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**AFTER THE EXERCISE:
USING CHANGE MANAGEMENT THEORY
TO IMPROVE AFTER-ACTION EVENT OUTCOMES**

by

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September 2019

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**AFTER THE EXERCISE:
USING CHANGE MANAGEMENT THEORY
TO IMPROVE AFTER-ACTION EVENT OUTCOMES**

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ABSTRACT

Preparedness agencies fail to act on gaps identified by exercises; instead, they repeat exercises and never move to resolve issues. After-action reports document exercise findings, but are not shared with forward-facing staff who do the work. Agencies spend federal money exercising capabilities, but fail to implement changes recommended by exercise evaluations. Yet some agencies are able to report successful after-action events and document improved capability performance. This thesis interviewed exercise professionals to identify common success factors and innovative solutions to after-action process challenges. It also surveyed preparedness employees to determine if after-action experiences differ by authority level. The thesis reviewed corporate change management literature looking for common steps to manage change and improve capabilities for emergency management agencies. The survey results show exercise participants experience after-action events differently based partly on their authority level. In particular, employees at an agency's forefront are less likely to see policy changes or be given an opportunity to read after-action documents and improvement plans. The literature review indicates specific interventions that can alleviate this, and the interviews illustrate instances where changes have been successfully applied. The thesis finally recommends specific strategies to increase the success of improvement plans.

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LIST OF ACRONYMS AND ABBREVIATIONS

AAM	after-action meeting
AAR	after-action <u>review</u> (U.S. Army) OR after-action <u>report</u> (HSEEP)
AAR/IP	after-action report/improvement plan
CHDS	Center for Homeland Defense and Security
DHS S&T	Department of Homeland Security, Science and Technology Directorate
EMS	emergency medical services
FEMA	Federal Emergency Management Agency
HSDL	Homeland Security Digital Library
HSEEP	Homeland Security Exercise and Evaluation Program
HSEEP-EP	HSEEP enterprise platform
IP	improvement plan
LLIS	Lessons Learned Information Sharing
MEP	master exercise practitioner
O/C	observer/controller
OIG	Office of Inspector General
SME	subject matter expert
TTX	tabletop exercise

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EXECUTIVE SUMMARY

A. OPENING STATEMENT

Preparedness agencies fail to act on gaps identified by exercises; instead, they repeat exercises and never move to resolve issues. After-action reports (AARs) document exercise findings, but are not shared with forward-facing staff who do the work. Agencies spend federal money exercising capabilities, but fail to implement changes recommended by exercise evaluations.

Exercise professionals create after-action documents and improvement plans (IPs), and then assume their findings are communicated throughout the agency. Exercise participants do not learn about exercise-generated policy changes or IPs.

Identifying gaps between the assumptions of exercise creators and the experiences of exercise participants is not new. Determining more precisely where this gap exists in terms of agency authority level is more helpful. However, identifying steps from corporate change management theories applicable to emergency management increases the likelihood exercise lessons will truly be learned, not just repeated.

B. PURPOSE OF RESEARCH

Preparedness agencies receive millions of dollars from the federal government. Exercise participation is meant to show national preparedness and the strength of core capabilities. However, if agencies do not follow through and improve the exercise's findings, the return on investment is low. This thesis provides clear steps to improve after-action outcomes and complete IP items.

C. METHOD OF DATA GATHERING AND ANALYSIS

Three research methods were employed to collect information for this thesis. A literature review of change management theory explored the ways for-profit corporations manage change in their fast-moving, high-consequence world. While the world of homeland security, emergency management, and government agencies is slower paced, they too reside in a high-consequence world. Investigating corporate change

management theory provided models for preparedness agencies to follow. Examples provided by several change management theorists offer guidance for ensuring changes and improvements begun are completed.

To understand the extent of the problem, a survey asked preparedness exercise participants about their after-action experiences. Survey respondents were asked if they saw after-action documents or IPs. Respondents were also asked if they saw policy or training changes addressing gaps identified by exercises, or if they had personally changed any behaviors. Survey respondents were divided by agency authority level to examine if front-line employees and first-level managers experiences differed from upper-level management.

Exercise professionals were interviewed to understand the after-action events from the exercise creator's perspective. Interview subjects were asked about successful after-action events they experienced, agency processes, and communication of exercise findings. Common factors leading to successful after-action events were identified. The exercise professionals also spoke about innovative solutions to the remaining barriers that hinder IPs.

D. OVERVIEW OF FINDINGS

This thesis found similarities between corporate change management theories and FEMA's Homeland Security Exercise and Evaluation Program (HSEEP) guidance for exercise management and improvement planning. HSEEP's strength lies in its instructions for exercise planning and conduct, but its weakness is evident in exercise after-action events. Change management theory provides actionable steps to help HSEEP users move beyond just identification of issues and into solutions.

Exercise participants experience after-action events differently based in part on their authority level. Employees at an agency's forefront are less likely to see policy changes or be given an opportunity to read after-action documents and IPs. Front-line and first-level managers are the workers of an agency. Policy changes and IPs must be visible to these workers if an agency hopes to strengthen its capabilities.

Exercise professionals distribute after-action documentation to select subject matter experts or individual agency contacts rather than disseminating the findings widely. Exercise professionals had no data documenting whether their findings were conveyed within agencies or to other relevant stakeholders.

E. RECOMMENDATIONS AND JUSTIFICATIONS

A clear plan to manage information collection and organizational changes improves after-action event outcomes by increasing capabilities within a preparedness organization. These recommendations offer strategies to increase successful after-action events.

1. Organizational Changes Must Be Clearly Identified to All Authority Levels

Preparedness agencies update policies and training programs to address gaps identified by exercises and real-world events. However, policy changes and training roll-outs must be communicated to all authority levels within an organization frequently and include why changes are occurring. Consistently communicating the importance of the organizational change signals to employees the value and seriousness with which the organization views the need for improvement.

2. Organizations Must Include Employees of All Authority Levels in After-Action Events

Preparedness agencies do not intend to silo employees and limit communication. However, if only management is privy to after-action discussions and improvement planning, front-line employees are left out. Including employees at all authority levels helps drive change. Employees with enthusiasm champion IP items they feel passionately about, regardless of their authority level.

3. Leverage Leadership, Whole Community Support, and Trust for Successful After-Action Events

Successful change management strategies encourage leaders to visibly drive change. Incorporating leadership influence helps increase successful completion of IP items. Interagency cooperation and community partnerships help by distributing work and

cost among many stakeholders when IP items are big or costly. Building trust plays an important role in both receiving honest feedback from exercise participants and working with leadership to approve honest documents for dissemination.

4. Exercise Professionals Must Disseminate After-Action Documents to Wider Audiences

Exercise professionals need to reach broader audiences with after-action action documents. Expanding distribution beyond single points of contact within agencies allows more exercise participants an opportunity to learn exercise findings.

Barriers to successful after-action processes exist. Change management strategies can help overcome them and improve performance outcomes and preparedness capabilities.

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I. INTRODUCTION

“Hey, Fred. You here for the exercise?”

“Yeah, Trevor. You think they fixed the radios yet? At last year’s exercise, we couldn’t talk to the guys in the next county.”

“I dunno. I think it was discussed during the after-action meeting last year, but I never heard anything from the supervisor after that. Did you?”

“Nah, I never heard what happened. Betcha the radios still don’t work.”

“Cassie, did you finish writing the after-action report from the full-scale?”

“Yes, I finished a couple of months ago. It’s still with senior leadership, why?”

“I’m going out to a meeting with some stakeholders who were involved in that big exercise. I wanted to report some of the findings.”

“Jim, I’m not sure leadership wants those findings made public...”

A. PROBLEM STATEMENT

Too often, conversations like the one between Trevor and Fred or Cassie and Jim are heard at the exercise check-in table or around the office water cooler. Employees repeat preparedness exercises, but without feedback from previous exercises, lessons are identified, but not truly learned.¹ Exercise professionals develop challenging scenarios, showcase participants’ skills, and document findings in reports that are shelved instead of read.² The result is issues identified in previous exercises are not corrected, because the improvement plan (IP) never filtered down to all participants. Organizations identify needed changes, but the change process is not managed properly.³

¹ Amy K. Donahue and Robert V. Tuohy, “Lessons We Don’t Learn: A Study of the Lessons of Disasters, Why We Repeat Them, and How We Can Learn Them,” *Homeland Security Affairs* 2, no. 2 (July 2006): 1–28.

² Thomas A. Birkland, “Disasters, Lessons Learned, and Fantasy Documents,” *Journal of Contingencies and Crisis Management* 17, no. 3 (September 2009): 146–56, <https://doi.org/10.1111/j.1468-5973.2009.00575.x>.

³ Birkland.

The Federal Emergency Management Agency (FEMA)'s Homeland Security Exercise and Evaluation Program (HSEEP) cycle has been proffered to preparedness stakeholders as the way to conduct and evaluate exercises.⁴ It involves agencies creating after-action reports (AAR) and IPs after exercises or incidents to address the gaps identified. Ideally, an agency works through the AAR/IP to increase its capabilities before the next exercise or real-world event. Despite having HSEEP templates and tools, not all agencies complete the exercise evaluation cycle and successfully manage the changes needed.

Even FEMA struggles to manage change successfully. In 2011, the Department of Homeland Security Office of Inspector General (OIG) made recommendations in its report, *FEMA's Progress in Implementing the Remedial Action Management Program* (OIG 11-32) that FEMA needed to develop instructions for creating clear and concise lessons learned statements.⁵ The OIG also found FEMA's program manager forwarded documented lessons learned to all 70 users enrolled in the program's database. At the time however, FEMA had 7,000 employees at its headquarters, and another 9,000 disaster assistance employees in other locations.⁶ The OIG report quoted a regional FEMA official who said, "lessons learned and best practices must be distributed in a more effective manner."⁷

The value of preparedness exercises is in improved employee response and agency readiness for real-world incidents.⁸ Some organizations conduct successful after-action

⁴ Department of Homeland Security, *Homeland Security Exercise and Evaluation Program (HSEEP)* (Washington, DC: U.S. Department of Homeland Security, 2013), Intro-1, https://www.fema.gov/media-library-data/20130726-1914-25045-8890/hseep_apr13_.pdf.

⁵ Department of Homeland Security Office of Inspector General, *FEMA's Progress in Implementing the Remedial Action Management Program*, OIG-11-32 (Washington, DC: Department of Homeland Security, 2011), 1.

⁶ Department of Homeland Security Office of Inspector General, 7.

⁷ Department of Homeland Security Office of Inspector General, 7.

⁸ Department of Homeland Security, *Homeland Security Exercise and Evaluation Program (HSEEP)*, Intro-1.

events and manage changes while others do not.⁹ What factors affect the success of an after-action event? Is the after-action experience the same for all members of an organization? How do organizations communicate after-action findings and IPs? Do exercise findings reach frontline employees and first level managers? Why are some organizations more successful at after-action events than others?

This thesis aims to address two main points: (1) establish if differences in after-action experiences exists between authority levels within organizations, and (2) determine success factors for after-action processes and innovative solutions to some remaining challenges.

B. RESEARCH QUESTIONS

This study focuses on four primary research questions:

- Do preparedness exercises result in visible policy, training, or behavior changes seen by front-line employees and first-level managers?
- Do after-action event experiences of upper-level management differ from front-line employees and first-level managers?
- In agencies with successful after-action events, what factors account for their success?
- What innovative solutions can help overcome the remaining challenges hindering successful after-action processes?

C. PURPOSE AND METHOD OF STUDY

The purpose of this thesis was to determine if after-action events result in visible policy, training, or behavior changes. The thesis also aimed to identify after-action success factors and innovative solutions to challenges still faced.

⁹ Elena Savoia, Foluso Agboola, and Paul D. Biddinger, "Use of After Action Reports (AARs) to Promote Organizational and Systems Learning in Emergency Preparedness," *International Journal of Environmental Research and Public Health* 9, no. 8 (2012): 2949–63, <https://doi.org/10.3390/ijerph9082949>.

A literature review of change management theories was undertaken to determine if ideas from the corporate world could be applied to emergency management fields.

A survey was used to collect data. Statistical analysis identified the changes visible to front-line staff and first-level managers following preparedness exercises. Analysis of survey data also differentiated experiences of upper-level management from employees to determine at what authority level after-action experiences might shift.

Interviews were conducted with exercise professionals across the country to identify factors associated with successful after-action processes and innovative solutions to the challenges they still face. Interviews were coded for common themes.

D. SCOPE AND CONTRIBUTION

Due to the time constraints, limitations to this thesis include: (1) data collection limited to government employees, healthcare providers, first responders, and emergency management professionals, (2) a focus on after-action events, particularly the communication of after-action recommendations, and (3) interviews conducted with six exercise professions who identified conducting successful after-action events.

Results of this thesis were presented to agency leadership; the researcher used conclusions drawn from the data to inform and improve future after-action events. The conclusions drawn from this research might also be useful to other preparedness exercise professionals looking to improve their agency's after-action processes and outcomes.

E. ORGANIZATION OF STUDY

Chapter II of this thesis contains background information and a brief overview of change management literature relevant to improving preparedness exercise after-action outcomes. Chapter III outlines the research design process and methodology used to measure and analyze data from the quantitative survey. Chapter III also outlines the coding process of the qualitative interviews. Chapter IV presents the quantitative survey results and extrapolates front-line staff and first-level managers' experiences juxtaposed with upper-level managers' experiences. Chapter V shares the qualitative interview analysis from the six, semi-structured interviews and highlights the commonalities and continuing

barriers experienced by the exercise professionals. Chapter VI discusses the change management literature, the quantitative survey results, and the qualitative interview data, and ties the three streams together. Chapter VII summarizes and draws conclusions from the original research data findings. This chapter also concludes with the thesis's limitations and provides recommendations for future research.

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II. BACKGROUND OF HSEEP AND CHANGE MANAGEMENT IMPERATIVES

The purpose of this chapter is threefold: (1) to examine the genesis of the Department of Homeland Security's AAR/IP, (2) to identify concerns with relying solely on the current HSEEP, and (3) to examine some leading theories in corporate change management to see how they can apply to emergency management.

A. THE GENESIS OF HSEEP'S AFTER-ACTION REPORT

In the early 2000s, Homeland Security Presidential Directives 5, 7, and 8 helped create capabilities-based exercise initiatives in accordance with the National Response Plan.¹⁰ These initiatives were the beginning of HSEEP. In the *Purpose* section of the 2013 HSEEP update, the document states that only through improvement planning can organizations correct gaps to “improve plans, build and sustain capabilities, and maintain readiness.”¹¹ The introduction to the HSEEP document further explains the purpose of preparedness exercises:

Exercise evaluation assesses the ability to meet exercise objectives and capabilities by documenting strengths, areas for improvement, core capability performance, and corrective actions in an After-Action Report/Improvement Plan (AAR/IP). Through improvement planning, organizations take the corrective actions needed to improve plans, build and sustain capabilities, and maintain readiness.¹²

HSEEP recommends creating an AAR following all exercises and real-world events. HSEEP was a modification of the United States' Army's after-action review, an oral tradition of recapping events, confusingly also abbreviated “AAR.”

