EM/FS also provided a statement that implied a coercive nature between funding and NIMS compliance,

If it is not a requirement from someone it is not going to happen anywhere and if there is no money tied to that requirement, it is not going to happen anywhere, and I think the best way to get anyone to do something is to threaten to take money away from them.

P9-EM/LE minimized the notion of financial coercion and said that,

We don't do things that we don't feel like doing. Tying NIMS compliance to federal preparedness grants and auditing is extremely valuable. You cannot really look at a plan and (determine if) that plan is consistent with NIMS. That is kind of an opinion, but if we said our policy is that every firefighter will take ICS100 and 700, Captains will take this and Chiefs will take this, then you can measure that and so I see a great value in having things like that that are measurable.

P2-FS expressed strong opinions about the requirement to report NIMS compliance and federal funding. When asked if emergency response departments would still utilize ICS the funding was not tied to NIMS compliance, P2-FS said

No, and honestly, there are a lot of smaller organizations that I would say, pencil whip it for a lack of a better term. They will have a one page protocol somewhere that says they will follow NIMS and ICS, but then you get to rural America and you know it is still that country firefighting and EMS and freelancing and people doing whatever the (expletive) they want, however, the (expletive) they want with very little command and control or ICS structure whatsoever, because that is the way they have always done and they are not

going to change, but when they apply for that federal grant, I guarantee they are checking the box and if they had to go dust off a three ring binder somewhere that has a one pager in it that they're NIMS compliant, you know, they can show that and so I do think it is pencil whipped at sometimes and had it, if it was not required, you're right it would not necessarily, they wouldn't even have that policy at all.

Theme 7: There are Mixed Opinions About the Sense of Duty to Utilize ICS

Three participants (P5-EM, P9-EM/LE, P10-LE) expressed a sense of duty to utilize ICS during emergency response. However, three participants (P1-LE, P4-EMS, P7-EM/FS) rejected the notion that a sense of duty compels them to utilize ICS during emergency response. Rejecting a sense of duty to utilize ICS did not imply that the participants held negative opinions about ICS. Perhaps the strongest expression of duty came from P10-LE who said "it is not just a duty (to use ICS), it is a moral obligation. Not only is it a good practice, but morally and ethically - it saves lives. It is proven to work." P5-EM commented that,

We actually use (ICS) both in real world and in training. We practice that over time and then in any real world that I have been involved in we worked ICS. I could really not see a response in any other right myself.

P9-EM/LE provided several examples of successful use of ICS and summarized by saying,

I know that ICS works. I think my sense of duty comes from that experience - when done this is the best way of it. This is kind of the best way that is out there to manage an incident.

The sense of duty was commonly directed toward fellow responders and not ICS as a system of command and coordination. For example, P7-EM/FS had strong opinions about ICS. While supporting ICS, P7-EM/FS did not claim a sense of duty to utilize ICS, stating

You can put whatever you want on a piece of paper and that does not mean I care, I guess. Just because NIMS says it is the way we have to go and just because I have funding tied to it does not mean I really ultimately give a (expletive) about the funding or the rules.

P1-LE supported ICS but not out of a sense of duty by stating,

There is buy-in. It is not like I have to do it because the policy says so, even though our policy does say so. I think people understand this is structured so we get the job done efficiently, safely, and effectively.

P7-EM/FS had relatively less experience than many other participants and was not in the Emergency Response Services when NIMS and ICS were mandated. P7-EM/FS rejected utilizing ICS because of a sense of duty yet acknowledged the ubiquitous nature of ICS in several examples.

We are accidentally ICS or ICS is accidentally exactly what we do on a day-to-day basis just because it is convenient and for being entirely honest with you, the type and personalities that we get into public safety they might have this need to serve or just love what they do or the community or whatever drove them to get in there, but ultimately it is an inherently lazy culture. (ICS) is usually just the path of least resistance. It is the easiest way to manage that incident. I do not think I am driven out of the sense of duty to use incident command and to love it and to teach it, and to ultimately preach it on occasion and sometimes forcefully like 'this is what you are going to do.' There is no question. It is not a sense of duty. It is because it is easy.

