Rules of Engagement: Exploring Organizational Drivers that Facilitate Employee Engagement within a Governmental Public Health Agency

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DISSERTATION

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DISCLAIMER

The findings and conclusions in this report are those of the author(s) and do not necessarily represent the official position of the U.S. Centers for Disease Control and Prevention.
DEDICATION

This dissertation is dedicated to my loves – my husband Vinny and my children Xavier and Gabrielle. I thank you for your love, support and sacrifices throughout this process. You encouraged me and kept my spirits lifted. I also want to thank my mother, my father, my sister, Lindsay, my in-laws, and the rest of my family for their support on this journey. It truly took a village to get to this milestone, and I am blessed beyond measure to have you all in my life.
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<td>ARE</td>
<td>Applied Research and Evaluation</td>
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<tr>
<td>AI</td>
<td>Appreciative Inquiry</td>
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<td>CDC</td>
<td>Centers for Disease Control and Prevention</td>
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<td>CIO</td>
<td>Centers/Institutes/Offices</td>
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<td>COR</td>
<td>Contracting Officer’s Representative</td>
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<td>DHHS</td>
<td>Department of Health and Human Services</td>
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<td>DHDSP</td>
<td>Division of Heart Disease and Stroke Prevention</td>
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<tr>
<td>DrPH</td>
<td>Doctor of Public Health</td>
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<tr>
<td>EEI</td>
<td>Employee Engagement Index</td>
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<td>FEVS</td>
<td>Federal Employee Viewpoint Survey</td>
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<td>FTE</td>
<td>Full-Time Equivalent</td>
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<td>GS</td>
<td>General Series</td>
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<td>GAO</td>
<td>Government Accountability Office</td>
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<tr>
<td>IOM</td>
<td>Institute of Medicine</td>
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<td>IRB</td>
<td>Institutional Review Board</td>
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<td>MSPB</td>
<td>Merit System Protection Board</td>
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<td>OMB</td>
<td>Office of Management and Budget</td>
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<td>OPM</td>
<td>Office of Personnel Management</td>
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<td>PMAP</td>
<td>Performance Management Appraisal Process</td>
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<td>PMA</td>
<td>Presidential Management Agenda</td>
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<td>PART</td>
<td>Program Assessment Rating Tool</td>
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<td>PSM</td>
<td>Public Service Motivation</td>
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I. CHAPTER 1: BACKGROUND AND PROBLEM STATEMENT

A. Background

i. The Changing Landscape of Public Health and the Need for Employee Engagement

The field of public health and its governmental infrastructure are in the midst of fundamental shifts. While there were many public health successes that increased life expectancy and improved health in the 20th century (CDC, 1999), complex challenges persist and continue to emerge. Public health advances, primarily through governmental intervention, resulted in the control of life-threatening infectious diseases; however, there has been a recent resurgence of communicable diseases including West Nile virus, foodborne outbreaks, vaccine-preventable diseases, and, most recently, the Zika virus (Field, 2005; Smith et al., 2014; MMWR, 2016). As the population ages, the chronic disease burden and other issues associated with aging become more demanding (IOM, 2003; Rowitz, 2009). The demographic composition of the country is changing and affecting the public health landscape. The increasing cultural and economic diversity of the U.S. requires exploration of health equity, health disparities and access to care issues (IOM, 2003; Rowitz, 2009). The scope of public health has significantly expanded over the last few decades. Public health is no longer confined to the boundaries of health promotion and disease prevention. Responsibilities for governmental public health have expanded and cover a range of public health programs including infectious disease, chronic disease, immunization, disaster preparedness, environmental health and health in all policies (IOM, 2003; IOM, 2011). The September 11, 2001 terror attacks brought forth the threat of bioterrorism and a new era of public health preparedness and security (Rowitz, 2009). There is greater understanding and emphasis on addressing the
complex social determinants of health through policy, societal and environmental interventions (IOM, 2003; Frieden, 2010) which requires the expansion of traditional partnerships to include multi-sectoral collaboration to make a greater impact (IOM, 2011).

As public health has expanded, governmental public health agencies at the local, state and federal levels continue to play a major role in providing leadership to promote and protect the health and well-being of the American population. A strong governmental public health infrastructure is needed to respond to potential health and safety threats as well as prevent and manage chronic and infectious diseases (IOM, 2003). Traditional responsibilities of these agencies and its workforce include monitoring the burden of disease and other health threats, initiating research on disease etiology and risk factors, providing preventive health services and providing access to care and treatment to vulnerable populations. However, the governmental public health workforce has been challenged to expand its expertise and capacity in order to navigate emerging issues and responsibilities as they continue fulfill their discipline-specific roles (Plough, 2014; U.S. DHHS, 2016). A new model of public health, termed Public Health 3.0, has emerged based on the need to more effectively address the social and environmental determinants of health through strong leadership and multisector collaboration (U.S. DHHS, 2016). Workforce development efforts traditionally focused on developing skills within public health disciplines (Crawford et al., 2009; Lichtveld & Cioffi, 2003) but a greater emphasis is being placed on the need for broader core public health competencies including leadership, systems thinking and policy development (IOM, 2003; Kaufman et al., 2014; Castrucci et al., 2015). Recent research indicates that public health workforce needs persist in core competency training beyond discipline-specific competencies; rather, the development of systems thinking, persuasive communication and change management competencies need to be prioritized in the current public health context (Kaufman et al., 2014). Because of the shifting landscape, the governmental public health workforce has been appointed additional duties
including facilitating collaborative action across sectors (IOM, 2012). Although there are increased responsibilities and expectations for governmental public health professionals, funding to support workforce infrastructure has decreased substantially over recent years due to budget cuts and has led to staff shortages (NACCHO, 2013; Jarris, 2012).