¹⁰ “Homeland Security Presidential Directive 5,” Department of Homeland Security, February 28, 2003, <https://www.dhs.gov/publication/homeland-security-presidential-directive-5>; “Homeland Security Presidential Directive 7,” Department of Homeland Security, June 27, 2008, <https://www.dhs.gov/homeland-security-presidential-directive-7>; “Presidential Policy Directive 8: National Preparedness,” Department of Homeland Security, July 7, 2008, <https://www.dhs.gov/presidential-policy-directive-8-national-preparedness>.

¹¹ Department of Homeland Security, *Homeland Security Exercise and Evaluation Program (HSEEP)*, Intro–1.

¹² Department of Homeland Security, Intro–1.

In 1999, John Morrison and Larry Meliza researched the beginnings of the U.S. Army's use of after-action reviews for their still-referenced report, *Foundations of the After-Action Review Process*.¹³ This comprehensive report for the U.S. Army Research Institute traces the beginnings of after-action reviews to conversations held in the field between official Army historian S. L. A. Marshall and U.S. Army troops during the Second World War. Marshall's troop interviews comprised the oral histories of the battles the men fought, lessons they learned, and methods to improve in the future.¹⁴

Morrison and Meliza quote the U.S. Army's Training Circular 25-20, which defines an after-action review as "a professional discussion of an event, focused on performance standards, that enables soldiers to discover for themselves what happened, why it happened, and how to sustain strengths and improve weaknesses."¹⁵ Two important ideas are encapsulated in this definition. First, after-action review is a discussion rather than a formal, written document, and second, the review allows the participants to learn for themselves rather than be told the results of the event.

Other scholars define an after-action review slightly differently, but the focus remains on participants reviewing their own performance. For example, Thomas Mastaglio et al. describe a review as a "retrospective session that allows trainees to review prior training performance . . . conducted to focus on what was planned to occur during training, what actually did occur during training, why events unfolded as they did, and what should be modified during subsequent training."¹⁶ A consistent theme that review is essential for improvement is seen throughout the definitions. James Bliss writes that an after-action review should focus on using experiences to promote learning.¹⁷ In her research report for

¹³ John E. Morrison and Larry L. Meliza, *Foundations of the After-action Review Process* (Adelphi, MD: United States Army Research Institute, 1999), v-vi.

¹⁴ Morrison and Meliza, 5.

¹⁵ Morrison and Meliza, 1.

¹⁶ Thomas Mastaglio et al., *Current Practice and Theoretical Foundations for the After Action Review* (Alexandria, VA: United States Army Research Institute, 2010), 1.

¹⁷ Bliss et al., *Establishing an Intellectual and Theoretical Foundation for the After Action Review Process—A Literature Review* (Adelphi, MD: United States Army Research Institute, 2011), v.

the U.S. Army Research Institute, Margaret Salter writes that after-action reviews should ask questions, encourage thinking, and get participants talking.¹⁸

However, an after-action review is more than just people talking to one another about a recent event. After-action reviews are facilitated discussions. An after-action review requires someone outside of the event being discussed to keep participants focused on the exercise's intended outcomes and actual events.¹⁹ After-action researchers note if the event facilitator, often called the observer/controller (O/C) in military reports, is not well trained, participant learning can be hindered.²⁰ Then, the review may lose focus and turn into a critique or lecture.²¹

After-action reviews are considered the “gold standard” for improving learning outcomes and researchers argue they are one of the best ways organizations learn.²² The Army's success with after-action reviews has been understood outside the military for years. Much has been written about their use by major corporations and their interpretation of the process.²³ Perhaps the first private industry known for incorporating the U. S. Army's after-action review process was Shell Oil, in 1994, when a retired general sat on their board of directors.²⁴ Corporations like Harley-Davidson use a modified version of the U.S. Army's after-action review to ensure standards are met before a product launch.²⁵ Other companies, like wine retailer and distributor Geerlings & Wade, conduct quarterly after-action reviews to look consistently at what went well and what did not.²⁶

¹⁸ Margaret S. Salter and Gerald E. Klein, *After Action Reviews: Current Observations and Recommendations* (Alexandria, VA: United States Army Research Institute, 2007).

¹⁹ Department of Homeland Security, *Homeland Security Exercise and Evaluation Program (HSEEP)*, 4–3.

²⁰ Mastaglio et al., *Current Practice and Theoretical Foundations*, 2.

²¹ Salter and Klein, *After Action Reviews*, 9.

²² Mastaglio et al., *Current Practice and Theoretical Foundations*, 2.

²³ Marilyn Darling and Charles S. Parry, “After Action Reviews: Linking Reflection and Planning in a Learning Practice,” *Reflections* 3, no. 2 (2001): 68.

²⁴ Darling and Parry, 68.

²⁵ Darling and Parry, 68.

²⁶ Darling and Parry, 68.

Like the private sector, when FEMA looked to codify the exercise and evaluation cycle, they included a form of after-the-action recap to allow for data collection, evaluation, interpretation, and making recommendations.²⁷ The most recent, 2013 version of HSEEP continues to recommend a process for exercise evaluation that begins with a player *hotwash* immediately after the exercise concludes.²⁸

HSEEP's *hotwash* mimics the U.S. Army's after-action review.²⁹ HSEEP defines a *hotwash* as "a facilitated discussion held immediately after an exercise among exercise players. It captures feedback about any issues, concerns, or proposed improvements players may have about the exercise. [It] is an opportunity for players to voice their opinions on the exercise and their own performance."³⁰ The *hotwash*, led by a facilitator, captures the exercise participant's verbal recollections immediately after the exercise ends.

HSEEP's exercise evaluation does not stop after the initial *hotwash* discussion. Instead, it continues with collecting evaluation data to produce a written document, the after-action report (AAR). HSEEP's AAR encapsulates the exercise's planned objectives, core capabilities, and evaluator findings.³¹ An exercise professional, often the exercise director or exercise planning team, usually writes this report. The draft report is then briefed to elected or appointed officials, leadership from the organizations involved with the exercise, lead evaluators, and the exercise planning team to allow everyone a chance to weigh in on the findings and recommendations.³²

B. PROBLEMS WITH HSEEP

HSEEP has adapted since its inception, but some fundamental problems still exist with the program. Exercise professionals and scholars have concerns about HSEEP's "ad

²⁷ Department of Homeland Security, *Homeland Security Exercise and Evaluation Program (HSEEP)*, 4–7.

²⁸ Department of Homeland Security, 4–7.

²⁹ Mastaglio et al., *Current Practice and Theoretical Foundations*, 1.

³⁰ Department of Homeland Security, *Homeland Security Exercise and Evaluation Program*, 67.

³¹ Department of Homeland Security, Glossary–1.

³² Department of Homeland Security, Glossary–1.

hoc” process for reporting after-action events.³³ Three specific concerns are: (1) HSEEP’s lack of guidance for writing AAR/IPs, (2) HSEEP’s lack of guidance for tracking or implementing the IP, and (3) a lack of guidance for communicating exercise findings to others.

The essence of HSEEP is a doctrine for exercise creation and evaluation.³⁴ However, scholars have noted no specific guidance exists for evaluating the performance of capabilities.³⁵ Reading the most recent 2013 version of the HSEEP manual highlights some alarming observations in terms of the emphasis, or rather the lack of emphasis, in exercise evaluation. The document devotes nearly 50 pages to exercise creation, yet only about half a page discusses data analysis, and three paragraphs provide information about writing AARs.³⁶ Including the information about the IP only adds just over two pages. Altogether, data analysis, AARs, and IPs account for less than 10 percent of the HSEEP document.³⁷

Researchers have noted that with HSEEP’s limited guidance, the manner in which AARs are created is not universal; instead, reports are created ad hoc.³⁸ FEMA claims in its HSEEP document, exercises provide an opportunity for the whole community to come together and work to prevent, protect, mitigate, respond, and recover from any incident.³⁹ However, exercises can only do those things if participants learn from them. Without clear guidance on how to analyze data generated by the exercise or write an AAR/IP, agencies

³³ Donahue and Tuohy, “Lessons We Don’t Learn,” 12.

³⁴ Adam Norige et al., “Homeland Security Exercise and Evaluation Program—Enterprise Platform (HSEEP-EP): An Innovative Service Oriented Architecture Approach,” in *2012 IEEE Conference on Technologies for Homeland Security (HST)*, 123–28, 2012, <https://doi.org/10.1109/THS.2012.6459836>.

³⁵ Brandon Greenberg, Paule Voevodsky, and Erica Gralla, “A Capabilities-Based Framework for Disaster Response Exercise Design and Evaluation: Findings from Oil Spill Response Exercises,” *Journal of Homeland Security and Emergency Management* 13, no. 4 (2016): 2, <https://doi.org/10.1515/jhsem-2016-0034>.

³⁶ Department of Homeland Security, *Homeland Security Exercise and Evaluation Program (HSEEP)*, 5–5–5–6.

³⁷ Department of Homeland Security, 5–5–5–6, 6–1–6–3.

³⁸ Donahue and Tuohy, “Lessons We Don’t Learn,” 12.

³⁹ Department of Homeland Security, *Homeland Security Exercise and Evaluation Program (HSEEP)*, Intro–1.

struggle to show lessons were learned. Donahue and Tuohy feel the phrase “lessons learned” is inaccurate. They write lessons are not really learned, as evidenced by the same mistakes being repeated in later exercises.⁴⁰

In the 2013 HSEEP document, six fundamental principles are listed. Exercise practitioners are encouraged to apply the Fundamental Principles to help manage exercise programs and individual exercises.⁴¹ The fundamental principles are:

- Guided by elected and appointed officials
- Capability-based, objective driven
- Progressive planning approach
- Whole community integration
- Informed by risk
- Common methodology⁴²

Nowhere in the fundamental principle list does it mention how to learn from, analyze, or document findings from an exercise program.

In 2011, FEMA and the Department of Homeland Security, Science and Technology Directorate (DHS S&T) worked with the Lincoln Laboratory at MIT to update HSEEP to be a more flexible method for actually tracking capabilities. A platform called the HSEEP enterprise platform (HSEEP-EP) was envisioned to be “a highly flexible framework that will form the foundation of the new HSEEP Toolkit.”⁴³

Researchers working on the HSEEP-EP framework looked into four parts of the then-current HSEEP Toolkit and noted “significant capability gaps” throughout, but

⁴⁰ Donahue and Tuohy, “Lessons We Don’t Learn,” 3.

⁴¹ Department of Homeland Security, *Homeland Security Exercise and Evaluation Program (HSEEP)*, 1–1.

⁴² Department of Homeland Security, 1–1.

⁴³ Norige et al., “Homeland Security Exercise and Evaluation Program—Enterprise Platform (HSEEP-EP),” 123.

especially in terms of the evaluation piece.⁴⁴ Norige et al. noted, “currently, exercise evaluators often stress the need for evaluation tools, specific to the HSEEP process, which can assist them with their exercise evaluations. In place of an integrated set of evaluation tools, capable exercise evaluators build ad-hoc tools to suit their immediate evaluation needs.”⁴⁵ The article’s authors hoped this HSEEP-EP would provide an efficient way to consult a variety of exercise data sources and provide an easy way to share information between organizations and agencies. The promises of the HSEEP-EP platform were interesting, but nearly a decade later, it has not been produced.

While exercise professionals wait, FEMA’s current version of the HSEEP cycle uses after-action reporting and documenting as a way to capture lessons learned in the exercise. FEMA originally hoped that lessons learned from exercises or events in one jurisdiction would help other agencies or jurisdictions.⁴⁶ To facilitate the sharing of knowledge, FEMA created the Lessons Learned Information Sharing (LLIS) program so that jurisdictions might not repeat mistakes others had already made. Several authors have pointed out flaws with this idea, though. Darling and Parry summarize the situation succinctly: “What faith would you place in the report of someone whom you don’t know, based on a one-time experience?”⁴⁷

Not surprisingly, agencies did not want to air their dirty laundry in a national database for all to see. Agencies do not want to admit their mistakes or leave themselves open to lawsuits by admitting errors.⁴⁸ The library of after-action documents also fell short of its intended purpose because it can be difficult to apply lessons from one disaster to another one experienced by a different agency, at a different time, in a different location.

⁴⁴ Norige et al., 124.

⁴⁵ Norige et al., 127.

⁴⁶ Department of Homeland Security, Office of Inspector General, *FEMA’s Progress in Implementing the Remedial Action Management Program*, 1.

⁴⁷ Darling and Parry, “Linking Reflection and Planning,” 65.

⁴⁸ Birkland, “Disasters, Lessons Learned, and Fantasy Documents,” 149.

Events are unique, and agencies, like people, often need to make mistakes themselves to learn from them.⁴⁹

In early 2015, the LLIS ceased to exist as a separate repository and most content was moved to the Homeland Security Digital Library (HSDL).⁵⁰ At that time, approximately 23,000 sources were moved into the HSDL.⁵¹ However, the LLIS had been online since 2004, which means on average, less than 2,100 lessons learned documents were uploaded annually. Also, if the LLIS gathered lessons learned and best practices from a cadre of more than 18,000 public safety officials and national subject matter experts (SMEs) as they claimed, the small number of submissions demonstrate a lack of use of the LLIS.⁵²

Researchers Donahue and Tuohy reported “incident commanders who participated in our study pointed out that discussions of lessons are moot unless they can be disseminated to the grass-roots level ...[so] line responders can adopt them.”⁵³ When lessons are not disseminated, they become “observed,” rather than learned.⁵⁴ As researchers Elena Savoia, Foluso Agboola, and Paul Biddinger noted in their article, “Use of After Action Reports (AARs) to Promote Organizational and Systems Learning in Emergency Preparedness,” “despite voluminous attempts to document and learn from prior emergency preparedness system response failures, the challenges experienced in planning

⁴⁹ Birkland, 150.

⁵⁰ “LLIS in the HSDL,” *Homeland Security Digital Library* (blog), accessed April 6, 2019, <https://www.hsdl.org/c/llis-in-the-hsdl/>.

⁵¹ “LLIS in the HSDL.”

⁵² Lessons Learned Information Sharing, *LLIS Intelligence and Information Sharing Initiative: Homeland Security Intelligence Requirements Process* (Washington, DC: Lessons Learned Information Sharing, 2005), 1, https://www.dhs.gov/xlibrary/assets/Final_LLIS_Intel_Reqs_Report_Dec05.pdf.