According to P4-EMS, the sense of duty to implement ICS is not strong in EMS and is not commonly understood. As the only participant who was full-time EMS and not involved in FS, EM, or LE, P4-EMS stated,

We do have a local protocol that kind of lines out the ICS structure and talks about the first arriving paramedic will be Incident Command until the first-arriving officers shows up, so it exists but it is not used frequently and is not well known.

Theme 8: Cultural Challenges Exist Between Different Emergency Response Services

Seven out of twelve participants (P2-FS, P3-EM/FS, P4-EMS, P5-EM, P6-EM, P9-EM/LE, P12-LE) expressed views that there are cultural differences between the various emergency response services. P2-FS believes that

there is a cultural challenge there between the emergency management folks and the fire folks when it comes to adaptability. There is still a lot of buy-in to ICS and NIMS and there is not really a lot of pushback, which is a good thing, but I really, really advocate on that adaptability whereas every emergency manager I have ever dealt with struggle with adaptability in emergency situations because it is not the way they wrote the plan and that is always a cultural challenge that we have to overcome.

P3-EM/FS also commented on the relationship between team culture and the success of implementing ICS.

The groups that work as a team, work as a team under ICS very well. The groups that are not used to working as a team, stumble a little bit to understand it. They go through it at the basic level training, but it is one of those things they are not comfortable with unless that is used routinely.

As an emergency manager, P5-EM observed cultural differences between law enforcement and fire services and stated,

Working with the cops and the firefighters, two different cultures there, they have their own way of doing things, you know they are not going to veer too far from that. Cops

have their own (ways), they do not use ICS, but they do have their own form of what they do and when you work with them, they do not change what they are doing to accommodate you, it is the other way around.

From the perspective of an experienced law enforcement officer, P12-LE provided unique insight by stating

The culture of law enforcement is very much about based around secrets. My information, my investigation, my, my, my. That makes it difficult to open the door for a true ICS because of that lack of sharing of information or differences in policies. We have to be more consistent across the (state) borders to what is expected of us. Fire is great at it. They are all generally speaking similar on their response, police is not, they're not. It is a culture thing with us.

Several participants (P1-LE,) commented that the cultural differences that previously hindered ICS and emergency response are improving.

Theme 9: Emergency Response Would Suffer Without ICS

Participants expressed many different views about ICS and their experience implementing ICS during training and in real events. However, eleven out of twelve participants expressed views that emergency response would suffer without ICS. P1-LE said that

In a world without ICS, without NIMS, it would just be confusing and challenging for emergency response. It would be dangerous, and it would be inefficient for operations for the communities and the public we serve. If you do not have a good established command and control system in place, then every chief officer, or every company officer is going to deal with that car crash completely different. Dispatch is going to be confused, law

enforcement is going to be confused. I think it is just going to be a safety concern and your efficiency of operation is going to be decreased.

P2-FS-EM/FS supported management by objectives and related ICS to the effective command and coordination during an incident. P2-FS said that removing ICS from emergency response

Would result back to being a command presence meaning the officer of the day would have to be in charge because it would go to that level. Without incident command and everybody coming to that same banner, I do believe we would have again chaos, and we would have freelancing, we would have the objectives would not be met because it may be different objectives and I think we would hurt people. Our objectives would not be identified, they would not be met. People would be unsafe.

P7-EM/FS supported the nation-wide implementation of ICS and said that emergency response without ICS would be

A circus. I think a lot of especially what fire service and emergency management does is, by default, complaint. The flip side with that is if we did not have these requirements or a nationwide or worldwide system, we have a lot confusion. Even with ICS we do have some problems because every agency has different policies and procedures.