The public health workforce needs to be engaged to effectively navigate the broad array of challenges in an increasingly complex field. Employee engagement is a critical and desired outcome for employees and their organizations across different sectors. Employee engagement can be defined as “the cognitive, emotional, and behavioral energy an employee directs toward positive organizational outcomes” (Shuck & Wollard, 2010). Engaged employees demonstrate “a sense of purpose and focused energy, evident to others in the display of personal initiative, adaptability, effort, and persistence directed toward organizational goals” (Macey et al, 2009). This positive state experienced by employees contributes to desired work behaviors that enrich individual and organizational performance.

Governmental public health professionals are crucial resources given the challenges and opportunities of the changing landscape of public health. Strengthening employee engagement within the governmental public health workforce could offer a strategic advantage to meeting current and future demands in the field. It is critical that public health workers are engaged in their work and work in a setting that supports their engagement. There is some recognition that engaging employees can have a positive impact within the field of public health (Jarris & Sellers, 2015; Fernandez, 2007). A recent survey of state public health workers indicates that employee perceptions of greater engagement are predictive of lower intentions to leave the current position within a year (Liss-Levinson et al., 2015). While there is limited research on employee engagement within the field of public health, it has been studied extensively in other sectors and its lessons may be transferrable to maximize the public health workforce.
ii. The Business Case for Employee Engagement

Employee engagement is a topic that has generated momentum over the last decade in several areas, including business management, the government and public sector, human resource development and organizational psychology. This increased attention is due to several changes in the global business landscape including the proliferation of technology, globalization and changing demographic patterns have intensified the complexity of the modern global economy and increased the demand for highly skilled talent (HayGroup, 2014; Joyner, 2015; McKinsey & Company, 2012a). The nature of work has changed from the completion of routine, mechanistic tasks to work that requires more complex problem solving (McKinsey & Company, 2012b; Pink, 2009). Improved productivity of the workforce is sought after in an environment of increased competition and limited financial resources (Wellins & Bernthal, 2015; Towers Perrin, 2003). As such, human resources – people – are the primary source of competitive advantage in today’s economy (Wellins & Bernthal, 2015).

Unfortunately for the United States (U.S.) workforce, the state of employee engagement in the U.S. is bleak and suggests that the majority of employees are not optimally engaged. Gallup Incorporated, a leader in employee engagement research and tracking, has collected data from hundreds of organizations in the U.S. and over 25 million employees regarding perceptions of employee engagement and achievement of performance outcomes. Gallup reports that only 30% of U.S. employees are engaged, while 52% are not engaged and 18% are actively disengaged (Gallup, 2013). According to Gallup (2013), employees who are not engaged are “checked out” and do not put energy into their work. Actively disengaged employees behave in ways that undermine the accomplishments of their company; they tend to miss more days and quit at a higher rate than
engaged colleagues. Engaged employees are “involved in, enthusiastic about, and committed to their work” (Gallup, 2013). Research conducted by other human capital consulting experts report similar findings that the majority of employees are not optimally engaged. A report from Aon Hewitt’s global research database demonstrates that 27% of employees in North America are highly engaged, 39% are moderately engaged and 34% are either passively engaged or actively disengaged (Aon Hewitt, 2015).

There is a body of evidence from the business sector that demonstrates organizations with higher employee engagement have increased individual and organizational performance outcomes. A study of engagement and business outcomes in nearly 8,000 business units showed that employee engagement was correlated with increased customer satisfaction, productivity and profitability, and with decreased employee turnover (Harter, Schmidt, & Hayes, 2002). In 2013, Gallup released a report from their three-year study of nearly 50,000 work units and almost 1.4 million employees (primarily in the private sector). The study found that employee engagement is a predictor of organizational performance and the following performance outcomes: productivity, profitability, quality, absenteeism, turnover, customer ratings and safety. High employee engagement enhanced these performance outcomes and work units in the top 50th percentile double their odds of success as compared to the bottom 50th percentile (Gallup, 2013). Increased employee engagement has also been demonstrated to improve financial performance in the private sector. Companies highly ranked as Fortune’s Best Places to Work outperformed the general market by a ratio of 5:1 (Bowles and Cooper, 2009). A study of global engagement trends showed that an increase in employee engagement led to an increase in revenue the next year (Aon Hewitt, 2015). Organizations with highly engaged employees outperformed their competition in terms of profitability and higher earnings per share. Organizations with more engaged employees experienced 147% higher earnings
per share compared with their competition (Gallup, 2013). Research from Macey et al. (2009) demonstrated that the companies that scored in the top 25% in employee engagement had increased return on assets, profitability and shareholder value as compared to companies in the bottom 25%. While highly engaged organizations enjoy increased bottom-line results, the inverse is true for less engaged organizations; actively disengaged employees cost the economy up to $355 billion annually in lost productivity (McKinsey & Co., 2012a). Employee engagement has been established as a competitive advantage in business, with engaged employees shepherding their organizations to increased profits and productivity (Harter, Schmidt, & Hayes, 2002; Bates, 2004).