⁵³ Donahue and Tuohy, “Lessons We Don’t Learn,” 20.

⁵⁴ Eric Holdeman, “The Difference between Lessons Observed and Lessons Learned,” *Emergency Management*, January 11, 2010, 1, <http://www.govtech.com/em/training/Lessons-Observed-and-Lessons-Learned.html>.

and responding to disasters seem to be ‘learned’ over and over again in disaster after disaster.”⁵⁵

C. CHANGE MANAGEMENT FOR SUCCESSFUL CHANGE

Jeroen Stouten, Denise Rousseau, and David De Cremer wrote an article looking at the scholarly literature around popular change management practices used in business.⁵⁶ Their work looked at seven of the most popular schools of change management, from Kurt Lewin’s 1948 three-step model to John Kotter’s updated 2012 nine-step model. Stouten, Rousseau, and De Cremer examined the different models to look for similarities, differences, and best practices. While each change management model breaks change into a different number of phases, seven main steps can be generalized.

- Realize change is needed
- Choose members for change committee
- Create change plan
- Communicate change plan
- Act on change plan
- Monitor changes
- Involve leadership

Examining each step demonstrates how lessons learned from the field of change management might apply to processes outside the corporate world.

⁵⁵ Savoia, Agboola, and Biddinger, “Use of After Action Reports (AARs) to Promote Organizational and Systems Learning in Emergency Preparedness,” 2950.

⁵⁶ Jeroen Stouten, Denise Rousseau, and David De Cremer, “Successful Organization Change: Integrating the Management Practice and Scholarly Literatures,” *Academy of Management* 12, no. 2 (June 2018): 752–88.

a. Realize Change Is Needed

Stouten, Rousseau, and De Cremer discuss the importance of recognizing that change is needed.⁵⁷ Both Michael Beer and Rosabeth Moss Kanter write that gathering input from stakeholders must happen first.⁵⁸ Michael Beer, an early leader in the field of change management, goes further by suggesting that the identification of the need for change should be conducted in a group setting. Identifying if change is needed and documenting findings in a group setting can start the change process. As Beer noted, “By helping people develop a shared diagnosis of what is wrong in an organization and what can and must be improved, a general manager mobilizes the initial commitment that is necessary to begin the change process.”⁵⁹

b. Choose Members for Change Committee

Choosing who should be on a change committee can be difficult. A change committee can be a formal group of people tasked with guiding an organization’s change, or an informal group of people acting as change champions. John Kotter, one of the early writers of change management theory, wrote about “accelerators” in his 2012 article for the *Harvard Business Review*. Kotter explained “accelerators” were people within an organization who felt passionately about some aspect of the change.⁶⁰ These accelerators are not devoted to the change full-time, but because they want to see the change happen, they work to shepherd it. Identifying staff members who are “volunteers” by nature might help in the selection change committee members.

A question arises of whether leadership should be part of change committees. Two conflicting ideas exist in change management theory. Three Harvard University colleagues, Rosabeth Moss Kanter, Barry Stein, and Todd Jick, who wrote a set of Ten Commandments for change in 1992, stressed the importance of including leadership on change committees.

⁵⁷ Stouten, Rousseau, and De Cremer, 757.

⁵⁸ Stouten, Rousseau, and De Cremer, 757.

⁵⁹ Michael Beer, Russell A. Eisenstat, and Bert Spector, “Why Change Programs Don’t Produce Change,” *Harvard Business Review* 68, no. 6 (December 1990): 162.

⁶⁰ John P. Kotter, “Accelerate!,” *Harvard Business Review* 90, no. 11 (November 2012): 49.

They believed a strong leader could help lend a sense of legitimacy to the change.⁶¹ Other change management proponents believe in empowering employees to facilitate change.⁶² Leadership's role in the change process is looked at further in the last section of this chapter.

c. Create Change Plan

Another of Kanter, Stein, and Jick's commandments charged organizations to develop a plan.⁶³ Creating a change plan helps overcome the problem identified by Kotter, that even if employees want to change, they cannot do so unless they are given a plan.⁶⁴ Making a change plan also helps show the changes are part of a long-term work plan. Employees are more likely to believe change is a priority when a change plan demonstrates the organization's commitment of resources, staff time, and training.⁶⁵ Employees are more likely to provide input when an organization actively listens to their concerns and suggestions, which demonstrates the belief that staff may be the best source of improvement suggestions.⁶⁶

An interesting difference of opinion in the change management literature exists over whether the feedback and information collected for the change plan should focus on strengths or weaknesses.⁶⁷ While most corporate change management models focus on areas needing improvement, only Appreciative Inquiry recommends focusing on strengths identified.⁶⁸

⁶¹ Stouten, Rousseau, and De Cremer, "Successful Organization Change," 754.

⁶² Stouten, Rousseau, and De Cremer, 762.

⁶³ Stouten, Rousseau, and De Cremer, 754.

⁶⁴ Stouten, Rousseau, and De Cremer, 765.

⁶⁵ Stouten, Rousseau, and De Cremer, 766.

⁶⁶ Jennifer Frahm and Kerry Brown, "First Steps: Linking Change Communication to Change Receptivity," *Journal of Organizational Change Management* 20, no. 3 (2007): 384, <http://dx.doi.org.libproxy.nps.edu/10.1108/09534810710740191>.

⁶⁷ Stouten, Rousseau, and De Cremer, "Successful Organization Change," 758.

⁶⁸ Stouten, Rousseau, and De Cremer, 763.

d. Communicate Change Plan

In their article for the *Journal of Organizational Change Management*, Australian researchers Jennifer Frahm and Kerry Brown describe successful organizational communication as an “information processing and uncertainty reduction activity,” which allows employees to feel a sense of ownership towards the change, rather than reluctance or fear.⁶⁹ In their paper, “Organizational Learning Culture—The Missing Link between Business Process Change and Organizational Performance,” four economic faculty members of the University of Ljubljana found the importance of employees in the change initiative could not be overestimated.⁷⁰ Perhaps Kotter stated it best, “without credible communication, and a lot of it, the hearts and minds of the troops are never captured.”⁷¹

Effective communication plans incorporate visions of change, explain why change is important, and open communication channels to allow multi-directional communication flow. Gil and Mataveli note it is crucial for staff members to know what is happening in their organization to feel connected to the organization’s problems and solutions.⁷² In other words, employees need to understand the vision of change identified to be fully engaged in any IPs. Kotter again distilled the message to its essence, when he wrote, “the real power of a vision is unleashed only when most of those involved in an enterprise or activity have a common understanding of its goals and direction.”⁷³

One point is clear across change management strategies; those who will implement it must see change as possible. One way to promote the idea that change is possible is to communicate it often and in many modalities.⁷⁴ Six of the seven change models Stouten,

⁶⁹ Frahm and Brown, “First Steps,” 373, 380.

⁷⁰ Miha Škerlavaj et al., “Organizational Learning Culture—The Missing Link Between Business Process Change and Organizational Performance,” *International Journal of Production Economics* 106, no. 2 (April 2007): 346–67, <https://doi.org/10.1016/j.ijpe.2006.07.009>.

⁷¹ John P. Kotter, “Leading Change Why Transformation Efforts Fail,” *Harvard Business Review*, January 2007, 96–103.

⁷² Alfonso Gil and Mara Mataveli, “The Relevance of Information Transfer in Learning Culture: A Multigroup Study by Firm Size in the Wine Industry,” *Management Decision* 55, no. 8 (2017): 1699.

⁷³ John P. Kotter, *Leading Change* (Boston: Harvard Business School Press, 1996), 85.

⁷⁴ Stouten, Rousseau, and De Cremer, “Successful Organization Change,” 760.

Rousseau, and De Cremer examined concur; a key element in a change plan is communication across as many channels as possible, including using leaders to communicate the change vision and serve as role models.⁷⁵ The only notable exception is the Appreciative Inquiry model, which does not go into details on how change should be communicated.⁷⁶

In their article, Frahm and Brown quote a 1996 study by P. D. Witherspoon and K. L. Wohlert, “Communication is the process on which the initiation and maintenance of organizational changes depends ... Ultimately the success of any change effort depends on how effectively the strategy for and the substance of the change is communicated to those who are the targets of the change.”⁷⁷ In his chapter in *Handbook of Principles of Organizational Behavior: Indispensable Knowledge for Evidence-Based Management*, Beer writes staff need to know why a change is needed and how the new approach will improve outcomes.⁷⁸

Unfortunately, Frahm and Brown found information was often, “a commodity to be brokered and a scarce resource to be guarded and the flow of information stops at supervisor level.”⁷⁹ They found employees often blamed managers for communications breakdowns and felt they had no way to pass information up the organizational ladder.⁸⁰ Kanter, Stein, and Jick also noted communication needed to be unidirectional, not just edicts from leaders to staff. They described how organizations need to listen to concerns

⁷⁵ Stouten, Rousseau, and De Cremer, 761.

⁷⁶ Stouten, Rousseau, and De Cremer, 761.

⁷⁷ Frahm and Brown, “First Steps,” 372.

⁷⁸ Michael Beer, “Sustain Organizational Performance through Continuous Learning, Change and Realignment,” in *Handbook of Principles of Organizational Behavior: Indispensable Knowledge for Evidence-Based Management*, ed. Edwin Locke (New York: John Wiley & Sons, 2011), 547, <http://ebookcentral.proquest.com/lib/ebook-nps/detail.action?docID=624768>.

⁷⁹ Frahm and Brown, “First Steps,” 372.

⁸⁰ Frahm and Brown, 380.

and comments from all staff if change committees hope to understand what the change means to all levels within the organization.⁸¹

e. Act on Change Plan and Acknowledge Progress

One area in which the most prominent change management models disagree is how to accomplish the desired changes by promoting new learning methods.⁸² Some scholars believe in two distinct phases of change, planning and implementing. Others believe the two-phase idea is a myth because change is complicated and plans alter over time as they are put into practice.⁸³ Still others focus on making change part of a sustainable, long-term work plan, rather than have it be a single event.⁸⁴

Whether plans and implementation evolve together, or consecutively, change plans must be implemented, not just put on a shelf. This implementation requires a commitment to the plan and a desire to truly change.⁸⁵ Kotter's Eight-Step Model is one of the early change management theories to encourage incorporating easy wins from low-hanging fruit.⁸⁶ This idea of early and easy wins can also provide opportunities to highlight successful changes to internal and external stakeholders, which thus sustains the change momentum.

In her article, "Change is Everyone's Job," Rosabeth Moss Kanter wrote about using teaching and mentoring as methods to move change forward in an organization. She included a section about creating contests to highlight best practices in an organization with a prize of travel to other branches to teach the winning method to others.⁸⁷ While Kanter wrote strictly in terms of the business world, similar approaches can be seen at emergency

⁸¹ Rosabeth Moss Kanter, Barry A. Stein, and Todd D. Jick, *The Challenge of Organizational Change: How Companies Experience It and Leaders Guide It* (New York: The Free Press, 1992), 388.

⁸² Stouten, Rousseau, and De Cremer, "Successful Organization Change," 765.

⁸³ Frahm and Brown, "First Steps," 377–79.

⁸⁴ Stouten, Rousseau, and De Cremer, "Successful Organization Change," 766.

⁸⁵ Donahue and Tuohy, "Lessons We Don't Learn," 10.

⁸⁶ Stouten, Rousseau, and De Cremer, "Successful Organization Change," 755.

⁸⁷ Rosabeth Moss Kanter, "Change Is Everyone's Job: Managing the Extended Enterprise in a Globally Connected World," *Organizational Dynamics* 28, no. 1 (Summer 1999): 14, [https://doi.org/10.1016/S0090-2616\(00\)80003-0](https://doi.org/10.1016/S0090-2616(00)80003-0).

management conferences where best practices from one jurisdiction are presented as case studies to others.

f. Monitor Changes

In 1980, Beer added something unique to change management; the idea that changes should be tracked and altered as needed.⁸⁸ More than two decades later, in his book, *ADKAR: A Model for Change in Business, Government and Our Community*, Jeffery Hiatt wrote about the idea that change, if left by itself, will fizzle out and employees will revert to old ways of doing things. Instead, those managing change must try different tactics encourage change. Ideas such as positive feedback, recognition, rewards, celebrations, accountability, and audit systems, can help reinforce the new, desired behaviors and ensure changes becomes the new normal.⁸⁹

g. Involve Leadership

Leadership support is important for successful changes because it lends legitimacy to the change, acknowledges change will make improvements, and puts management's authority behind the change. Many change management writers believe leadership support is crucial.⁹⁰ In Kanter, Stein, and Jick's work on change titled: *The Challenge of Organizational Change: How Companies Experience It and Leaders Guide It*, their fifth commandment might be the key to understanding why change efforts frequently fail. The fifth commandment states a strong leader's support improves the chance of success because the changed is believed to be legitimate.⁹¹ If senior leadership is not involved in the change, participants doubt the sincerity of the change.

In their article titled, "Why Organizations Don't Learn," Francesca Gino and Bradley Staats note another possible reason organizations do not change is that "leaders across organizations may say that learning comes from failure, but their actions show a

⁸⁸ Stouten, Rousseau, and De Cremer, "Successful Organization Change," 754.

⁸⁹ Jeffrey Hiatt, *ADKAR: A Model for Change in Business, Government, and Our Community* (Fort Collins, CO: Prosci Learning Center Publications, 2006), 119–21.

⁹⁰ Beer, Eisenstat, and Spector, "Why Change Programs Don't Produce Change," 163.

⁹¹ Stouten, Rousseau, and De Cremer, "Successful Organization Change," 754.

preoccupation with success.”⁹² Mistakes are seen as wastes of time, money, and resources.⁹³ When a leader is involved in the change process, she admits room for improvement exists in organizational processes. Other scholars of change management note failures help organizations learn.⁹⁴ When leadership truly understands learning can come from mistakes, staff do not fear providing truthful and accurate process analysis.

Beer noted employee’s frustration when newly learned skills and business methods went unused and unappreciated because organizational policies had not changed.⁹⁵ Leadership support for change means authority is behind change plans, and employees see an expectation to use their new skills. Change does not merely come from altering how an organization is structured, but from actually working in a new and better manner.⁹⁶

Many change management models Stouten, Rousseau, and De Cremer compared note the importance of leadership buy-in.⁹⁷ When leaders promotes change, they facilitate change.⁹⁸ Beer wrote, “effective change leadership enhances organizational performance, economic value, and organizational effectiveness.”⁹⁹ Applying Beer’s ideas to emergency management and first responder communities, effective change leadership can enhance community preparedness, resource sharing, and interagency cooperation.