P10-LE provided similar comments as the other participants and said that emergency response without ICS would be “chaotic at best. We might win but we are going to know we were in a fight” and P11-LE said it would be “unorganized. Without ICS and everybody taking their piece of the pie, it will be chaotic, I definitely think it will be, and you are going to lose most, if not all, your effectiveness of the response to as well.”

In a slightly different approach for law enforcement, P12-LE said that

emergency response without ICS is effective for short-term small-scale response.

Everyone sort of knows their mission. Speaking of law enforcement, go stop the bad guy, go make sure that person is safe. Firefighters go squirt water on stuff or put Band-Aids on people. We know what we are supposed to do, and we can go and do it. But the second it starts getting more complex, that is where you have your make-it or break-it moment with ICS because you either set it up right and you task people appropriately or everything starts to fall apart very very quickly. That's where having that training and understanding is beneficial, but without ICS, you really cannot do anything beyond your immediate here and now.

In the lone dissenting view, P4-EMS expressed that if ICS was not used during emergency response, there would not be a difference in their procedures since they do not use ICS on 99% of their calls.

Summary

Chapter Four presented the data from 12 semi-structured interviews. Following analysis, nine themes emerged from the patterns or responses. The influence of normative systems is strong across the four participating emergency response services. However, a key variable is the extent to which the normative influence supports ICS. Regulative systems were found to have a complex influence on emergency responder experiences with ICS, but there was evidence that ICS is supported by the relationship between NIMS compliance and Federal preparedness grant funding. Instead, the more dominant influences appear to be normative and cultural-cognitive systems. Cultural-cognitive systems showed significant influence during multi-agency responses. Chapter Five presents the results, interpretation of findings, implications for practice, and a comparison

between the findings and the theoretical framework for the study. Chapter Five concludes with recommendations for future research and closing statements.

CHAPTER 5. DISCUSSION, IMPLICATIONS, RECOMMENDATIONS

Chapter Five connects the data to the rest of the manuscript and the need for the study. After a summary of the results, the focus of this chapter turns outward to the previous literature and the wider field of interest. The significance of these findings to the emergency management scholars and practitioners is also presented. Chapter Five is organized into sections discussing a discussion of the results, conclusions based on the results, a comparison of findings with the theoretical framework and previous literature, an interpretation of the findings, and recommendations for further research.

Summary of the Results

The literature does not offer a comprehensive evaluation of Incident Command System (ICS) experiences among fire services, law enforcement, emergency management, and Emergency Medical Services (EMS) professionals. This research study aimed to explore emergency responder experiences with ICS. Emergency responders are responsible for making critical decisions under pressure and resource scarcity. If responding organizations utilize ICS differently, there may be detrimental effects on decision making, communication, or utilization of resources. Understanding the human-system experiences of different emergency response organizations could help to improve the approach to and implementation of ICS.

Research has suggested that ICS often not used as intended (Jensen & Waugh, 2014). ICS was also criticized for limited usefulness and that some assumptions of ICS may be faulty (Jensen & Waugh, 2014). Additional support for the study came from the differing conclusions over the application and value of ICS found in the literature. The literature indicated potential disagreement between practitioners and scholars in terms of ICS' effectiveness (Jensen &

Thompson, 2016). Grainer (2016) suggested that further research was needed to determine if the existing systems and associated ICS training should be updated or revised.

This study was conducted using the generic qualitative inquiry and institutional theory framework to explore how normative, regulative, and cultural-cognitive systems influence emergency responder experiences with ICS. Scholars have used institutional theory to study how organizations develop a shared reality, obtain compliance, make and enforce rules, exert, coercive power, develop collective understanding, and enact the processes of deciding and acting (Abdelnour et al., 2017; Alvesson et al., 2019; Jones et al., 2015; Scott, 2017). The influence of normative and cultural-cognitive systems appeared as the dominant influence across the four participating emergency response services. Regulative systems were found to have a complex influence on emergency responder experiences with ICS. The data suggests that changes and improvements to ICS should be presented to the emergency response community as practical improvements instead of regulations or requirements. The results also demonstrate that the interaction of these systems establishes tension between the instituted and the instituting as previously described by Bouilloud et al. (2019) and Scott (2017).