iii. The Public Sector and Employee Engagement

Similar to the private sector, research in the public sector has demonstrated the positive impact of employee engagement. Unlike the private sector, there are no financial performance metrics to determine organizational outcomes. However, there is still compelling evidence that employee engagement and government performance outcomes are linked. The U.S. Merit Systems Protection Board (MSPB) conducted a study of federal employees that found that higher levels of employee engagement correlated with increased success achieving strategic goals as measured by the Office of Management and Budget’s (OMB) Program Assessment Rating Tool (PART) (USMSPB, 2008). The PART process required federal agencies to identify performance goals and report results. The high engagement agencies had statistically significant higher PART scores than the low engagement agencies (USMSPB, 2008). Engaged federal employees were also less likely to leave their agencies, took fewer sick leave days and submitted fewer equal employment opportunity complaints. However, the U.S. MSPB reported that only one-third of federal employees are fully engaged, which echoes the aforementioned findings in the private sector (USMSPB, 2008). Gallup's
analysis of U.S. federal employees demonstrated that only 27% are engaged and it is estimated that the lack of engagement costs the government $18 billion in lost productivity annually (Ander & Swift, 2014).

The results of a government-wide survey reinforce the finding that engagement among federal employees has been sub-optimal in recent years. The Federal Employee Viewpoint Survey (FEVS) is conducted by the U.S. Office of Personnel Management (OPM) and its purpose is to measure federal employees’ perceptions on “whether, and to what extent, conditions that characterize successful organizations are present in their agencies” (OPM, 2013). A subset of FEVS questions comprise the Employee Engagement Index (EEI), which measures the conditions that support an engaged workforce. EEI trends showed a decline in employee engagement with the government-wide EEI score dropping from 67% in 2011 to 63% in 2014 (OPM, 2015). The incremental decrease in EEI may have been disappointing but it was not unexpected given the recent turbulent landscape for federal employees. Hiring and pay freezes, furloughs, and budget cuts have tainted the last several years throughout government (OPM, 2013). The two-week government shutdown beginning October 1, 2013 forced over 800,000 public servants to discontinue their work until further notice, as their position was not considered “essential” (Jarvis, 2014). The shutdown also reinvigorated negative public and political discourse regarding the perceived value, or lack thereof, of civil servants (Marshall and Elghossain, 2014).

The declining trend of employee engagement within the federal workforce has negative implications for agency effectiveness given the aforementioned evidence correlating engagement and performance. The potential risks of a disengaged federal workforce were elevated to the highest level of government and became a fixture of President Obama’s second term Presidential Management Agenda (PMA). In 2013, President Obama and his administration introduced the new PMA, which incorporates successful strategies from the private sector in order to enhance
engagement and performance in the federal government (White House, 2013). One of four main pillars in the agenda, People and Culture, focused on “unlocking the full potential of today’s Federal workforce and building the workforce needed for tomorrow” (A Government of the Future, 2014; Clark, 2014). Strengthening employee engagement is one of the three key elements in the PMA People and Culture pillar to create an engaged and productive workforce that can best serve American citizens. The workforce-focused agenda was further reinforced through a White House memorandum issued in December 2014 which gave specific guidance to heads of executive departments and agencies on how to “strengthen an organizational culture of employee engagement and mission performance” (White House, 2014). The memorandum identifies the federal workforce as essential to achieving mission success and acknowledges employee engagement as a leading indicator of performance. Furthermore, the document outlines strategies and objectives that focus on using available employee engagement data to identify areas of strengths and weaknesses within an organization and implement actions to make improvements (White House, 2014). Access to FEVS data and results have been expanded as a result of the PMA so that agencies and leaders can monitor engagement progress and utilize the unit-level data (Clark, 2014).

As a part of the Obama administration’s efforts in improving employee engagement across the government, the U.S. Government Accountability Office (GAO) used the FEVS EEI data to describe government-wide trends in employee engagement and identify potential practices to improve employee engagement (U.S. GAO, 2015). The GAO report highlighted employee engagement as an important federal workforce priority and compelled further action by OPM and other agencies to utilize the FEVS data and share promising practices. While the report highlighted employee engagement, the data and findings reflect the experiences of over 400,000 federal employees across 82 agencies representing diverse missions and work environments. The EEI provides some insight into engagement facilitators and barriers for agencies and their organizational
units; however, the measure is not a definitive representation of engagement. GAO suggests that additional data be collected and other data sources be utilized to gain a deeper understanding of employee engagement within a particular agency or organizational unit (U.S. GAO, 2015).

iv. Work Environment Conducive to Engagement

Organizations in the business sector and within government have recognized that engagement improves outcomes. High engagement workplaces have become strategic necessities to attract, retain and enable high performing employees (Gallup, 2013; Joyner, 2015). It bears acknowledgement that individual factors may influence a person’s capacity to engage. Personality traits, such as openness and conscientiousness, and non-work related variables may contribute to engagement (Wollard & Shuck, 2011; Macey & Schneider, 2008). However, the work environment is critical and engagement can emerge (or retreat) based on certain conditions, which will be explored in the next chapter (Shuck et al, 2011; Shuck et al, 2014). Engagement is influenced by environmental stimuli in the work place and factors within the organization itself. Human resources development research contends that the interaction of the person and the organizational environment determine whether an employee is engaged or disengaged (Shuck et al, 2011). A systems approach to public health workforce development echoes the notion that the worker cannot be viewed in isolation; they are interrelated with the nature of the work itself and the work environment (Kennedy and Moore, 2001). The work or organizational environment includes people, policies and procedures, physical space, and tangible and intangible elements (Shuck et al, 2011). Employees are “continuously calibrating” their engagement as they interpret and interact with the organizational environment (Alagaraja & Shuck, 2015; Shuck, Ghosh, Zigarmi & Nimon, 2012). Governmental public health agencies stand to benefit from creating environments where
employees can be engaged. Similar to the role of the governmental public health in supporting environments in which people can be healthy (Frieden, 2010; Frieden, 2013), agencies should create and maintain environments in which employees can be engaged, motivated and satisfied in their roles protecting the health of the population. As previously described, the current public health landscape requires a uniquely prepared and engaged workforce to navigate complex challenges. Members of the public health workforce contribute their expertise, education, training and experience to effectively promote health and respond to health threats (Gebbie, 1999). However, less attention has been paid to creating supportive organizational conditions that enhance the application of those skills and talents. Some evidence suggests that a supportive work environment and certain drivers positively related to engagement can improve public health worker knowledge, skills and abilities (Kaufman et al, 2014).