⁹² Francesca Gino and Bradley Staats, “Why Organizations Don’t Learn,” *Harvard Business Review*, November 2015, 2.

⁹³ Gino and Staats, 2.

⁹⁴ Gil and Mataveli, “The Relevance of Information Transfer in Learning Culture: A Multigroup Study by Firm Size in the Wine Industry,” 1700.

⁹⁵ Beer, Eisenstat, and Spector, “Why Change Programs Don’t Produce Change,” 161.

⁹⁶ Beer, Eisenstat, and Spector, 158.

⁹⁷ Stouten, Rousseau, and De Cremer, “Successful Organization Change,” 758.

⁹⁸ David Bamford and Stephen Daniel, “A Case Study of Change Management Effectiveness within the NHS,” *Journal of Change Management* 5, no. 4 (December 2005): 394, <https://doi.org/10.1080/14697010500287360>.

⁹⁹ Beer, “Sustain Organizational Performance through Continuous Learning, Change and Realignment,” 553.

III. RESEARCH METHODOLOGY

This thesis looked at communication of after-action findings on visible policy, training, or behavior changes in employees across four authority levels in government, healthcare, first responder, and emergency management agencies. This chapter explains the collection methods and data analysis tools used. A quantitative survey, qualitative interviews, and literature review address the following research questions.

A. RESEARCH QUESTIONS

- Do preparedness exercises result in visible policy, training, or behavior changes seen by front-line employees and first-level managers?
- Do after-action event experiences of upper-level management differ from front-line employees and first-level managers?
- In agencies with successful after-action events, what factors account for their success?
- What innovative solutions can help overcome the remaining challenges hindering successful after-action processes?

B. QUANTITATIVE SURVEY METHOD

A survey collected data about policy, training, and behavior changes witnessed by four authority levels in different preparedness agencies. This survey also asked respondents about opportunities to read after-action documents and IPs following preparedness exercises. This section explains the survey's development, respondents, and implementation.

1. Survey Participants

Survey respondents were users of the New Mexico Department of Health's learning management system, NM.TRAIN.org. The database had approximately 10,900 users at the time of the survey. Users worked for government agencies, healthcare providers,

emergency management, law enforcement, fire service, and emergency medical services (EMS). One hundred sixty-five respondents consented and completed the survey. Chapter IV presents a detailed description of survey respondent demographics. For a complete listing of the survey questions, please see Appendix A.

2. Survey Development

The survey was a conditional branching survey that employed skip logic to direct respondents to relevant questions based on their previous answers. It included a maximum of 14 questions focused on experiences following preparedness exercises. The first question series asked the respondent if their agency had been part of a preparedness exercise, and if yes, had they themselves been involved in the exercise:

- Has your employer or agency conducted or been part of a preparedness exercise in the last two years? Answer Options: Yes; No; I don't know
- Did you participate in the preparedness exercise? Answer Options: Yes; No; I don't know
- What was your role? Answer Options: Player; Controller/Evaluator; Exercise Planner; Observer; SimCell Participant (Choose all that apply)

Respondents who answered they had participated in a preparedness exercise were asked if their agency had provided them an opportunity to read the after-action documentation and the IP:

- After the preparedness exercise(s) did your agency provided you an opportunity to read after-action documents? Answer Options: Yes; No; I don't know
- After the preparedness exercise(s) did your agency provided you an opportunity to read the Improvement Plan (IP), a document that identifies specific corrective action steps and assigns them to responsible parties with an established target date for completion? Answer Options: Yes; No; I don't know

The next series of questions asked the respondent if they had seen agency changes in either policy or training, or if they had personally changed behavior as a result of gaps identified by the preparedness exercise:

- Have you seen a policy change at your agency addressing gaps identified by the preparedness exercise(s)? Answer Options: Yes; No; I don't know
- Have you experienced any training changes at your agency addressing gaps identified by the preparedness exercise(s)? Answer Options: Yes; No; I don't know
- Have you personally changed any behavior as a result of a gap identified by the preparedness exercise? Answer Options: Yes; No; I don't know

The final series of questions asked the respondent demographic information, including employer type and authority level within their agency:

- Type of employer: Answer Options: Government (any level); Healthcare provider; Emergency management; Fire service; Law enforcement; EMS; Other
- Are you a: Answer Options: Front-line employee (not supervisor or manager); First line supervisor (report to a manager and front-line employees report to you); Middle level manager (supervisors or lower management report to you); Senior level manager (middle managers report to you)

3. Survey Administration

Every NM.TRAIN.org user who selected to receive email notifications was sent an email asking for participation in an academic survey. See Appendix B for survey participation request. The survey was put into the Naval Postgraduate School's electronic Lime Survey account and a survey link was included in the email. A similar email with the Lime Survey link was sent as a reminder 10 days after the initial email. See Appendix C.

No further emails were sent. Results of the survey were downloaded into an Excel spreadsheet for analysis.

4. Survey Analysis

The initial question series separated out respondents who stated their agency had been part of a preparedness exercise in the last two years. These respondents were further filtered to leave only the respondents who had participated in their agency's preparedness exercise. The respondents were asked if their organization provided them an opportunity to read any after-action documentation or IPs.

The respondents were then asked if they saw any changes in their organization because of gaps identified by the preparedness exercise. Specifically, the first question asked if respondents saw any policy changes addressing changes made at the strategic level. The second question asked if changes in training were visible, addressing the possibility of changes at the worker level, rather than at an organizational level. Finally, respondents were asked if they personally changed behavior as a result of exercise-identified gaps. This question attempted to capture possible changes at the individual level.

The last section collected demographic data on the survey respondents, which identified the type of preparedness agency they worked for, and their authority level. This data helped in analyzing the respondents' answers and grouping respondents into similar authority level categories across response types. The authority-level demographic allowed the researcher to filter data and identify connections between front-line employees and first-level managers, as opposed to mid- and senior-level managers.

C. QUALITATIVE INTERVIEW METHOD

In addition to the quantitative survey, exercise professionals were recruited to participate in semi-structured telephone interviews. See Appendix D for the recruitment email. Potential interview subjects were recruited by asking local master exercise practitioners (MEPs), Center for Homeland Defense and Security (CHDS) cohort members, and exercise colleagues for names of potential interview subjects who had experienced successful after-action events. Possible interview subjects were emailed the

recruitment request. Candidates who did not respond received a follow-up email asking for an interview and used a similar script about two weeks later. See Appendix E for follow-up email. Non-responsive candidates received no further contact.

Six interviews were conducted and each lasted between 20 and 45 minutes with fire service professionals, police officers, emergency managers, and safety directors. These interviews discussed the topic of after-action events from the professional exercise creators' perspective.

1. Interview Protocol and Administration

Six telephone interviews were conducted using the computer program Zoom to record them for later transcription. The decision to interview six subjects across a variety of disciplines ensured inclusion of a broad spectrum of experiences. To avoid even the appearance of coercion, no healthcare provider exercise professionals were considered as candidates.

The following four questions were asked of each interviewee:

- What does your process look like after an exercise concludes?
- What factors do you think account for your successful after-action events?
- What was the genesis of your current, successful after-action process?
- Tell me about your experience with facilitating preparedness exercises

In addition, a series of possible prompts were listed under each main question to elicit detail or guide the interviewee back to the main topic, if needed. See Appendix F for a complete list of questions and possible prompts. The interviews were conducted individually, over three weeks, at the interview subjects' convenience. The interview audio files were transcribed for accuracy and yielded 76 pages. Before analyzing the interviews, each subject was given a code (A1–F6) to ensure anonymity.

2. Analysis of Qualitative Data

Interviews were analyzed by repeated close readings. Similar topics and experiences were identified in the six transcripts and collated in a spreadsheet. Overlapping ideas were grouped into two main themes, and each was further divided into three subthemes. These themes and sub-themes explored the exercise professional's perspective on after-action events.

3. Integration of Literature, Quantitative and Qualitative Results

Chapter VI integrates findings from the change management literature with the quantitative survey results and interview themes. A three-column chart presents a generalized set of change management steps, relates each step to an HSEEP strength, and ties both to challenges still faced by exercise professionals, as related in their interviews.

D. SUMMARY

This chapter outlined the research methods used to analyze change management literature, the quantitative survey, and the qualitative interviews. Quantitative survey data was analyzed to identify if patterns exist between an employee's authority level and their after-action experiences. Qualitative interviews were conducted to collect data from exercise professionals about their after-action experiences. Information was collected from both exercise participants and exercise professionals to compare the experiences of the one with the expectations of the other.

IV. QUANTITATIVE SURVEY RESULTS

This chapter presents the quantitative survey findings designed to address Research Questions #1 Do preparedness exercises result in visible policy, training, or behavior changes seen by front-line employees and first-level managers, and #2 Do after-action event experiences of upper-level management differ from front-line employees and first-level managers?

The survey questions collected after-action experience data from preparedness stakeholders of differing agency authority levels to determine if authority levels affected after-action experiences. Questions asked about three possible ways identified gaps could be addressed: (1) changes in policy, which upper-level managers might see, (2) changes in training, which front-line staff and first-level managers, the “doers” of an agency might see, and (3) changes in personal behavior, which encompassed employees who made changes on their own, without waiting for official policy or training directives.

One hundred sixty-five respondents from the New Mexico Department of Health’s learning management database completed the survey. Respondents were front-line staff and first-level, mid-level, and senior-level managers. Respondents represented a variety of stakeholders.

The analysis is organized into five parts: (1) participant demographics, (2) exercise involvement, (3) changes observed, (4) opportunity to read after-action documents, and (5) opportunity to read IPs.

A. PARTICIPANT DEMOGRAPHICS

Table 1 shows the seven agency types that participated in the survey: government, healthcare provider, emergency management, EMS, fire service, law enforcement, and other. The table cross references the respondent’s agency type with their level of authority: front-line staff, first-line manager, mid-level manager, and senior manager. The two agency types most represented were government employee (45.5%) and healthcare provider

employee (31.5%). For government employees, 46 were front-line staff, 20 were first-level managers, five were mid-level managers, and four were senior-level managers. For healthcare providers, 21 were front-line staff, 16 were first-level managers, seven were mid-level managers, and eight were senior-level managers.

Table 1. Demographics of Respondents

Demographics of Respondents by Agency Type and Level of Authority	Front-Line Staff	First-Level Manager	Mid-Level Manager	Senior-Level Manager	Total
Government	46	20	5	4	75
Healthcare	21	16	7	8	52
Emergency Management	4	2	0	0	6
EMS	3	2	2	0	7
Fire Service	0	2	1	1	4
Law Enforcement	1	0	1	1	3
Other	10	4	2	2	18
Total	85	46	18	16	165

B. EXERCISE INVOLVEMENT

The 165 respondents were asked if their agency took part in a preparedness exercise within the previous two years. Those who responded in the affirmative were asked if they themselves participated in the exercise. Those who responded “Yes” to both questions were asked to select the role or roles they had in their agency’s preparedness exercise.

Table 2 shows 118 respondents or 71.5% responded “Yes,” 34 or 20.6% responded “No,” and 13 or 7.9% responded “I don’t know” when asked if their agency had been part of a preparedness exercise.

Table 2. Agency Participation in Exercise

Agency Participated in Preparedness Exercise in the Last Two Years?	Number	Percentage
Yes	118	71.5%
No	34	20.6%
I Don't Know	13	7.9%
Total	165	100.0%

As shown in Figure 1, upon examining the 118 “Yes” responses, just under half (48.3%) were front-line employees and nearly a third (31.3%) were first-level managers. The remaining responses, (20.4%), were divided evenly between mid-level and senior-level managers, each reporting 10.2% yes responses. This division of responses by authority level is not surprising. The source of the survey respondents was a database for a learning management system of online training courses. More front-line staff and first-level managers use online learning, and therefore, are in the learning management database than mid- or senior-level management.

Percentage of Respondents Reporting Their Agency Participated in a Preparedness Exercise by Agency Authority Level

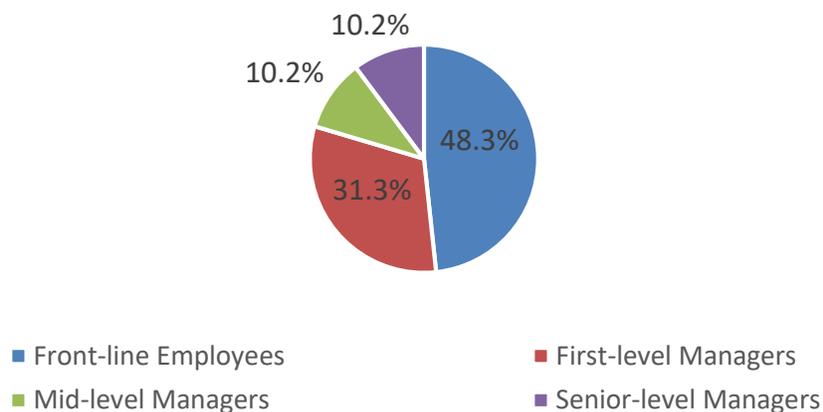


Figure 1. Agency Authority Level of Respondents

The second question asked the 118 participants if they themselves participated in the exercise. Table 3 shows 85 or 72.0% responded “Yes,” 31 or 26.3% responded “No,” and two or 1.7% responded they did not know if they had been a part of a preparedness exercise.

Table 3. Individual Participation in Exercise

Response to Individual Participation in Exercise?	Number	Percentage
Yes	85	72.0%
No	31	26.3%
I Don't Know	2	1.7%
Total	118	100.0%

As seen in Figure 2, of the 85 participants who participated in a preparedness exercise, nearly half of the respondents (42.4%) were front-line employees and almost a third (32.9%) were first-level managers. The remaining 24.7% was nearly evenly divided between mid-level managers (12.9%), and senior-level managers (11.8%). The overwhelming participation of front-line staff and first-level management is not surprising, as those populations are frequently the level targeted for preparedness exercise play. This question shows that the majority of the survey respondents who participated in a preparedness exercise within the last two years are either front-line employees or first-level managers (75.3%).