Discussion of the Results

The results answered the research questions, but responses varied slightly based on a participant's branch of emergency response service. The fire service and emergency management participants were overall more supportive of ICS and their experiences reflect common use and understanding of the system. Law enforcement and EMS participants had a wider range of opinions of ICS but were overall less supportive of ICS and do not appear to integrate ICS into the regular course of their duties like the fire service and emergency management organizations. It is possible that the research design influenced this outcome. The participant inclusion criteria

required least 5 years of experience in an emergency response service and completion of specific advanced ICS courses (ICS-300 and ICS-400). It is possible that the sample positively selected individuals with a bias for or against ICS based on that level of training and experience.

Participants offered an overall supportive opinion of ICS and said the emergency response community is receptive to ICS. The most common supportive statement about experiences with ICS was that the system provides a common framework for incident response that permits the use of best practices. Participants also said that while no system is perfect, ICS helps improve incident response and save lives. Participants who said they don't use ICS often still felt the system is valuable for its intended purpose. Participants from fire services and emergency management organizations expressed strong buy-in and support for ICS in the conduct of all response activities. They also appeared to be advocates for teaching ICS concepts to the broader emergency response community. The utilization of ICS among EMS personnel was described as infrequent among firefighter paramedics and non-existent in the private EMS community. Participants from law enforcement offered more critiques of ICS than those from fire services and emergency management organizations. Most law enforcement participants said they did not train in ICS enough to feel confident using it during large incidents and did not require ICS to perform their daily duties.

Several connections between the study's themes were apparent. The Emergency Response community is receptive to ICS and much of the emergency response community has a lot of experience using ICS in training and real incidents. Participants expressed that their support for ICS is strongly aligned with the generalized opinions of ICS within their department and among their peers. This implies that perceptions of ICS Participants from each emergency response service said they felt ICS was not applied consistently among different emergency response

services. This is concerning since ICS is intended to be a unifying framework. Conflict should be expected when different organizations are not willing or able to operate within this framework. Participants also said there was a lack of ICS training and exercises and that pre-existing relationships influence response outcomes. It is logical to conclude that additional ICS-focused training and exercises with other organizations could help alleviate conflict and promote teamwork. While each branch of emergency response will always have a unique culture, working collaboratively within ICS is likely to foster cohesive multifunctional teams.

None of the participants said that their organization suffered when they did not use ICS. Law enforcement participants who did not claim to use ICS in the course of their regular duties did, however, say that ICS would be needed in large and multi-agency incidents. Those participants also said that when they use ICS, they are behind the curve and should improve their interoperability within ICS.

The data showed mixed opinions about the link between NIMS compliance and Federal Preparedness funding. The most common opinion was that this link represented a win-win strategy because it encourages the emergency response community to use ICS while also supporting the organizations with equipment and resources with which they can conduct their activities. There is some evidence that ICS is supported by the relationship between NIMS compliance and Federal preparedness grant funding, but that the requirement to use ICS is not necessarily the strongest motivation for everyone. For example, some participants said they would use ICS even without the funding incentives, simply because they see ICS as the best way to approach unified emergency response. None of the participants said they only use ICS because of the NIMS mandate, and none said that the Federal preparedness grant funding should be provided even if NIMS compliance is not required.

Conclusions Based on the Results

The purpose of ICS is to provide a common framework and lexicon for emergency response. The Department of Homeland Security (DHS) intended for local, state, and federal emergency response organizations to use ICS for all-hazards incident response regardless of the incident's cause, size, geographic scope, duration, or complexity (DHS, 2017). According to DHS (2017), "ICS is a standardized approach to the command, control, and coordination of on-scene incident management that provides a common hierarchy within which personnel from multiple organizations can be effective" (p. 24). The results of this study indicate that great progress has been made toward the goal of national NIMS compliance and use of ICS. ICS has achieved widespread adoption, but the extent of its use is highly dependent on the branch of emergency response service. Fire services and emergency management appear to have fully adopted ICS practices during daily activities. Law enforcement and EMS organizations tend to show hesitancy toward utilizing ICS in the course of their regular duties for various reasons. These include lack of knowledge or no apparent need to utilize ICS in all circumstances.