The identification of organizational drivers within a particular work environment can help the organization’s leaders and managers determine what specific conditions necessary for engagement are needed for their organization (Wollard & Shuck, 2011). In terms of the governmental public health workforce, there are unique factors related to working within a federal government system that may influence employee engagement. There has not been an in-depth exploration of organizational drivers of employee engagement in the governmental public health workforce. Although employee engagement has been linked to improved individual performance and organizational outcomes, the construct has not yet been explored in public health. Governmental public health agencies should create and sustain conditions that enhance employee engagement in order to achieve public health outcomes and support the members of the workforce.
v. Employee Engagement at the Centers for Disease Control and Prevention (CDC)

The Centers for Disease Control and Prevention (CDC) is a federal public health agency within the Department of Health and Human Services (DHHS) whose mission is “to protect America from health, safety and security threats, both foreign and in the U.S.” (CDC, 2016). CDC employees respond to challenges across the full range of public health topic areas and disciplines. Since the government-wide focus on strengthening employee engagement in 2014, CDC has implemented multiple strategies to increase participation in the FEVS and encourage organizational units to use their EEI data to improve engagement. Employee engagement continues to be one of five priority areas within DHHS in fiscal year 2017 in order to “evaluate the effectiveness of workforce programs, policies, and practices in creating and sustaining a culture of performance engagement throughout DHHS” (DHHS, 2016). Although CDC FEVS EEI scores are higher than the overall government-wide average (70% vs. 63% in 2014; OPM, 2014), the CDC human resources management office and other agency staff are committed to improving engagement throughout the organization. While the agency average is relatively high, EEI scores range from 44% to 97% across the dozens of organizational units within centers/institutes/ offices (CIOs), divisions and branches (CDC, 2015). As CDC continues to assess and prioritize engagement, an exploration of CDC-specific organizational drivers for employee engagement would help target strategies tailored to public health employees working within the federal government.

B. Statement of the Problem

Public health practice in the 21st century requires an engaged workforce to navigate persistent health challenges in an increasingly complex environment. The governmental public
health workforce is the foundation of the U.S. public health infrastructure; its employees are the primary resources for delivering core services and accomplishing agency mission. Employee engagement can be defined as an individual’s investment of cognitive, emotional and behavioral energies directed toward organizational outcomes. In both the private and public sectors, employee engagement is a key indicator of organizational performance. Organizations with higher proportions of engaged employees have increased productivity, improved retention, higher customer satisfaction and lower absenteeism. Despite this evidence, there has been little focus on employee engagement in the governmental public health workforce or on the role of the organization in shaping an environment conducive to keeping employees engaged and motivated. While there are individual characteristics that can influence an employee’s degree of engagement, there are also organizational factors that can impact engagement either positively or negatively. In 2014, the PMA called for increased accountability among agency leaders to strengthen employee engagement in the federal workforce in order to improve mission outcomes. Early analyses of government-wide engagement measures demonstrated that employee engagement has decreased over the last few years and identified potential drivers and practices that may improve engagement. However, the organizational drivers of employee engagement among governmental public health employees are unclear and have yet to be explored. Low employee engagement in governmental public health agencies may impede performance and hinder the achievement of public health mission. Determining organizational drivers of and organizational strategies that promote employee engagement may help create a more engaged and effective public health workforce at the federal level.
C. Research Questions

Employee engagement may be an important strategy to maximize the public health workforce and its organizations in order to achieve public health impact. This construct has not yet been explored in public health and an in-depth exploration into the employee experience of engagement in relation to the work environment is needed. The study objectives are to: 1) describe employees’ experience with and perceptions of engagement within their organization; 2) examine employee perceptions of the organizational drivers and federal government influences that may contribute to employee engagement within a government public health agency; and 3) to identify promising practices for employee engagement to improve organizational performance and promote the achievement of public health impact. The research questions and sub-questions are as follows:

Research Question 1: What is the current state of employee engagement in a federal government public health agency?
   Sub-question 1: How do employees define engagement at the organizational unit level?
   Sub-question 2: How do employees characterize engagement within their organization?

Research Question 2: How have certain organizational drivers contributed to employee engagement in a federal government public health agency?
   Sub-question 1: How does the establishment of purpose support employee engagement?
   Sub-question 2: How does the empowerment of the workforce support employee engagement?
   Sub-question 3: How does the encouragement of growth support employee engagement?
   Sub-question 4: How does the provision of support by an organization support employee engagement?
   Sub-question 5: How does the promotion of fairness support employee engagement?
   Sub-question 6: What other organizational drivers support employee engagement?
   Sub-sub question 6.1: How do other organizational drivers support employee engagement?
Research Question 3: How does working for the federal government affect perceptions of employee engagement?