Percentage of Preparedness Exercise Participants by Agency Authority

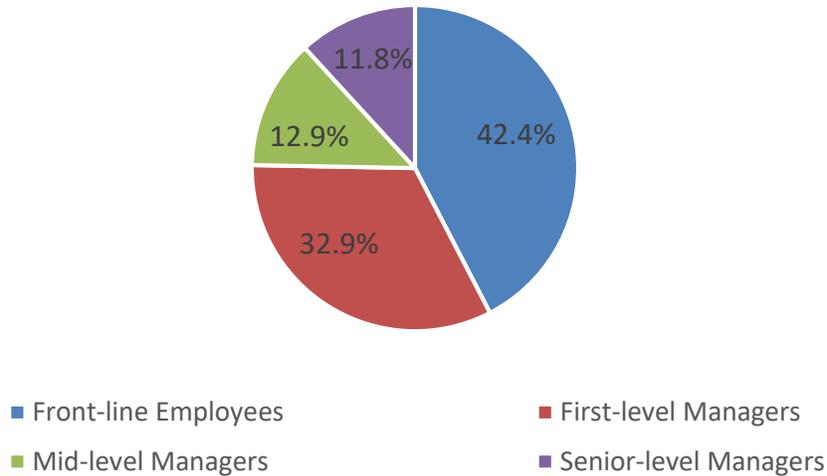


Figure 2. Authority Level of Preparedness Exercise Participants

As indicated in Table 4, a follow-up question asked participants their role in the exercise. Of the 85 respondents who participated in an exercise, the largest percentage at each authority level participated as a player. This response is consistent with exercise structure requiring more players than any other role. Managers of all levels participated as exercise controllers or evaluators more frequently than front-line employees, and mid-level managers were nearly twice as likely (25.0%) as front-line employees (13.0%) to serve as exercise creators. Responses totaled more than 85 because respondents were allowed to check all roles they performed over the previous two years.

Table 4. Exercise Role by Authority Level

Role(s) in Preparedness Exercise(s)?	Front-line Employee	First-level Manager	Mid-level Manager	Senior-level Manager	Total
Player	50.0%	40.0%	35.0%	42.9%	
	27	16	7	6	56
Controller/Evaluator	14.8%	22.5%	20.0%	28.6%	
	8	9	4	4	25
Exercise Planner	13.0%	17.5%	25.0%	14.3%	
	7	7	5	2	21
Observer	16.7%	15.0%	15.0%	14.3%	
	9	6	3	2	20
SimCell Participant	5.6%	5.0%	5.0%	0.0%	
	3	2	1	0	6
Total	54	40	20	14	128

C. CHANGES OBSERVED

A series of survey questions asked the 118 respondents if they had observed organizational policy or training changes, or personal behavior changes as a result of the preparedness exercise. As the HSEEP explains, exercises assess and evaluate:

The ability to meet exercise objectives and capabilities by documenting strengths, areas for improvement, core capability performance, and corrective actions in an After-Action Report/Improvement Plan (AAR/IP). Through improvement planning, organizations take the corrective actions needed to improve plans, build and sustain capabilities, and maintain readiness.¹⁰⁰

Beginning with the visibility of policy change question, Table 5 shows only 40 respondents or 33.9% answered “Yes,” 49 or 41.5% responded “No,” and 29 or 24.6% responded that they did not know if they had seen a policy change to address a gap

¹⁰⁰ Department of Homeland Security, *Homeland Security Exercise and Evaluation Program (HSEEP)*, Intro-1.

identified by the preparedness exercise. Combining those who did not see a policy change and those who were not sure, the percentage climbs to nearly two thirds (66.1%).

Table 5. Visible Policy Change

Response to Visible Policy Change?	Number	Percentage
Yes	40	33.9%
No	49	41.5%
I Don't Know	29	24.6%
Total	118	100.0%

Table 6 shows the response broken out by agency authority. Less than a quarter (22.8%) of front-line employees saw a policy change addressing a gap identified by the preparedness exercise. First-level managers were not that much better, only slightly over one third (37.8%) believed they had seen a policy change. Mid-level managers were the only category where a large majority (66.7%) responded they had seen a policy change. Less than half (41.7%) of senior-level managers reported seeing a policy change. This response could be the result of mid-level managers writing policy changes, agencies not changing policies, or policy changes not being a result of gaps identified by preparedness exercises.

Table 6. Visible Policy Change by Authority Level

Response to Visible Policy Change?	Front-line Employee	First-level Manager	Mid-level Manager	Senior-level Manager	Total
Yes	22.8%	37.8%	66.7%	41.7%	
	13	14	8	5	40
No	43.9%	40.5%	16.7%	58.3%	
	25	15	2	7	49
I Don't Know	33.3%	21.6%	16.7%	0.0%	
	19	8	2	0	29
Total	57	37	12	12	118

The second question in this series asked respondents if they observed training changes addressing a gap identified by the exercise. Table 7 shows 52 respondents or 44.1% answered “Yes,” 47 or 39.8% responded “No,” and 19 or 16.1% responded they did not know if they had seen training changes. Combining those who did not see any training change and those who were not sure, the percentage climbs to over half (55.9%).

Table 7. Visible Training Change

Response to Visible Training Change?	Number	Percentage
Yes	52	44.1%
No	47	39.8%
I Don't Know	19	16.1%
Total	118	100.0%

Table 8 shows the response, by agency authority, to the same question on visible training changes addressing gaps identified by the preparedness exercise. From this breakout, it is clear just over a third (35.1%) of front-line employees had seen a change in training addressing a gap, but 45.6% did not, and 19.3% were not sure. First-level managers were better, with 45.9% believing they saw a training change. However, those not seeing a change and those unsure were the majority, at 54.1%. Again, mid-level managers were the only category where a large majority (75.0%) responded they saw a training change. Senior-level managers were evenly split, 50% reporting they had seen a training change, and 50% reporting they had not.

Table 8. Visible Training Change by Authority Level

Response to Visible Training Change?	Front-line Employee	First-level Manager	Mid-level Manager	Senior-level Manager	Total
Yes	35.1%	45.9%	75.0%	50.0%	
	20	17	9	6	52
No	45.6%	35.1%	16.7%	50.0%	
	26	13	2	6	47
I Don't Know	19.3%	18.9%	8.3%	0.0%	
	11	7	1	0	19
Total	57	37	12	12	118

The final question in this series asked respondents if they had personally changed their behavior as a result of gaps identified by the preparedness exercise. Table 9 shows 71 or 60.2%, a majority of respondents, answered “Yes,” 40 or 33.9% responded “No,” and seven or 5.9% responded that they did not know if they changed their behavior as a result of a gap identified by the exercise. For the first time, the majority of respondents answered in the affirmative (60.2%).

Table 9. Personally Changed Behavior

Response to Personally Changed Behavior?	Number	Percentage
Yes	71	60.2%
No	40	33.9%
I Don't Know	7	5.9%
Total	118	100.0%

Table 10 shows the response, by agency authority, to the question on personally changing behavior to address gaps identified by the preparedness exercise. This breakout shows more than half (54.4%) of front-line employees report changing their behavior to address a gap. First-level managers are nearly the same, with 56.8% believing they changed their behavior. Again, mid-level managers were the highest category, with 83.3% responding they had changed their behavior. A majority of senior-level managers also reported changing their behavior (75.0%).

Table 10. Personally Changed Behavior by Authority Level

Response to Personally Changed Behavior?	Front-line Employee	First-level Manager	Mid-level Manager	Senior-level Manager	Total
Yes	54.4%	56.8%	83.3%	75.0%	
	31	21	10	9	71
No	40.4%	35.1%	16.7%	16.7%	
	23	13	2	2	40
I Don't Know	5.3%	8.1%	0%	8.3%	
	3	3	0	1	7
Total	57	37	12	12	118

Tables 6, 8, and 10 begin to answer Research Question #1: Do preparedness exercises result in visible policy, training, or behavior changes visible to front-line employees and first-level managers? The survey findings show that few front-line (22.8%) and first-level managers (37.8%) believe they saw policy changes addressing gaps identified by preparedness exercises. Survey findings increased slightly when front-line (35.1%) and first-level managers (45.9%) were asked if they had seen training changes addressing gaps identified. The question of personal behavior change was the only time when the “Yes” responses increase above 50 percent for both front-line (54.4%) and first-level managers (56.8%).

Tables 6, 8, and 10 also attempt to answer Research Question #2: Do after-action event experiences of upper-level management differ from front-line employees and first-level managers? The survey results show differences between mid- and senior-level managers and front-line staff and first-level managers. While two thirds of mid-level managers (66.7%) reported seeing policy changes, more than half (58.3%) of senior-level managers reported they had not seen policy changes. This result is surprising; given policy change is normally considered to be implemented from the top down.

Policy change might not be visible to staff of lower authority levels because they might not read policies. However, training changes should be more visible to front-line and first-level employees, as they are the ones who do the work. The second question in this series asked respondents if they saw training changes to address gaps identified by preparedness exercises. The experience of front-line employees and first-level managers were similar and differed from upper-level managers. Nearly two-thirds (64.9%) of front-line employees and 56.0% of first-level managers reported they did not or were not sure if they had seen any training changes. This response is surprising. It is also surprising that 75.0% of mid-level managers reported they had seen training changes; mid-level managers are not the usual target for training updates. Senior-level managers were split evenly between those reporting seeing a training change and those reporting they had not.

Even asking about personal behavior changes, the survey still shows differences between upper-level managers, and lower-level staff. Both front-line staff (54.4%) and first-level managers (56.8%) responded nearly identically in the affirmative. However, mid- and senior-level managers responded “Yes” at much higher rates, 83.3% and 75.0%, respectively.

Looking at these three questions together, a clear difference can be seen between upper-levels of management and the front-line and first-level staff. This difference is further illustrated by responses to questions about opportunities to view AARs and IPs.

D. OPPORTUNITY TO READ AFTER-ACTION DOCUMENTS

The survey asked respondents if they were given an opportunity to read after-action documents. Table 11 shows that 48.3% of the respondents felt their agency had provided

them an opportunity to read after-action documents. However, 32.2% said they were not given the opportunity and a further 19.5% responded they were unsure. Taken together, respondents who were not given an opportunity, and those unsure represent more than half of the respondents (51.7%).

Table 11. Opportunity to Read After-Action Documents

Provided an Opportunity to Read AA Documents?	Number	Percentage
Yes	57	48.3%
No	38	32.2%
I Don't Know	23	19.5%
Total	118	100.0%

Breaking the responses out by authority level shows where after-action documentation fails to be communicated in an organization. Front-line staff overwhelmingly (61.4%) responded they were uncertain if or were not provided an opportunity to read the after-action documents, while only 38.6% felt they were provided an opportunity to read them. A majority of first-level managers (54.1%) reported they were given an opportunity read the after-action documentation, while 45.9% reported they were uncertain if or were not given an opportunity to read them. In contrast, two thirds of mid-level managers, (66.7%), and more than half, (58.3%) of senior-level managers, reported they were given an opportunity to read the after-action documents.

The remaining 33.4% of mid-level and 41.7% of senior-level managers reported they were not given or were uncertain if they had been provided an opportunity to read the after-action documents. It is unlikely upper-level leaders follow up on actionable findings if they are uncertain if they read the after-action findings.

Table 12. Opportunity to Read After-Action Documents by Authority Level

Provided an Opportunity to Read AA Documents?	Front-line Employee	First-level Manager	Mid-level Manager	Senior-level Manager	Total
Yes	38.6%	54.1%	66.7%	58.3%	
	22	20	8	7	57
No	36.8%	35.1%	16.7%	16.7%	
	21	13	2	2	38
I Don't Know	24.6%	10.8%	16.7%	25.0%	
	14	4	2	3	23
Total	57	37	12	12	118

E. OPPORTUNITY TO READ IPS

The final section of the survey asked respondents if their agency provided them an opportunity to read the IP. Table 13 shows only 37.3% of the respondents felt their agency provided them an opportunity. Almost half (44.9%) said they were not provided an opportunity and a further 17.8% responded they were unsure if they were given an opportunity. Taken together, respondents who were unsure and those who were not given an opportunity represent more than half of the respondents (62.7%).

Table 13. Opportunity to Read IP

Provided an Opportunity to Read IP Documents?	Number	Percentage
Yes	44	37.3%
No	53	44.9%
I Don't Know	21	17.8%
Total	118	100.0%

Examining the responses by agency authority level, only 24.6% of front-line employees reported they had been provided an opportunity to read the IP. More than half, (56.1%) reported they had not been provided the opportunity and a further 19.3% were not sure. A difference is seen between front-line staff and the first-level managers. A higher percentage of first-level managers (43.2%) reported having the opportunity to read the IP, with 37.8% reporting they were not given the opportunity and 18.9% reporting they were unsure.

Table 14. Opportunity to Read IP by Authority Level

Provided an Opportunity to Read IP Documents?	Front-line employee	First-level Manager	Mid-level Manager	Senior-level Manager	Total
Yes	24.6%	43.2%	66.7%	50.0%	
	14	16	8	6	44
No	56.1%	37.8%	33.3%	25.0%	
	32	14	4	3	53
I Don't Know	19.3%	18.9%	0%	25.0%	
	11	7	0	3	21
Total	57	37	12	12	118

A third (33.3%) of mid-level managers and a quarter (25.0%) of senior-level managers reported they had not been given an opportunity to read the IP. Adding in those upper-levels of managers who were unsure of their opportunity to read the IP, the percentage increases to 50.0% for senior-level managers. Managing change in an organization requires the support of leadership; upper-level management must be included in the distribution of IPs to add their authority and help guide the changes.

Table 15. Summary of Visible Changes and Opportunities Provided

Summary of Visible Changes and Opportunities Provided	Front-line Employee	First-level Manager	Mid-level Manager	Senior-level Manager
Yes—Opportunity to Read After-action Documents	38.6%	54.1%	66.7%	58.3%
	22	20	8	7
Yes—Opportunity to Read Improvement Plan	24.6%	43.2%	66.7%	50.0%
	14	16	8	6
Yes—Visible Policy Change	22.8%	37.8%	66.7%	41.7%
	13	14	8	5
Yes—Visible Training Change	35.1%	45.9%	75.0%	50.0%
	20	17	9	6
Yes—Visible Personal Behavior Change	54.4%	56.8%	83.3%	75.0%
	31	21	10	9

F. SUMMARY

This chapter outlined the quantitative survey results to identify if patterns exist between an employee’s after-action experience and their authority level. Overall, the data shows few front-line employees were provided an opportunity to read after-action documentation (38.6%) or an IP (24.6%) following a preparedness exercise. First-level managers reported slightly higher opportunities to read after-action documents (54.1%) and IPs (43.2%) than front-line employees. The difference between employees of lower authority level (front-line staff and first-level managers) and higher authority level (mid-level managers) is striking in regards to policy and training changes seen. An interesting shift is seen with senior-level managers reporting lower levels in all categories, compared to mid-level managers.

Chapter V will examine findings from the six, semi-structured qualitative interviews and highlight the commonalities and continuing barriers expressed by exercise professionals in regards to implementing successful after-action events.

V. QUALITATIVE INTERVIEW RESULTS

Six telephone interviews were conducted to collect information from first responder and emergency management exercise professionals. Chapter III—Research Methodology describes the interview transcription and coding process. Interviews were analyzed for common themes. Themes were divided into two main categories, factors accounting for successful after-action processes, and innovative solutions to remaining challenges.