The grievances that some participants expressed also present a solution. Improving emergency responder experiences with ICS could benefit from meaningful classroom training and high-quality realistic operational exercises. This conclusion is consistent with previous literature. The three most influential factors that appear to influence emergency responder experiences with ICS are relationships, knowledge of ICS, and the accumulated experience with ICS during emergency response activities.

The results indicate that pre-existing relationships influence the application of ICS during real responses. This suggests that time and effort should be invested into activities with the purpose of building strong professional relationships between organizations and within the ranks

of those organizations. Since many incidents require more than one branch of emergency response, it would be beneficial for those organizations to have experience working together under similar circumstances. That experience could be obtained through training and exercises that facilitate discussion of tactics, techniques, and procedures (TTPs) and organization standard operating procedures (SOPs). The results also indicate that the quality of experiences with ICS are associated with the demonstrated benefit that ICS provides during emergency response. Demonstrating the benefits of ICS could be included during post-exercise discussions or after-action reviews (AARs).

Several participants mentioned the potential benefits of refresher training in basic ICS, like what is taught in ICS-200. Comments included statements that the knowledge of ICS is perishable, and that annual refresher training is recommended but should be directed towards applying skills to ICS responses. This training would benefit by including multiple agencies to encourage open discussion about best practices. The classroom training could be expanded by conducting realistic training with partner organizations. By utilizing a crawl-walk-run methodology to increase the scope and complexity of training, responders can become more familiar with their role within ICS and build relationships between organizations. This methodology could be applied in practice in a progressive series of events that begins with classroom training and expands to tabletops, drills, and culminates in a full-scale exercise. A key aspect of this training would be to avoid doing things one way in training and another way in real responses.

Comparison of Findings with Theoretical Framework and Previous Literature

The study's findings suggest that emergency responder experiences with ICS are improving. The data presented more positive opinions about ICS than previous literature indicated. This is possibly due, in part, to the integration of ICS principles at the lowest levels of emergency responder training and use of ICS in training exercises. ICS was designed to permit a coordinated and unified emergency response (Martaindale & Blair, 2019). The findings support previous literature and found that ICS is not equally utilized among fire services, law enforcement, emergency management, and EMS. Jensen and Youngs (2015) suggested there is limited potential for standardization within the field of emergency management. The results indicate that the emergency response community supports ICS but that more work is required to fully adopt ICS as intended by DHS. Grainer (2016) concluded that basic ICS is taught throughout the emergency response services but presents several shortfalls centered around: training limitations, atrophy of knowledge, skills, and abilities; and distrust of the system in general. This study supports the need for further training and practical exercises but did not find a generalized distrust of ICS.

Since the adoption of NIMS, there has been "significant and ongoing debate about the implementation and effectiveness" of ICS (Rose et al., 2017, p. S130). The findings support Martaindale and Blair (2019), who concluded that incident command is a skill where the fire service is commonly ahead of law enforcement. The findings also suggest that emergency responders agree that ICS is effective for coordinating complex incidents, but that ICS is not used regularly within law enforcement and EMS activities. Martaindale and Blair (2019) stated that ICS was designed for fire services and that implementation among law enforcement was often

met with resistance. Participants in this study made similar comments to explain the continued challenges of implementing ICS in law enforcement activities. However, law enforcement participants generally made comments that they are open to ICS but feel more training and practice would be helpful. Chang and Trainor (2018) concluded that the pre-existing relationships between emergency responders is an important predictor of success within ICS. The data support this conclusion and suggest that the training and exercises should include a focus on building positive relationships between organizations.