  Sub-question 1: How does the politicized environment affect perceptions of employee engagement?
  Sub-question 2: How does funding affect perceptions of employee engagement?
  Sub-question 3: How do employee protections (job security) affect perceptions of employee engagement?
  Sub-question 4: How do financial incentives affect perceptions of employee engagement?
  Sub-question 5: How does the government bureaucracy affect perceptions of employee engagement?
  Sub-question 6: How does a public service ethic affect perceptions of employee engagement?

D. Leadership Implications

An increased emphasis on employee engagement may serve as a strategic advantage and imperative amidst the rapidly changing landscape of public health. The public health workforce is essential in assuring the public’s health (Woltring & Novick, 2003). There is empirical evidence that employee engagement is a key predictor of individual and organizational performance and outcomes. As such, organizations and their leaders are accountable to optimize engagement to enhance their employees experience at work and improve overall performance outcomes. Recent efforts to identify future needs of the public health workforce recognize that work environments at state health agencies need to evolve in order to keep workers engaged and innovating (Jarris & Sellers, 2015).

While engagement is typically measured at the individual level, it is important to study engagement using a systems approach to understand how the organizational environment and government context may affect how public health workers experience engagement. Facilitators and
barriers of engagement will likely be multifactorial and an individual's experience will be influenced at multiple levels (Joyner, 2015). A systems-level study of organizational drivers can identify leverage points to intervene on complex issues around engagement.

Governmental public health agencies at the local, state and federal levels have tremendous responsibilities to provide essential services and respond to existing and emerging threats. While the focus of this research is within a particular federal public health agency, the findings on organizational drivers of engagement and any strategies to improve engagement could be relevant to state and local public health departments, other federal agencies and non-governmental public health organizations.
II. CHAPTER 2: THEORETICAL AND CONCEPTUAL FRAMEWORK

A. Literature Review

i. Defining Employee Engagement

Employee engagement has been demonstrated to be linked to positive organizational outcomes in the private and public sectors; however, what does it mean to be engaged? During the relatively short history of employee engagement, the understanding of the concept has evolved. Despite the explosion of recent empirical studies and management reports, there is not one universally accepted definition of employee engagement. For the purposes of this research, employee engagement is defined as “an individual’s investment of cognitive, emotional and behavioral energies directed toward organizational outcomes” (Shuck & Wollard, 2010). This definition was synthesized from the body of research in the field and is conceptually grounded in William Kahn’s foundational theory of personal engagement (Shuck & Wollard, 2010). Kahn described personal engagement as a motivational, psychological state in which people decide to bring “varying degrees” of their selves to their work roles (Kahn, 1990). When employees are engaged, they cognitively, emotionally and physically invest themselves in their work role performance. Conversely, Kahn describes a state of personal disengagement in which employees withdraw themselves and their physical, cognitive and emotional energies (Kahn, 1990). Organization members choose how much of their selves they will invest in their work based on their individual characteristics and work context (Kahn, 1990; Rich et. al., 2010). Kahn’s ethnographic research revealed three psychological conditions that are necessary for engagement: psychological meaningfulness, psychological safety and psychological availability. Psychological meaningfulness is the extent to which people find meaning in their work and feel valuable (Kahn, 1990; Saks & Gruman, 2014). Psychological safety is experienced when people are able to bring their whole selves
to their work without fear of negative consequences and feel a sense of trust in various work situations (Kahn, 1990). Psychological availability is determined by the amount of physical, emotional or psychological resources people have to engage in their work (Kahn, 1990). The presence of physical and emotional energy are necessary to engage and be psychologically available; when these resources were depleted, employees are less able to engage and more apt to withdraw.

Building on Kahn, Shuck and colleagues contend that cognitive engagement is the first step toward engagement for an individual and is dependent on a person’s appraisal that the work is meaningful, safe and available; it is the rational willingness to invest their energies (Shuck & Wollard, 2010; Shuck & Reio, 2011; Alagaraja & Shuck, 2015). Cognitive engagement also describes the attention and focus an employee brings to their work role (Kahn, 1990; Rich et. al., 2010). Focus involves immersing oneself into the work without being easily distracted (Kahn, 1990; Macey et. al, 2009). Emotional engagement reflects feelings of enthusiasm and positive energy towards the work role (Kahn, 1990; Rich et. al, 2010; Macey et. al, 2009). Once an employee is emotionally engaged, they have made the decision to cognitively engage and emotionally invest their knowledge, skills and abilities (Shuck & Reio, 2011; Alagaraja & Shuck, 2015). The physical manifestation of engagement is the display of intensity and effort towards work and the accomplishment of role-related goals (Kahn, 1990; Rich et. al, 2010). Physical engagement is typically associated with the outcome of performance and this behavioral reaction signals the intention to act in alignment with the organization and its goals (Rich et. al, 2010; Shuck & Reio, 2011; Alagaraja & Shuck, 2015). When employees display behavioral engagement and are fully present, they are attentive, connected, integrated and focused in their work role (Kahn, 1992).