All interviews were confidential; interviewees were assigned codes (A1–F6), their names, agencies, and identifying information were withheld.

A. GENESIS OF SUCCESSFUL AFTER-ACTION PROCESSES

Understanding how an agency’s after-action process became successful is important to identify possible steps other organizations could emulate. With this goal, interview questions attempted to find the factors that accounted for successful after-action processes by asking exercise professionals about their successful events. This section discusses the three similar factors exercise creators identified as helping create successful after-action events.

1. Leadership

The importance of leadership involvement was highlighted repeatedly in the interviews. One interviewee (A1) spoke about the role leaders played in helping focus efforts and speed up change, saying, “Leadership can kind of help shape which corrective actions are prioritized or if we need to kind of accelerate some of our planning and outreach timelines.” Another respondent (F6) summarized the situation even more clearly, “You have to have buy-in from the top. Nothing gets done without instructions from the boss.”

Understanding it can be difficult for leadership to admit mistakes, the same respondent (F6) summarized the difficulty exercise professionals face when creating a challenging exercise:

Where leaders need to switch their thinking is not in [thinking] any mistake is bad ... —we all make mistakes, what are you doing about it? And if you

have a successful program that leads to the improvement over areas where you're weak, that's something to write home about.

A strength several respondents touched upon was experienced leadership. Some mentioned leaders who rose up through the ranks and had experience "in the trenches" as one respondent put it (B2). Experienced leaders moved their programs forward easier, because they knew what was possible. A similar effect was noted by several respondents (D4 and C3) when leaders were locals and had grown up in their regions. Interviewees noted local leaders showed more willingness to engage in preparedness exercises and the after-action work.

The exercise professionals interviewed also noted they looked to their leadership for plan development. They expected their leaders to listen to input of mid-level managers but then allow those mid-level managers the autonomy to implement plans at the tactical level (E5). Exercise professionals spoke of trusting their leaders and how that trust must flow in both directions. Leadership must trust them, too. "At the highest level, it's important to help your leader understand what is gained by going through the after-action process, how it is important, and to give the weight of their position to the process" (F6).

2. Training Due to Real-World Events

Real-world events played a role in the way several respondents' agencies conducted after-action events. Real-world events could be positive or negative; ranging from a community festival to a school shooting. Many respondents spoke about maintaining a database of corrective actions identified during preparedness exercises, but one respondent, (A1), noted that his organization also incorporated items in that database from real-world emergency responses to remind staff of the connection between exercises and real-world consequences.

A1's methods are not unique, but his visible success is dramatic proof of the relationship between exercises and incidents. A1's agency created a series of exercises relating to family assistance centers. Less than a year later when a major incident happened in his jurisdiction, A1's agency demonstrated successful execution of many objectives

exercised recently. “We did a very good job with patient tracking and family reunification and understanding kind of the different roles and process for that whole cycle.” (A1)

Real-world events can also highlight what one respondent (E5) called “perishable skills.” This respondent spoke about skills first responders use during active shooter or hostage situations. These rare situations require alterations of normal skill sets used on more routine calls. He spoke of conducting community exercises in actual soft target locations because similar places were targeted in other parts of the nation. These community exercises allowed practice of those rarely used, “perishable skills” to “frontload a significant amount of training” (E5). This interviewee, (E5), attributed frontloading training and exercising in actual community locations as the reason why his agency successfully stopped an active shooter with minimal loss of life in the same location just a few months later.

Another respondent, (C3), spoke about planned, real-world events like community festivals, and how these annual events allow participants an opportunity to exercise new ideas and compare findings to previous years. He explained how his agency identified gaps after an annual event and implemented training to address the problem. The event identified communication challenges between various safety stakeholders. The following year, his agency implemented a new command and control communication strategy for the event. Based on an identified problem and the training put into place to address the gap, C3’s community corrected a problem within one year.

3. Community and Interagency Involvement

All exercise professionals interviewed spoke about the importance of exercising with other agencies and community partners. Several (B2 and E5) spoke about specific real world events that occurred in their communities and how those tragedies highlighted the need to exercise together.

A common reason for exercising with other preparedness partners is communication difficulties often exist between different first responder groups. Communication challenges are often a finding in exercises (B2, E5, C3, and D4). One interviewee explained:

Example, every year communications, like in any drill, is always a failure. So we build upon that. And some of the problems that we've been having—and what we want our response agencies to do—annually, they're used to be on their own channels. Fire's on the fire channel. Law enforcement on the law enforcement channel. But every year, we try to get them to go to the V channels to the interoperability channels because we want them to be able [to talk] (B2).

The interviewee further went on to explain this gap would not have been identified if the different agencies had not been exercising together.

A different interviewee, (E5), spoke about integrating training between first responder groups so each understood not only their role, but the role they played as a coordinated group, “It was an entire—you know, both agencies getting together that significantly helped on the front-end to make the incident itself work out.”

A good example was given by F6, who recalled an exercise with the objective of setting up temporary shelters for refugees or evacuees. The exercise found significant delay in shelter set-up when the normally desk-bound, social services staff were solely responsible for gathering equipment and cots. F6 spoke about combining parks and recreation services staff with the social services staff because the parks and recreation staff were normally at the sites. In later events, the onsite parks and recreation employees at shelter locations followed shelter set-up blueprints and had shelters ready up to 20 minutes earlier than when social services staff set up alone.

B. REMAINING CHALLENGES AND INNOVATIVE SOLUTIONS

Despite conducting preparedness exercises to strengthen response capabilities, agencies still face barriers to improving areas identified as deficient. Barriers can come from both outside and inside the organization. Interviewing exercise professionals, three barriers preventing improvements were identified along with a work-around for each challenge.

1. Fear of Identifying Weaknesses

Creating a challenging exercise that identifies areas for improvement is important. As one respondent put it, “It's not really worth doing an exercise unless you are able to

document some findings and areas for improvement” (A1). He went on to say, “We don’t sugarcoat it or make everyone think that the exercise is a total success and there were no issues” (A1). Another interviewee spoke about the concern that participants and evaluators do not send truthful feedback or evaluations. As the exercise professional (C3) explained:

Sometimes I feel like ... the feedback that we’ll receive gets kind of sterilized. And it’s because they either don’t want to admit that there was an issue, or they don’t want [it] to be written down where it could be, you know, seen by people in the future and asked why didn’t we correct this. And I feel like that’s part of the problem. We don’t always accurately reflect upon the exercise.

The challenge for exercise professionals is not just creating an exercise that challenges participants and identifies areas for improvement. The challenge lies in honestly documenting the findings.

SOLUTION: Exercise professionals create an atmosphere of trust to receive accurate feedback about capability gaps.

HSEEP takes pains to remind participants that exercises are a no fault, learning environment. As one interviewee explained:

If people won’t tell you what they didn’t do right or they’re afraid to speak about themselves or their peers, you’re never going to have the true improvement that you really, really crave. Anybody can write an exercise. And exercises are good or bad, what have you, but the after-action process is the crucial piece to it all. Are you learning from this or are you just putting on a show for somebody? (F6)

Without the trust of the participants, exercise players will not identify their weak areas. Those weak areas must be documented in after-action reports because those areas are the capabilities that need strengthening.

Trust must also include leadership. Exercise professionals must take pains to explain to leaders the gaps identified by an exercise are not something to be ashamed of or hide. Often, exercise professionals are put into a position of explaining to leaders the areas in which to improve. As one interviewee explained:

Convincing your leadership that what is important is gained by showing your dirty laundry, warts and all, is so important to the organization and

actually shows true leadership, that you know everybody at the end of it knows there's things that didn't go right (F6)

Once an agency accepts some areas need improvement, the exercise professional can “look at their boss or senior-elected official and go, ‘We weren't good at this. We fixed it, and now we're good at it’” (F6).

2. Drifting Attention

A second challenge exercise professionals noted is simply the loss of attention or momentum once an exercise ends. Leadership may agree with the after-action findings, but not follow through because their attention shifts. An interviewee explained, “I feel like the idea and the concept behind the after-action report is usually general accepted. It's just the implementation is not always there” (C3). The same exercise professional went on to explain the lack of follow through is not malicious, “The problem is that, you know, everybody has ten other jobs they're doing, and the exercise is a priority maybe during the exercise. And then afterwards, it kind of starts to slip over time” (C3).

Several exercise professionals commented on the lack of follow through being a challenge to implementing IPs successfully. One interview respondent, (F6), said, “It's easy for people to walk away from this [improvement] process unless, you know, the orders from the top are to participate, and then everybody understands why it's important.”

SOLUTION: Exercise professionals identify improvement-item champions and foster leadership involvement.

One interviewee, (C3), spoke of the value of having “a couple of people who act as champions” of certain improvement items, but that even then “it doesn't always last. Other things take priority.” Another interviewee spoke about the value of having someone at a command staff level take responsibility for an IP item (D4). The interviewee commented on the value of assigning responsibility to someone with authority who “will actually take responsibility for it, for their division to handle the problem.” (D4).

Another respondent (F6) spoke again about the value of leadership involvement to maintain focus on the after-action process. The respondent said:

So at the highest level, it's important to help your leader understand what is gained by going through the after-action process, how it is important, and give the weight of their position to the process. That makes it run faster because after a disaster, everybody just wants to return to their old life. (F6)

3. Communication Failures Limit Reporting of Findings

Even a well-documented and supported IP can face challenges if it is not communicated back to the exercise participants. Each interviewee was asked how their after-action document and IP gets communicated. Several interviewees (A1, B2, and C3) spoke of circulating the draft report back to subject matter experts at participating agencies. Others (D4, E5, and F6) said the document gets sent electronically to key partners in participating agencies. One interviewee, (D4), said, "it will go back via email chain to some of the key players who then cascade it down as needed." However, one respondent pointed out the potential flaw with this approach:

We really do rely heavily on those individuals from the agencies to pass the information along. And I don't have any real data to point to how well that gets disseminated or how consistent that is across the departments or even different agencies (C3)

When asked about communicating the after-action documents back to participants, one interviewee remarked, "There are so few written after-action reports that are made even—not even public, but even shared amongst peers. It's really sad" (F6).

SOLUTION: Exercise professionals communicate after-action findings and improvement-plan items more broadly.

One interviewee (B2) spoke about his innovative solution to the challenge of communicating after-action findings back to participants. The interviewee explained:

So we—and it's a lunch. We meet for lunch and we do a luncheon. We go around the room with all our stakeholders, and we talk about successes and failures and improvements (B2).

By offering a luncheon opportunity to his exercise participants a few weeks after the exercise, B2 is able to communicate the successes and areas of improvement to a wider audience than would read an emailed document. It becomes a social time, with interactive discussions and participant buy-in.

Acknowledging that exercises identify gaps and potential “dirty laundry” (F6), holding people accountable for changes and improvements, and sharing after-action documents within and between agencies are challenges exercise professionals face when they try to implement IPs after exercises. Exercise professionals with successful after-action processes have found some work-arounds and innovative solutions to help overcome those challenges.

VI. DISCUSSION

The idea of using corporate change management theories in the world of emergency management is not as strange as it first appears. Many change management concepts overlap HSEEP concepts. Adding successful change management strategies to a HSEEP IP can help move a jurisdiction beyond just identifying the same gaps repeatedly, and actually help make strides towards strengthening a jurisdiction's capabilities.

Table 16 brings together successful change management strategies compiled from the literature, findings from surveying four different levels of agency authority, and the experiences of exercise professionals expressed in interviews. The table shows the relationship between generalized change management steps, existing strengths of the HSEEP process that promote change, and remaining areas for improvement or barriers that limit change.

Table 16. Change Step, HSEEP Process Strength, and HSEEP Area for Improvement or Barrier

General Change Step— Compiled from Change Management Strategies	HSEEP Process Strength	HSEEP Area for Improvement or Barrier
(1) Realize Change is Needed —collect information to understand the problem from as many stakeholders as possible in a group setting ¹⁰¹	<p>HSEEP after-action events begin with a <i>hotwash</i> where areas for improvement (change) are identified</p> <p>Hotwash—facilitated discussion held immediately after an exercise for players to capture feedback about issues, concerns and propose improvements¹⁰²</p> <p>“We go around the room with all our stakeholders, and we talk about successes and failures and improvements” (B2)</p>	<p>A <i>hotwash</i> is a start, but exercise professionals must go beyond simple discussions and include feedback from experienced, unbiased evaluators</p> <p>—Using only self-assessments from a <i>hotwash</i> can be unreliable, unless findings are correlated with qualified evaluator assessments¹⁰³</p> <p>“Sometimes I feel like they get, the after-action reports and the feedback that we’ll receive, gets kind of sterilized”(C3)</p> <p>“Group settings can tend to be two or three people who dominate the conversation” (F6)</p>
(2) Choose Members for Change Committee —choose staff to guide and oversee change process ¹⁰⁴	The nature of employees in the preparedness field is an advantage	Exercise professionals interviewed noted difficulty finding change committee members because interest wanes after an exercise is completed (C3) and frustration at the lack of

¹⁰¹ Stouten, Rousseau, and De Cremer, “Successful Organization Change,” 757.

¹⁰² Department of Homeland Security, *Homeland Security Exercise and Evaluation Program (HSEEP) Glossary*–6.

¹⁰³ Elena Savoia et al., “Assessing Public Health Capabilities during Emergency Preparedness Tabletop Exercises: Reliability and Validity of a Measurement Tool,” *Public Health Reports* 124, no. 1 (February 2009): 144, <https://doi.org/10.1177/003335490912400117>.

¹⁰⁴ Stouten, Rousseau, and De Cremer, “Successful Organization Change,” 758.

General Change Step— Compiled from Change Management Strategies	HSEEP Process Strength	HSEEP Area for Improvement or Barrier
	<p>Nature of Staff—staff in the homeland security, emergency management, healthcare, and first responder fields are “volunteers” by nature; they want to make their communities better, safer, and more resilient and are more likely to volunteer to help foster changes within their agencies</p> <p><i>“The emergency management structure in any organization is who the true champions are” (F6)</i></p>	<p>improvement tracking mechanisms (A1), causing some change committee members to be chosen simply because they showed up (D4) —Personnel shortages can limit or prohibit after-action events and changes¹⁰⁵</p> <p><i>“People who act as champions maybe [do it] just for a while, and then it doesn’t always last. Other things take priority after a while, and then I wouldn’t say the follow-through is there” (D4)</i></p>
<p>(3) Create Change Plan—determine strategic actions, outline steps needed, and determine compelling motivation to act¹⁰⁶</p>	<p>HSEEP after-action events are documented in an After-Action Report/Improvement Plan</p> <p>AAR/IP—summarizes key evaluation information, objectives, core capabilities, strengths, and areas for improvement; specifies corrective actions, assigns responsibilities, and due dates¹⁰⁷</p> <p><i>“It’s not really worth doing an exercise unless you are able to document some findings and areas for improvement” (A1)</i></p>	<p>Researchers of after-action documents note writing AARs give an agency the illusion of learning, unless action consolidates the lesson¹⁰⁸</p> <p>HSEEP is of limited help after an exercise - less than 10% of HSEEP contains information about data analysis, creating the After-Action Report and the Improvement Plan <i>combined</i></p> <p><i>“We shouldn’t be investing our resources in training and exercises unless we make the effort to improve our lessons-learned processes. ‘If you</i></p>

¹⁰⁵ Department of Homeland Security Office of Inspector General, *FEMA’s Progress in Implementing the Remedial Action Management Program*, 5.