Training in ICS does not impart the ability to use ICS in a real incident response. The successful implementation of ICS during emergency response is dependent on realistic training (Buck et al., 2006). This study strongly supports the relationship between realistic training and emergency responder experiences with ICS. Steigenberger (2016) asserted that practical exposure to the pressures of time and situational complexity are necessary for all disaster response organizations. In recognition of the importance of training, the federal government provided training and funding to support exercises involving ICS (Jensen & Thompson, 2016). One conclusion of this study is that refresher training and realistic practical exercises are requested by the emergency response community for continued adoption of ICS. Grainer (2016) noted that personnel who complete required ICS training often stop training once they complete ICS-300 or ICS-400. The data supports that finding but also found that only senior leaders in law enforcement and EMS organizations attend ICS-300 and ICS-400 training. Completion of ICS-300 and ICS-400 is common at lower levels among fire services and emergency management.

Comparison with the Theoretical Framework

Institutional theory was used as the framework for this generic qualitative inquiry. Scott (2017) proposed that institutional behavior is influenced by normative, regulative, and cultural-

cognitive systems. The findings are supported by most aspects of institutional theory. Specifically, emergency responder experiences with ICS are strongly influenced by normative and cultural-cognitive systems. Normative systems guide institutional behavior through expectations of roles and responsibilities (Scott, 2017). The data included many statements about the expectation to use ICS and individual responsibilities directed by ICS. Normative structures also contribute to the strength and duration of relationships between emergency response organizations (Jung et al., 2019). The findings suggest that relationships between partner organizations heavily influence the perceptions of ICS during training and exercises. The data support Chang and Trainor (2018), who concluded that strong relationships are required to facilitate the effective application of ICS.

The findings indicated that cultural-cognitive systems strongly influence emergency responder experiences with ICS. Within an institution, cultural-cognitive systems use symbolism to construct reality among its members (Scott, 2017). Culture is the collective mental programming that distinguishes among groups of people (Yeo et al., 2018). The findings indicate that among emergency responders, the cultural-cognitive influences come primarily from initial training and the attitudes and expressed opinions of organizational leadership. The basics of ICS are introduced to all emergency responders in their basic courses, but negative opinions of ICS from leaders will influence successive cohorts of responders. Participants from fire services and emergency management referred to ICS as the standard system for all emergency response. The orthodoxy found in cultural-cognitive systems is often evident and often taken for granted as *the way we do things* (Scott, 2017).

Regulative systems were found to present a mixed influence on emergency responder experience with ICS. Participants strongly support the requirement for work-related credentialing

and certifications. Similarly, Grainer (2016) concluded that trust in the competence of fellow emergency responders is supported by credentialing, professional development, and realistic training exercises. The data indicates that emergency responders place great value in knowing that responders understand the technical aspects of their role which promotes effective and safe emergency response. As previously mentioned, the training and certifications should be supplemented with challenging realistic exercises.

Previous literature suggested that the link between NIMS compliance and Federal preparedness grant funding presented a coercive force. The primary mechanism of control within regulative systems is coercion (Scott, 2017). The study findings indicate that emergency responders don't feel think link is coercive in a negative sense. A common response was that the funding requirement was a win-win situation because it encourages the use of ICS while also supporting organizational materiel needs. Hildebrand (2015) found that receipt of federal preparedness grants lacked statistically significant predictive power for NIMS implementation. Several participants indicated that organizations could *pencil whip* NIMS compliance on paper for purposes of grant requirements. Hildebrand (2015) found no consistent or statistically significant correlation between the receipt of grants and the perception of federal control over local emergency management and homeland security actions. This was explained, in part, by the weakness of federal policy enforcement or insincere implementation at state and local levels (Hildebrand, 2015). The data support this notion because several participants mentioned there is no penalty for not following through with NIMS compliance beyond the departmental policy level. As previously mentioned, utilization of ICS primarily comes from the normative and cultural-cognitive influences.