Other conceptualizations of engagement have emerged and differ from Kahn’s framing. Maslach et. al. (2001) defined engagement as the opposite of job burnout (burnout). The experience of burnout is the culmination of interpersonal stressors in the workplace that is characterized by
exhaustion, cynicism and inefficacy (Maslach et. al, 2001). Exhaustion is the hallmark component of burnout and is characterized by the depletion of emotional resources. Cynicism refers to the process by which an employee detaches from their work as a means to coping with emotional stress. Inefficacy is when an employee experiences reduced personal accomplishment as a result of exhaustion and cynicism (Maslach et. al., 2001). Partially in response to the positive psychology movement, Maslach and colleagues re-framed burnout as the “erosion of engagement” and characterized energy, involvement and efficacy as the opposite dimensions of exhaustion, cynicism and inefficacy (Maslach and Leiter, 1997; Maslach et. al, 2001). While these reverse-burnout characteristics were described, they were not assessed independently of burnout; rather they were assessed by the opposite of pattern scores of an instrument that measures burnout (Maslach et. al, 2001; Schaufeli et. al, 2002).

Schaufeli and colleagues (2002) further expanded Maslach and colleagues' burnout antithesis concept by positing that while burnout and engagement are opposites, they are also independent states that should be assessed and measured separately. The authors defined engagement as “a positive, fulfilling, work-related state of mind that is characterized by vigor, dedication and absorption” (Schaufeli et. al., 2002). Vigor is defined by “high levels of energy and mental resilience”; dedication is defined by strong involvement in work, with “a sense of significance, enthusiasm, and challenge”; and absorption refers to being fully immersed in one's work (Schaufeli et al, 2002).

Engagement as the positive antithesis of burnout has some characteristics in common with Kahn’s conceptualization. Kahn’s framing of engagement also includes emphasis on vigor and energy, specifically cognitive, emotional and physical energies that serve as resources to invest in the work role (Kahn, 1990). The dimensions of involvement and dedication have similar qualities to emotional engagement, and absorption and efficacy may be demonstrated through physical
engagement. However, the burnout antithesis has been critiqued for too strong a focus on burnout in terms of conceptualization and measurement. The validity of the measures to appropriately assess engagement as conceptualized by Kahn has been challenged (Shuck, 2011; Saks & Gruman, 2014). While the burnout antithesis framework may be useful in drawing attention to the negative consequences of burnout and the opportunities of engagement, scholars maintain that engagement is an independent, unique construct and conceptualizations that heavily overlap with burnout diminish the ability to effectively assess engagement (Saks & Gruman, 2014).

Perspectives on employee engagement have developed over the last two decades and research on the topic has expanded in several sectors. Employee engagement is a distinct construct and occurs at the individual level. When employees are engaged, they feel like their work is valued, they trust people and processes within their work environment and they feel like they have sufficient personal resources to do their job. Consequently, employees are absorbed in their work, feel enthusiastic about their work and invest their energies and personal resources toward work goals. While an individual must make the choice whether to engage or not, that choice is influenced by a culmination of daily experiences in their work environment (Shuck, Ghosh, Zigarmi & Nimon, 2012). Engagement is not a static state; it fluctuates based on a set of circumstances (Kahn, 1990; Shuck, Ghosh, Zigarmi & Nimon, 2012). Engagement happens “within environments that cultivate the emergence of psychologically safe and meaningful places of work and in those situations where employees believed that they had adequate resources available to complete their work” (Shuck, Twyford, Reio & Shuck, 2014). The organization has the responsibility and opportunity to shape the experience of engagement. Employee engagement is amenable to change and, ideally, improvement.
ii. Organizational Drivers of Employee Engagement

Many factors may contribute to the cultivation of employee engagement in an organization. Engagement is a mediating variable, whereby various drivers have been found to predict engagement and engagement predicts outcomes (Saks, 2006). From a practice perspective, it follows that studying drivers of engagement will give insight into what fosters engagement within an organization and where interventions may be needed. Drivers are unique to the organizations themselves and, as such, should be identified to leverage opportunities to improve employee engagement (Wollard and Shuck, 2011). The following five drivers of employee engagement have been explored conceptually and empirically in the literature.

Establish and Align Purpose

It is useful to explore drivers of employee engagement through the lens of Kahn’s three psychological conditions necessary for engagement, which positively relate to an employee’s level of engagement. According to Kahn, people experience meaningfulness when there is an exchange in their investment of energy; they are able to give energy to the work and they receive that energy back (Kahn, 1990). In turn people feel as though they are making a difference in their work roles. Employees want to believe that not only are they making a worthwhile personal contribution, but that the contribution will be valued (Shuck & Rose, 2013). People need to find meaning in their work and that meaning can be enhanced by understanding and working toward the organization’s mission and purpose. Meaning, and thereby engagement, is enhanced when employees connect to a purpose beyond the work itself (Maylett & Warner, 2014). The seemingly constant changes in the global and organizational landscapes make a deeper grounding in purpose essential for employees to navigate complex environments (Joyner, 2015). Research in the private sector has identified the
important link between meaning, purpose and engagement (McKinsey & Co., 2012a; Groscurth, 2014). Organizations are encouraged to establish and reinforce of a sense of purpose that is rooted in the mission and values help to ignite employees’ desire to contribute to organizational goals (Bersin, 2015). A clear mission clarifies an organization's purpose and reason for its existence and provides guiding direction for fulfilling purpose and organizational goals (Bryson, 2004). Mission-driven companies that effectively convey meaning and purpose have been shown to have 40% higher levels of retention (Bersin, 2015). Gallup research has found mission is a key factor in employee engagement and a driver of organizational performance (Groscurth, 2014). Mission and purpose may be more important for nonprofit and public sector organizations. A sense of mission is central to the role of the public sector in service to its citizens (Vigoda-Gadot, Eldor & Schohat, 2012). For private sector organizations, the creation of economic value may be central to their purpose; however, the mission and purpose of public sector organizations must be grounded in social values that improve our society and compel leaders and employees alike (Phills, 2005).