¹⁰⁶ Stouten, Rousseau, and De Cremer, “Successful Organization Change,” 758–60.

¹⁰⁷ Department of Homeland Security, *Homeland Security Exercise and Evaluation Program (HSEEP)*, Glossary–1, Glossary–6.

¹⁰⁸ Donahue and Tuohy, “Lessons We Don’t Learn,” 14.

General Change Step— Compiled from Change Management Strategies	HSEEP Process Strength	HSEEP Area for Improvement or Barrier
		<p><i>don't get the lessons right you chase hollow solutions and throw money away without actually solving problems”¹⁰⁹</i></p> <p><i>“Lessons reporting processes are, on the whole, ad hoc. There is no universally accepted approach to the development or contents of reports”¹¹⁰</i></p>
<p>(4) Communicate Change Plan—communicate the planned changes as far, as often, and through as many channels as possible¹¹¹</p>	<p>HSEEP recommends conducting an After-Action Meeting (AAM) to showcase the AAR to leadership and begin communicating the areas for improvements (changes) identified</p> <p>After-Action Meeting—interactive meeting allowing leadership and exercise planners an opportunity to discuss and validate exercise findings¹¹²</p> <p>—Mid- and Senior-level managers reported seeing AARs 66.7% and 58.3%, respectively,</p>	<p>Researchers noted there can be political consequences to releasing an after-action document if it identifies agency flaws or policy failures¹¹³</p> <p>—Less than half (38.6%) of front-line staff surveyed reported being provided a chance to read the after-action documentation, even less (24.6%) reported seeing an Improvement Plan</p> <p><i>“A lot of times, we’ll circulate it [AAR] to all of the participants or at least kind of the key participants from specific agencies” (A1)</i></p>

¹⁰⁹ Donahue and Tuohy, 17.

¹¹⁰ Donahue and Tuohy, 12.

¹¹¹ Stouten, Rousseau, and De Cremer, “Successful Organization Change,” 760–61.

¹¹² Department of Homeland Security, *Homeland Security Exercise and Evaluation Program (HSEEP)*, Glossary–1.

¹¹³ Donahue and Tuohy, “Lessons We Don’t Learn,” 12.

General Change Step— Compiled from Change Management Strategies	HSEEP Process Strength	HSEEP Area for Improvement or Barrier
	<i>and IPs 66.7% and 50.0% of the time (survey data)</i>	<p><i>“It [AAR] will go back via email chain to some of the key players who then cascade it down as needed” (D4)</i></p> <p><i>“We really rely heavily on those individuals from the agencies to pass the information along” (C3)</i></p>
<p>(5) Act on Change Plan—empower employees, remove obstacles, and implement changes to processes¹¹⁴</p>	<p>Successful after-action reviews actually put plans into practice¹¹⁵</p> <p>HSEEP’s progressive approach of using a common set of priorities and objectives, over a series of exercises increasing in complexity to demonstrate improvement over time helps an agency put its change plan into action¹¹⁶</p> <p><i>“A true AAR practice pays attention to future action, not just reflection on what happened to date”¹¹⁷</i></p>	<p>Researchers of after-action processes note conducting a preparedness exercise does not equate to taking action to improve deficient processes¹¹⁸</p> <p>—Agencies happy with fantasy document AARs “will resist serious lesson-learning processes by either resisting the creation of such investigations [into causes of gaps], or will, once the investigation is complete, deny the lessons on cost, feasibility, or other grounds, or will simply ignore them”¹¹⁹</p>

¹¹⁴ Stouten, Rousseau, and De Cremer, “Successful Organization Change,” 763.

¹¹⁵ Marilyn Darling and Charles S. Parry, “After-Action Reviews: Linking Reflection and Planning in a Learning Practice,” *Reflections* 3, no. 2 (2001): 65.

¹¹⁶ Department of Homeland Security, *Homeland Security Exercise and Evaluation Program (HSEEP)*, 1–1.

¹¹⁷ Darling and Parry, “After-Action Reviews: Linking Reflection and Planning in a Learning Practice,” 65.

¹¹⁸ Ashley A. Bowen, “Are We Really Ready? The Need for National Emergency Preparedness Standards and the Creation of the Cycle of Emergency Planning,” *Politics & Policy* 36, no. 5 (October 2008): 847, <https://doi.org/10.1111/j.1747-1346.2008.00137.x>.

¹¹⁹ Birkland, “Disasters, Lessons Learned, and Fantasy Documents,” 154.

General Change Step— Compiled from Change Management Strategies	HSEEP Process Strength	HSEEP Area for Improvement or Barrier
		<p><i>“Usually [the AAR] it’s something that we try to use to guide improvement planning, but it’s not always taken—it—I wouldn’t say it’s not accepted because I feel like the stakeholders who are involved in the exercise believe in the improvements that are identified and the strengths that are identified, but I feel like sometimes it goes by the wayside of actually getting incorporated. We can only do so much in our office” (C3)</i></p> <p><i>“We occasionally mark some of these corrective actions [items] as what we call ‘inactive’, which basically meant we looked at, we explored it. It’s probably not gonna happen for a various reasons... there’s not really a path forward to complete it” (A1)</i></p>
<p>(6) Monitor Changes—track changes over time to sustain interest and attention, and to measure progress¹²⁰</p>	<p>HSEEP after-action events are tracked in an Improvement Plan (IP)</p> <p>IP and Tracking—identify specific steps to correct gaps, assign individuals responsible for each item, and track progress against target dates¹²¹</p>	<p>Researchers of after-action events note there is a lack of standardized processes for reporting and tracking lessons learned and planned updates¹²²</p> <p>—Organizations have “worked to innovate and improve their systems, but most have not</p>

¹²⁰ Stouten, Rousseau, and De Cremer, “Successful Organization Change,” 766.

¹²¹ Department of Homeland Security, *Homeland Security Exercise and Evaluation Program (HSEEP)*, Glossary–6.

¹²² Donahue and Tuohy, “Lessons We Don’t Learn,” 18.

General Change Step— Compiled from Change Management Strategies	HSEEP Process Strength	HSEEP Area for Improvement or Barrier
	<p><i>“We ... [tie] performance measure with city government that we have a certain percentage of our corrective actions completed within six months” (A1)</i></p>	<p>systematically analyzed why innovations do or do not work”¹²³ <i>“It required a lot of manual exporting and people to go in and look at [the IP tracking program]. And that wasn’t always effective” (A1)</i></p>
<p>(7) Involve Leadership—engage and gather support from leadership; coach change in others; shows buy-in and belief in change¹²⁴</p>	<p>HSEEP supports the inclusion of senior leaders and elected officials from the beginning of the exercise planning process</p> <p>Leadership Buy-in—“early and frequent engagement of elected and appointed officials is the key to success”¹²⁵</p> <p><i>“We kind of had our leadership actually planning the exercise” (D4)</i></p>	<p>Researchers of after-action events have noted leadership may focus on “doing something” to be seen doing something, rather than to actually accomplish the changes required to improve¹²⁶</p> <p>—Less than half (41.7%) of senior-level managers surveyed reported seeing policy changes addressing gaps identified by preparedness exercises</p> <p><i>“We will review the finalized after-action report with —kind of at a high level with them [City Manager and Deputy City Manager] of just went well, what are the big things to be improved and what the—kind of the plan is to do that. But there’s really not much more involvement than that” (C3)</i></p>

¹²³ Rachael N. Piltch-Loeb et al., “A Peer Assessment Approach for Learning from Public Health Emergencies,” *Public Health Reports* 129 (Supplement 2014): 29.

¹²⁴ Stouten, Rousseau, and De Cremer, 758–63.

¹²⁵ Department of Homeland Security, *Homeland Security Exercise and Evaluation Program (HSEEP)*, 1–1.

¹²⁶ Birkland, “Disasters, Lessons Learned, and Fantasy Documents,” 146–48.

Change management strategies attempt to overcome the same challenges faced by preparedness stakeholders. Looking at the literature of change management, HSEEP users can find new methods to help increase the likelihood of successfully changing their organization.

- Realize a change is needed. Before any organization can change, a belief that change is needed must first exist.¹²⁷ HSEEP is a guide to exercise creation and one of its stated goals is the identification of areas for improvement. HSEEP's identification of change process begins with a *hotwash*, a facilitated discussion during which all participants are free to speak about what they feel went well in the exercise and what needs improvement, or change. The challenge exercise evaluation literature noted is the unreliability of using only self-assessments, and instead recommends a combination of self-identification and qualified evaluator assessments.
- A change committee must be formed to guide the process, once the need for change is identified. Change management literature notes the most successful committee members are those who volunteer to help because they feel strongly in favor of the proposed change.¹²⁸ Exercise professionals interviewed noted the people who worked on their exercise planning teams were the ones felt strongly about the need for improvement (C3). These same interviewees also noted the difficulty the agency champions had in keeping change momentum going as time went on.
- A change plan must be created, once the need for change is identified and a change committee is formed. HSEEP addresses this idea directly by recommending an AAR/IP. Literature looking at the history of after-action

¹²⁷ Stouten, Rousseau, and Cremer, "Successful Organization Change," 757.

¹²⁸ Kotter, "Accelerate!," 49.

reviews and reports noted failures of instruction on *how* to write or implement an AAR/IP.¹²⁹

- The change plan must be communicated to relevant stakeholders for the changes to occur.¹³⁰ The HSEEP process includes a suggestion for an after-action meeting (AAM), a participatory meeting to review and communicate suggested changes.¹³¹ However, more than half (51.7%) of all survey respondents reported not seeing or not knowing if they saw an AAR following the exercise in which they participated. Even more survey respondents (62.7%) responded they had not seen or did not know if they saw an IP for the exercise in which they participated. Chapter IV looks at this finding in more detail, and includes break outs by authority level within organizations.
- The change plan must be acted on by the agency. HSEEP suggests making an IP to lay out the required corrective actions to take.¹³² However, the literature around after-action documents suggests they are “fantasy documents;” agencies create them, but fail to implement the corrective actions suggested.¹³³
- The proposed changes must be monitored for task completion to help reinforce the change process.¹³⁴ HSEEP promotes using an IP to identify action steps and assign specific individuals responsibility for their completion.¹³⁵ However, if an agency is content to just create a change

¹²⁹ Donahue and Tuohy, “Lessons We Don’t Learn,” 9.

¹³⁰ Stouten, Rousseau, and De Cremer, “Successful Organization Change,” 754.

¹³¹ Department of Homeland Security, *Homeland Security Exercise and Evaluation Program (HSEEP)*, 6-1.

¹³² Department of Homeland Security, 6-1.

¹³³ Birkland, “Disasters, Lessons Learned, and Fantasy Documents,” 146-56.

¹³⁴ Stouten, Rousseau, and De Cremer, “Successful Organization Change,” 755.

¹³⁵ Department of Homeland Security, *Homeland Security Exercise and Evaluation Program (HSEEP)*, 6-2.

plan, changes will not be incorporated into behavior. Interviews with exercise professionals noted the difficulty of tracking corrective action steps because no standardized method is available (A1).

- Leadership must be involved in promoting the change. Exercise professionals spoke about the value of leadership involvement (D4, F6). Yet, nearly half (41.7%) of senior-level leaders reported not seeing or not knowing if they saw an AAR for the exercise in which they participated. In addition, a fully half of senior leadership surveyed reported not seeing or not knowing if they saw an IP following a preparedness exercise.

FEMA's HSEEP templates and training course provide exercise professionals a solid foundation for creating preparedness exercises. However, HSEEP lacks guidance on the creation, implementation, and tracking of AARs and IPs. Interviews with exercise professionals provided personal stories and served as examples of the change management problems identified by the scholarly literature. A survey sampling preparedness stakeholders confirmed the assertions found in the scholarly literature of the problems with current after-action documentation methods. Change management strategies can provide help for preparedness stakeholders attempting to move beyond just identifying gaps to actually improving their agencies.

VII. SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

Research into the field of preparedness exercises has come a long way in the decades since journal writers believed little existed to demonstrate the value of exercises.¹³⁶ FEMA's HSEEP offers a creation framework for exercise professionals. However, preparedness professionals must incorporate exercise findings into after-action events and documents to drive policy and training changes.¹³⁷ The purpose of this thesis was to arrive at a better understanding of the different after-action experiences among four employee authority levels in government, healthcare, and first responder agencies. This thesis also looked for common factors in agencies with successful after-action events and innovative solutions to the barriers still faced.

Statistical analysis was used on survey data and identified differences in after-action experiences of exercise participants. Survey respondents were grouped into categories by the authority level they possessed within their agency, and front-line and first-level managers were divided from mid- and senior-level managers.

Semi-structured interviews were conducted to understand after-action events from the perspective of the exercise professionals who create them. Exercise professionals with successful after-action events were interviewed to look for common factors leading to success and innovative solutions to the remaining barriers. The following summary speaks to each research question posed in this thesis.

A. SUMMARY

This thesis was designed to answer four research questions. A summary of the findings for each question follows:

- Do preparedness exercises result in visible policy, training, or behavior changes seen by front-line employees and first-level managers?

¹³⁶ Danny M. Peterson and Ronald W. Perry, "The Impacts of Disaster Exercises on Participants," *Disaster Prevention and Management* 8, no. 4 (1999): 241.

¹³⁷ Mastaglio et al., *Current Practice and Theoretical Foundations*, 23.

Survey data showed more front-line employees and first-level managers reported they did not see or were not sure if they saw policy changes addressing gaps identified by preparedness exercises. The majority of those same employees also reported they did not see or were not sure if they saw any training changes because of preparedness exercises. A majority of front-line employees and first-level managers did report personally changing their behavior as a result of gaps identified by preparedness exercises.

- Do after-action event experiences of upper-level management differ from front-line employees and first-level managers?

The survey data showed that after-action experiences differed by authority level across preparedness agencies. Mid- and senior-level managers saw more policy and training changes addressing gaps identified by preparedness exercises than front-line staff or first-level managers. All authority levels reported personally changing behavior due to gaps identified by preparedness exercises. A higher percentage of mid- and senior-level managers reported changing their behavior than employees with lower authority levels. More upper-level management stated they were provided opportunities to read IPs than employees with lower authority levels.