Interpretation of the Findings

The goal of the study was to develop emergency responder experiences with ICS. Conflicting opinions of ICS among the scholars and practitioners was previously noted (Jensen & Thompson, 2016). This study explored emergency responder experiences with ICS to narrow the gap in the literature as previously recommended. Studying emergency responder experiences is important since it is intended to be a unifying system that is common throughout the country. This study revealed nine themes about how senior emergency responders experienced ICS throughout their careers. These themes inform the field of emergency management and demonstrate the suitability of institutional theory in this young academic field.

Literature suggested there is limited potential for standardization within the field of emergency management (Jensen & Youngs, 2015). The results suggest that standardization is only limited by the willingness of emergency responders to utilize ICS and train in its use together. Literature found that incident command is a skill where the fire service is commonly ahead of law enforcement and that ICS is not used regularly within law enforcement and EMS activities (Martaindale & Blair, 2019). The findings of this study support literature in those areas but suggest that ICS is becoming more commonplace with law enforcement as its culture grows more accepting and skilled with implementing ICS. Martaindale and Blair (2019) stated that ICS was designed for fire services and that implementation among law enforcement was often met with resistance. The findings indicate this resistance has largely faded and that law enforcement organizations have had positive experiences with ICS but likely need more time and training in ICS. The study findings confirmed that ICS is viewed and applied differently in law enforcement and EMS organizations than in fire services and emergency management. Furthermore, the relationship between responders is an important predictor of positive experiences with ICS. These

findings have implications for practice because they emphasize straightforward steps to improve experiences with ICS.

The study yielded these findings because the research design and the interview guide facilitated open and honest discussion about participant experiences with ICS. The study did not seek correct answers regarding the application of ICS, but instead asked participants non-threatening questions about specific aspects of their experiences. The outcome of this study was certainly influenced by the sample population selection criteria, the interview guide, the application of institutional theory, and the interpretation of the data.

Limitations

Limitations in research are known or potential weaknesses that are often out of the researcher's control (Theofanidis & Fountouki, 2018). It is imperative that scholarly research considers and presents limitations that may affect the study's design, results, and conclusions. This study recruited participants from metropolitan and rural emergency response organizations from the southwestern region of the United States. Many of the participants were from the same state. This means that emergency responders may have different experiences with ICS in other geographic regions. Only one participant was from a private EMS company. While some of the fire service participants were paramedics, their experiences with ICS were notably different. Additional representatives from private EMS services could have possibly added additional value to the study.

The data analysis methodology of this study is another potential limitation. Qualitative methodologies cannot be truly replicated and are not verifiable (Theofanidis & Fountouki, 2018). During analysis, quotations and meaning were drawn from the data that supported certain

conclusions. It is possible that different researchers would emphasize different conclusions from the same data.

Delimitations are the intentional boundaries that a researcher draws to control the scope of a study (Theofanidis & Fountouki, 2018). These boundaries commonly address the theoretical background, objectives, and research questions. The scope of this study was limited to experiences with ICS from a closed set of emergency response services to ensure the research goals were achievable. ICS is nearly ubiquitous among all fields of emergency response and is commonly applied by commercial entities. Including more ICS practitioners would increase the possible understanding of the research problem, it was impractical, given the limited time and budgetary resources available for this study.

Implications for Practice

This study was supported by previous requests for additional research of ICS. The literature did not fully characterized the perceived value of ICS in the emergency services (Jensen & Thompson, 2016). Studying emergency responder experiences with ICS is important because of the differing conclusions over the application and value of ICS found in the literature. ICS training is commonplace and presumed to be ubiquitous among emergency responder and emergency management communities (Grainer, 2016). The results indicate further work is required to achieve federal NIMS and ICS goals, but that experiences with ICS are continually improving.