Members of public organizations seem to be highly motivated to contribute to the achievement of agency mission, especially if the mission is perceived to be important and worthwhile (Rainey & Steinbauer, 1999). This connection may be of particular importance to the public health sector where practitioners are mission-oriented and committed to improving population health. In a survey of state health agency workers, 91% joined public health to “make a difference” (Jarris & Sellers, 2015).

Mission also improves strategic alignment, as it sets direction for the development of priorities and goals which are necessary for getting work done (Groscurth, 2014). Strategic alignment is an employee’s line of sight between their work and the strategic priorities of the organization; they are aware of organizational priorities and their importance, and understand how their daily work contributes to the achievement of organizational mission (Biggs et al, 2013). A
guiding direction must first be established and articulated throughout an organization before an employee can be firmly aligned. A longitudinal study demonstrated that employees who are aligned toward common organizational priorities and goals reported higher levels of engagement (Biggs et al, 2013). Given the work context, the aspect of directing one’s energy and engagement toward work goals and organizational outcomes is critical. Macey et. al. (2008) emphasize the concept of “purposeful energy” directed to specific organizational goals and objectives. Results from the 2015 FEVS indicate that 86% of CDC employees know how their work relates to the agency’s goals and priorities (OPM, 2015). Similarly, 85% of state health agency employees report knowledge of how their work relates to the agency’s goals (Jarris & Sellers, 2015). Employees are more engaged when they understand how their day-to-day work and responsibilities connect with the overall purpose and goals of the organization.

Empowers the Workforce

According to the literature, the nature of the work itself enhances psychological meaningfulness and those job characteristics influence engagement (Hackman & Oldham, 1980; Kahn, 1990). Autonomy is a critical job characteristic, wherein the employee has the “power to shape their work and environment in ways that allow them to perform at their best” (Maylett & Warner, 2014). Contrary to popular belief, autonomy is not blindly allowing employees to do what they please without accountability. Autonomy should include clear boundaries that set appropriate direction and expectations (Kahn, 1990; Maylett & Warner, 2014). Employees who are not given opportunities to be autonomous often feel disrespected and devalued, and can subsequently lose interest in the work (Maslach & Leiter, 1997; Maylett & Warner, 2014). Conversely, autonomy has been found to be positively related to engagement (Christian et. al, 2011; Crawford et al, 2010; Saks, 2006). Employees want to be involved in decisions that affect their work and, perhaps most
importantly, “they want to have some input into the process of achieving the outcomes for which they will be held accountable” (Leiter & Maslach, 2004). Giving employees freedom in how work gets completed helps them to feel empowered and creates a sense of responsibility for work outcomes (Hackman & Oldham, 1980; Maylett & Warner, 2014). Employee responsibility for and accomplishment of work outcomes may positively relate to the achievement of organizational outcomes. Data from the MSPB study of engagement within the federal workforce showed that employees were more satisfied with their involvement in decisions that affect their work in high-engagement agencies as compared to low-engagement agencies (Marrelli, 2011). Individual discretion and flexibility is important for public health practitioners to navigate emerging national trends, such as fostering a culture of quality improvement and leveraging electronic health information, as identified in the Public Health Workforce Interests and Needs Survey among state health agency workers (Sellers, Leider, Harper, et al, 2015).

Encourages Growth

In addition to autonomy, other job characteristics serve as antecedents to engagement and contribute to employees experiencing meaning in their work based on the type of work. Characteristics that support increased meaningfulness include complex and varied work that allow individuals to experience a sense of competence and challenge simultaneously (Kahn, 1990). Employees experience challenging work when they are able to take on different and/or more difficult work assignments that stimulate their interests (Maylett & Warner, 2014). People have an intrinsic need to perform activities well, especially when serving a meaningful purpose (Thomas, 2009). The drive for competence also encourages the attainment of additional skills to achieve mastery and peak performance (Halm, 2011; Thomas, 2009). The desire for mastery, or to improve at something that matters, promotes engagement (Pink, 2009; Maylett and Warner, 2014).
Challenging work has been found to be highly valued among public sector employees (Rainey, 2014). The need for continuous learning, whether formal or informal, is foundational to employees feeling engaged (Shuck et al, 2010). Opportunities to expand tasks and hone current skillsets supports continuous learning and growth. Research shows that developing employees’ strengths improves engagement and productivity (Gallup, 2013). Learning and development opportunities enable employees to improve knowledge, skills and competencies related to work and personal development (Maylett & Warner, 2014). Professional development is positively related to engagement and is considered a job resource to help employees meet their goals (Crawford et al, 2010; Xanthopoulou et al, 2007; Xanthopoulou et al, 2008). In comparing high- and low-engagement federal agencies, more employees in high-engagement agencies had positive views of available training and development opportunities (Marrelli, 2011). Without growth opportunities, high performing employees are likely to become bored and leave the organization (Maylett and Warner, 2014).