- In agencies with successful after-action events, what factors account for their success?

Interviewing exercise professionals with successful after-action events revealed three common themes. Interviewees spoke of the need for leadership support for the difficult work of making agency changes and improvements after a preparedness exercise. A second common factor was the role of real world events, either positive, planned events or negative, emergency situations. Exercise creators used real world events to drive changes and gain commitments to improve plans and training within their organizations. Finally, exercise professionals noted the importance of whole community and interagency involvement for successful after-action events.

- What innovative solutions can help overcome the remaining challenges hindering successful after-action processes?

Interviews with exercise professionals determined similar barriers remain across jurisdictions. The interview subjects noted three, consistent barriers: (1) political pressure to either sanitize or not release after-action documents, (2) losing focus on the improvement plan once the exercise concludes, and (3) after-action documents not disseminated equally to all levels within an organization.

Interview subjects also reported innovative solutions to work around the barriers they still face. Building trust helped prevent sanitizing after-action documents. Identifying agency employees passionate about specific improvement items made them ideal champions to guide their task to completion. Hosting a luncheon to gathering exercise participants and leadership back together after an exercise provided an opportunity to widely communicate after-action findings and planned improvement strategies.

B. CONCLUSIONS

Corporate change management theories outline processes that can increase the likelihood of successful organizational change. Emergency management and first responder agencies struggle to communicate capability gaps and improvement plans to different authority levels within their organizations. HSEEP lacks usable guidance for exercise professionals on how to document and implement needed changes.

Three factors increase the likely success of changing an organization after an exercise: engaged leadership, relating training and exercises to real world incidents, and involving the whole community. However, barriers to success still exist that include politics, waning attention post-exercise, and communication failures limiting dissemination of after-action documents. However, using innovative work-arounds, such as building trust with exercise participants and leaders, identifying improvement item champions, and finding novel ways to communicate after-action findings to large numbers of stakeholders can help exercise professionals overcome the challenges still faced.

A cohesive change management strategy can help preparedness agencies improve after-action events by successfully managing organizational changes. The following section outlines ways preparedness agencies could include corporate change management strategies to improve after-action events.

C. RECOMMENDATIONS

Preparedness exercises play a major part in ensuring the nation is ready for any natural, accidental, or malicious event.¹³⁸ To increase the nation's preparedness, agencies must not only conduct exercises, but also learn from them. Information learned from exercises is perishable; retaining it is a matter of capturing and codifying it for future discussion, training, or policy changes.¹³⁹ A clear plan to manage information collection and organizational changes can improve after-action event outcomes and increase capabilities within a preparedness organization. These recommendations offer strategies to increase successful after-action events.

1. Organizational Changes Must Be Clearly Identified to All Authority Levels

Preparedness agencies update policies and training programs to address gaps identified by exercises and real-world events. However, policy changes and training roll-outs must be communicated to all authority levels within an organization frequently and include why changes are occurring. Consistently communicating the importance of the organizational change signals to employees the value and seriousness with which the organization views the need for improvement.

2. Organizations Must Include Employees of All Authority Levels in After-Action Events

Preparedness agencies do not intend to silo employees and limit communication. But if only management is privy to after-action discussions and improvement planning,

¹³⁸ Department of Homeland Security, *Homeland Security Exercise and Evaluation Program (HSEEP)*, Intro-1.

¹³⁹ Peter T. Gaynor, "Special Event Planning for the Emergency Manager," *Journal of Business Continuity & Emergency Planning* 4, no. 1 (November 2009): 14-21.

front-line employees are left out. Including employees of all authority levels helps drive change. Employees with enthusiasm champion improvement plan items they feel passionately about, regardless of their authority level.

3. Leverage Leadership, Whole Community Support, and Trust for Successful After-Action Events

Successful change management strategies encourage leaders to drive change visibly. Incorporating leadership influence helps increase the successful completion of improvement plan items. Interagency cooperation and community partnerships help by distributing work and cost among many stakeholders when improvement plan items are big or costly. Building trust plays an important role in both receiving honest feedback from exercise participants and working with leadership to approve honest documents for dissemination.

4. Exercise Professionals Must Disseminate After-Action Documents to Wider Audiences

Exercise professionals need to reach broader audiences with after-action documents. Expanding distribution beyond single points of contact within agencies provides more exercise participants an opportunity to learn the exercise findings.

Barriers to successful after-action processes exist. Change management strategies can help overcome them and improve performance outcomes and preparedness capabilities.

D. FUTURE RESEARCH

More research into successful after-action events will help exercise professionals manage organizational change. An examination of employee motivation could help exercise professionals find more successful improvement plan strategies. An investigation into possible alternatives could provide preparedness agencies an option other than HSEEP for after-action documentation and improvement planning.

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APPENDIX A

Pre-Survey Question: Do you consent to be interviewed? Click here for complete consent information.

- a) I consent
- b) I do not consent

If “a,” go to 1. If “b” go to Thank You screen

- 1) Has your employer or agency conducted or been part of a preparedness exercise in the last 2 years?

Exercise types might include:

Tabletop Exercise (TTX) where participants discussed a scenario and what they would do (examples include: the 2018 PIP conference “Under Fire” 4-hour tabletop exercise)

Functional Exercise (FE) – where participants coordinate between various agencies in coordination centers (EOCs). Play is limited to talking, phone calls, entry into online programs. No “boots on the ground” movement.

Full-Scale Exercise (FSE) – multi-agency, multi-jurisdictional involving “boots on the ground” where participants actually move equipment and perform activities (examples include: 2017 Vigilant Guard; 2018 WIPPTREX)

- a. Yes / No / I Don’t Know

If YES, go to 2. If NO go to 12. If I Don’t Know, go to 12

- 2) Did you participate in the preparedness exercise?
 - a. Yes / No / I Don’t Know

If YES, go to 3. If NO go to 6. If I Don’t Know, go to 6

- 3) What was your role? Check all that apply if you have had more than one role
 - a. **Player** – Active participant who responds to the exercise,
 - b. **Controller / Evaluator** – Manage or evaluate the exercise, direct the pace and monitor the timeline. Measure and assess performance
 - c. **Exercise planner** – Creators of the exercise. Determine scope, objectives, scenario
 - d. **Observer** –View exercise but do not participate, provide input, or evaluate
 - e. **Sim Cell player** – Exercise control staff who simulate roles of non-playing agencies

All answers go to 4

- 4) Did you provide any feedback after the exercise?

Feedback types might include:

Hotwash – In person, immediately after the exercise; “say a positive/ something that needs improvement” verbal discussion usually less than 30 minutes

Paper Feedback Survey – may be immediately after the exercise or sent shortly after

Online Feedback Survey – may be immediately after the exercise or sent shortly after

After-Action Conference or Meeting – Formal event, usually about 30 days after exercise, involves leadership

- a. Yes / No / I Don’t Know

If YES, go to 5. If NO or I Don’t Know go to 6.

- 5) Which type of feedback did you provide? Check all that apply
- a. Hotwash
 - b. Paper Feedback survey
 - c. Online Feedback survey
 - d. Conference or Meeting

All answers go to 6

- 6) After the preparedness exercise(s) did your agency provided you an opportunity to read after-action documents? The document might be in the form of an After-Action Report (AAR), a report that captures observations and recommendations based on the exercise objectives, a Lessons Learned document, or new policy related to exercise findings.
- a. Yes / No / I Don’t Know

If YES, go to 7. If NO or I Don’t Know go to 8.

- 7) If you provided feedback after the preparedness exercise, did you feel your feedback was incorporated into the After-Action Report (AAR) or after-action document?
- a. Yes / No / I Don’t Know / I didn’t provide feedback

All answers go to 8

- 8) After the preparedness exercise(s) did your agency provided you an opportunity to read the Improvement Plan (IP), a document that identifies specific corrective

action steps and assigns them to responsible parties with an established target date for completion?

- a. Yes / No / I Don't Know

If YES, go to 9. If NO or I Don't Know 10

9) If you provided feedback after the exercise, did you feel your feedback was incorporated into the Improvement Plan (IP)?

- a. Yes / No / I Don't Know / I didn't provide feedback

All answers go to 10

10) Have you seen a policy change at your agency addressing gaps identified by the preparedness exercise(s)?

- a. Yes / No / I Don't Know

All answers go to 11

11) Have you experienced any training changes at your agency addressing gaps identified by the preparedness exercise(s)?

- a. Yes / No / I Don't Know

All answers go to 12

12) Have you personally changed any behavior as a result of a gap identified by the preparedness exercise?

- a. Yes / No / I Don't Know

All answers go to 13

13) Type of employer:

- a. Government (any level Federal; State; County; Local; Tribal – not law enforcement)
- b. Healthcare provider
- c. Emergency management
- d. Fire service
- e. Emergency Medical Service
- f. Law Enforcement
- g. Other

All answers go to 14

14) Are you a:

- a. Front-line employee (not supervisor or manager)

- b. First line supervisor (report to a manager and front-line employees report to you)
- c. Middle level manager (supervisors or lower management report to you)
- d. Senior level manager (middle managers report to you)

All answers go to Thank You Screen

APPENDIX B

Recruit Email for Survey (First Email)

Good Morning,

You are invited to participate in an **anonymous** research survey for a master's thesis about after-action events following a preparedness exercise.

The survey is designed to **take 3-5 minutes**, and consists of a maximum of 15 questions.

Your participation is **voluntary**. If you choose to participate, you may withdraw at any time. The information obtained during this study will be kept confidential, you will not be asked for your name or email. You will not benefit directly from this research nor be placed at risk of any adverse actions as a result of your responses. Additional questions about your rights as a research subject or any other concerns may be addressed to the Navy Postgraduate School IRB Chair, Dr. Larry Shattuck, 831-656-2473, lgshattu@nps.edu or to the Principle Investigator, Dr. Gail Fann Thomas 831.656.2767.

Please click the link to begin this short survey. Thank you for your participation!

Cynthia Holmes
Training and Exercise Unit Manager
New Mexico Department of Homeland Security and Emergency Management
505.415.0467
cynthia.holmes@nps.edu

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APPENDIX C

Recruit Email for Survey (Second/Final Email)

Good Morning / Afternoon,

About a week ago you received an email asking for your participation in an anonymous, online survey. If you have completed the survey, thank you! If not, **it's not too late!**

This survey provides research for a master's thesis about after-action events following a preparedness exercise. If you haven't participated in an exercise, please still take the survey, as that information is valuable too!

The survey is designed to **only take 3-5 minutes**, and consists of a maximum of 15 questions.

Your participation is voluntary. If you choose to participate, you may withdraw at any time. The information obtained during this study will be kept confidential, you will not be asked for your name or email. You will not benefit directly from this research nor be placed at risk of any adverse actions as a result of your responses. Additional questions about your rights as a research subject or any other concerns may be addressed to the Navy Postgraduate School IRB Chair, Dr. Larry Shattuck, 831-656-2473, lgshattu@nps.edu or to the Principle Investigator, Dr. Gail Fann Thomas 831.656.2767.

Please click the link to begin this short survey. Thank you for your participation!

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APPENDIX D

Recruit Script for Interview (First Email)

Good Morning / Afternoon,

My name is Cynthia Holmes, and I am a graduate student at the Naval Postgraduate School.

Thank you for your interest in potentially participating in research about successful after-action events, following a preparedness exercise. The interview will take 45-60 minutes.

Your participation is voluntary. If you choose to participate, you may withdraw at any time. You may also refuse to answer any question, in whole or in part. The information obtained during this study will be kept confidential. This research will take place over a recorded phone interview, and transcribed. You will not benefit directly from this research nor be placed at risk of any adverse actions as a result of your responses. Additional questions about your rights as a research subject or any other concerns may be addressed to the Navy Postgraduate School IRB Chair, Dr. Larry Shattuck, 831-656-2473, lgshattu@nps.edu or to the Principle Investigator, Dr. Gail Fann Thomas 831.656.2767.

If you choose to participate, you will be emailed the provided Consent Form for your records, and asked to provide a verbal consent at the beginning of the interview.

Thank you for your consideration!

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APPENDIX E

Recruit Script for Interview (Second/Last Email)

Good Morning / Afternoon,

My name is Cynthia Holmes, and a graduate student at the Naval Postgraduate School. I am following up on an initial email request sent about a week ago.

You are being asked to participate in research for a master's thesis about successful after-action events, following a preparedness exercise. This survey is expected to take between 45-60 minutes.

Your participation is voluntary. If you choose to participate, you may withdraw at any time. You may also refuse to answer any question, in whole or in part. The information obtained during this study will be kept confidential. This research will take place over a recorded phone interview, and transcribed. You will not benefit directly from this research nor be placed at risk of any adverse actions as a result of your responses. Additional questions about your rights as a research subject or any other concerns may be addressed to the Navy Postgraduate School IRB Chair, Dr. Larry Shattuck, 831-656-2473, lgshattu@nps.edu or to the Principle Investigator, Dr. Gail Fann Thomas 831.656.2767.

If you choose to participate, you will be emailed the provided Consent Form for your records, and asked to provide a verbal consent at the beginning of the interview.

Thank you for your consideration!

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APPENDIX F

Do you consent to be interviewed?

- 1) What does your process look like after an exercise concludes?
Possible Prompts:
 - a. What after-action events take place, and when?
 - b. Who is involved, and how are they chosen, and what do they contribute?
 - c. Who facilitates the process and how are they chosen?
 - d. How are the after-action events documented?
 - e. What is the role of the after-action events in your agency?
 - f. Who is the champion of the after-action event(s)?
 - g. What happens once the after-action event(s) occur?
 - h. Is there a feedback loop (i.e. participant feedback collected? How is it used?)
 - i. How are the after-action events or documents communicated?
 - j. How do you know when your after-action event(s) are successful?

- 2) What factors do you think account for your successful after-action events?
Possible Prompts:
 - a. What role does Leadership play?
 - b. Does your agency have contract support?
 - c. Does your agency have a dedicated IP tracker?
 - d. How does your agency communicate its after-action findings and intended changes?
 - e. What is the typical time frame for your after-action events?

- 3) What was the genesis of your current, successful after-action process?
Possible Prompts:
 - a. Did your agency study other successful agencies?
 - b. Did your agency study change management theory?
 - c. Study other best practices?
 - d. New leadership?

- 4) Can you tell me a little about your experience with facilitating preparedness exercises and their after-action events?
Possible Prompts:
 - a. What is your current title?
 - b. How long have you been involved with exercises?
 - c. In your current position, are preparedness exercise creation and conduct your primary function?
 - d. What training (either formal or informal) have you received in terms of exercise design, creation, facilitation, and reporting?

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