The findings contribute to the emergency management body of knowledge by agreeing or disagreeing with previous findings related to experiences with ICS. The findings support previous conclusions that: ICS is applied differently in different branches of emergency response; pre-existing relationships influence application of ICS (Chang & Trainor, 2018); professional

certifications are effective to build legitimacy and trust (Barbour & Manly, 2016); training exercises should ensure ongoing competencies, practice establishment and succession of command, and address potential confusion or mistrust with ICS (Grainer, 2016); and potential exists for disagreement between reported NIMS compliance and actual abilities to use ICS during an incident (Grainer, 2016). The findings present some levels of disagreement with the conclusions. Jensen and Youngs (2015) concluded that there is limited potential for standardization within the field of emergency management, but the findings show continual movement towards standardization. Grainer (2016) found that there is distrust for ICS as a common system of coordination and control, but the data show predominant trust for ICS among participants.

The findings contribute to the institutional theory body of knowledge and demonstrate the utility of this theory to the field of emergency management. The findings support the positions in literature that: normative structures contribute to the strength and duration of relationships between emergency response organizations (Jung et al., 2019); senior ICS practitioners appreciated the structure, discipline, and common terminologies that ICS encourages (Chang, 2015); orthodoxy found in cultural-cognitive systems is often evident and often taken for granted as *the way we do things* (Scott, 2017). Some disagreement was found with the conclusion of Hildebrand (2015), that the link between Federal Preparedness grants and NIMS compliance presents financial and legal coercion.

Recommendations for Further Research

The literature on emergency responder experiences with ICS is dominated by qualitative or anecdotal work. The emergency management body of knowledge would benefit from scholarly quantitative research. A validated survey instrument does not exist to measure emergency

responder experiences with ICS. Future research would be facilitated by the development and validation of such an instrument. The most influential quantitative work in emergency management focused on NIMS compliance and is becoming dated.

Future research could also expand the study sample, scope, and research questions to include other branches of emergency response. This study focused on fire services, law enforcement, emergency management and EMS. Many other organizations are included in the emergency response community and research including them could benefit the body of knowledge. Such organizations and specialized activities include SWAT teams, hazardous materials (HazMat) teams, hazardous device teams (a.k.a. bomb squads), aviation, swift water rescue, heavy rescue, high-angle and confined space teams, the National Guard and their Weapon of Mass Destruction Civil Support Teams (WMD-CSTs), civilian non-profits, non-governmental organizations (NGOs), and organizations overseeing key commercial infrastructure.

Conclusion

The goal of this research was to develop the emergency management body of knowledge regarding experiences with ICS. The research questions asked, how do normative, regulative, and cultural-cognitive systems influence emergency responder experiences with ICS? The goals were accomplished through a generic qualitative inquiry and semi-structured interviews with 12 senior emergency responders. Nine themes emerged from the data analysis that contribute to the academic field of emergency management and have implications for emergency response practitioners. The influence of normative systems was strong across the four participating emergency response services. Participants expressed that their support for ICS is strongly aligned with the generalized opinions of ICS within their department and among their peers. Regulative systems were not found to have a strong influence on emergency responder experiences with ICS

as previously reported in literature. The findings indicate that responders don't utilize ICS strictly because of the NIMS mandate and federal policy. There was evidence that the use of ICS is effectively encouraged by the relationship between NIMS compliance and Federal preparedness grant funding. Cultural-cognitive systems appear to heavily influence emergency responder experiences with ICS.

The results of this study indicate that the goal of national NIMS compliance and use of ICS is progressing but not achieved. ICS has achieved widespread adoption, but the extent of its use is highly dependent on the branch of emergency response service. Fire services and emergency management appear to have fully adopted ICS practices, but law enforcement and EMS organizations tend to show hesitancy toward utilizing ICS in the course of their regular duties. The results also indicate that pre-existing relationships between individuals and organizations have a strong influence on the experience with ICS during real responses. This suggests that time and effort should be invested into activities with the purpose of building strong professional relationships between organizations and within the ranks of those organizations. Not surprisingly, the strongest path forward for improved experiences with ICS continues to be challenging and realistic training that promotes effective communication and relationship building.

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