Provides Support

Supportive and positive work environments enhance employee engagement. When employees believe that their organization values their contributions and cares about their well-being, they are more fully able to invest in their work roles and engagement is heightened (Rich et al, 2010; Saks, 2006; Wollard & Shuck, 2011). Positive work interactions with supervisors, co-workers and clients can lead to meaningful work experience and increased engagement. When these relationships are constructive, they promote a sense of value, respect, dignity and appreciation which enhances psychological meaningfulness (Kahn, 1990). Emotional connections among work colleagues can create a feeling of community and even a familial attachment (Shuck et al, 2010). Supportive supervisor and co-worker relations are also positively associated with psychological safety, wherein
employees feel safe to express themselves (Kahn, 1990; May et al, 2004). The development and maintenance of trust in work relationships is key, and allows employees to share information and ideas openly (Kahn, 1990; Maylett & Warner, 2014). Work environments characterized by supportiveness and openness also encourage creativity and risk-taking in a safe setting (Kahn, 1990; Saks, 2006). Supportive supervisors and managers help to create a safe work environment and are positively related to engagement (Kahn, 1990; Saks, 2006). Supervisors who display caring behavior and show concern for the employee’s well-being and work build engagement (Kahn, 1990; Saks, 2006). Other positive supervisor behaviors include consistency, integrity and communication (May et al, 2004). Rewarding interpersonal relationships at work with colleagues and clients create a shared experience and mutual appreciation (Kahn, 1990). Social support at work is associated with greater engagement (Crawford et al, 2010; Leiter & Maslach, 2004; Xanthopoulou, Baker, Heuven, Demerouti & Schaufeli, 2008). An employee’s level of engagement has implications for their interactions with clients and other stakeholders. A study by Menguc et al (2012) suggests that employee engagement affects behavior and interaction with customers, and customers perceive greater employee performance among more engaged employees. Employee engagement is positively associated with customer-related business outcomes, such as customer satisfaction and loyalty (Harter, Schmidt, & Hayes, 2002).

Promotes Fairness

Employee perceptions of fairness within the workplace have implications for engagement. An organization should provide an environment in which employees are treated fairly and provided with equitable opportunities and recognition. Kahn’s (1990) concept of psychological safety is predicated on employees experiencing a sense of trust in their work environment. Fairness within an organization can manifest as feelings of mutual trust, respect and consideration for members
(Leiter & Maslach, 1999). The process of decision-making and whether or not the process is perceived as fair can affect an employee’s sense of justice. Regardless of the outcome, decisions within an organization are expected to be accurate, consistent and unbiased (Ghosh et al, 2014). Similarly, there is an expectation among employees that the organization’s policies and procedures are transparent and fairly applied (Macey et al, 2009). The quality of the decision-making process is reflective of an employee’s contributions and value to an organization, thus also contributing to psychological meaningfulness (Ghosh et al, 2014; Leiter & Maslach, 1999). The distribution of decision outcomes are expected to be fair and equitable based on the work and not favoritism; outcomes include compensation, hiring and promotion decisions and the allocation of other resources, opportunities and rewards (Ghosh et al, 2014; Leiter & Maslach, 1999). When employees have high perceptions of fairness, they are more likely to invest their energies and be engaged (Malinen, Wright & Cammock, 2013; Saks, 2006). Appropriate and meaningful recognition is an important signal of fairness. Recognition is a “message of appreciation or positive reinforcement tied to an employee’s behavior or accomplishment of a specific task or goal” (Mone & London, 2010). Employees will weigh the investment of their energies against the recognition they have received for those efforts (Mone & London, 2010). When there is a perceived balance between effort and recognition, an employee will be more willing to invest effort causing increased meaningfulness and engagement. Recognition can be formal or informal, but is most meaningful when it is part of a regular feedback process with employees and connected to strategic goals important to the organization (Mone & London, 2010). Research from Deloitte indicates that high-recognition companies have lower voluntary turnover as compared to companies with poor emphasis on recognition (Bersin, 2015). Only 57% of state health agency employees reported recognition of achievement. Only 51% of FEVS CDC respondents agree that differences in performance are recognized in a meaningful way (OPM, 2015).
Leaders and managers have the ability to influence engagement within their organization. Leadership by definition is “a process whereby an individual influence a group to achieve a common goal” (Northouse, 2010). Most of efforts to improve engagement in private and public organizations are directed towards leaders and managers. There has been minimal attention in the literature given to different leadership styles as potential drivers of engagement (Macey & Schneider, 2008; Saks & Gruman, 2014). However, this research theorizes that leadership influences the drivers and the manner in which employees experience leadership within their organization can affect their engagement. Evidence suggests that when leaders are actively involved in increasing engagement, the employees are more productive (Christian, Garza & Slaughter, 2011; Rich, LePine, & Crawford, 2010; Shuck & Herd, 2012). Leaders must be attuned to the drivers of engagement and help to create the conditions for engagement (Shuck & Herd, 2012). People must trust their leaders and managers, and believe that their best interests are being considered and promoted (Macey, Schneider, Barbera & Young, 2009). Leadership behaviors, positive and negative, are presenting a model to employees of what is valued and nurtured in the organization. Decisions within the organization on what is monitored and measured, how resources are allocated, how jobs are designed and whether fairness is displayed have implications on whether or not employees invest themselves into their work role (Macey, Schneider, Barbera & Young, 2009). The nuances of how employees interpret leadership attitudes and practices in an organizational context have yet to be studied (Shuck & Herd, 2012) but this study offers an opportunity to explore this dimension more fully.
iii. Federal Government Context

Employees experience engagement locally within their organization, but working in the federal government provides an interesting lens through which employees interpret their engagement. Working within a federal government context introduces a host of special challenges that are not present in the private sector, sometimes constraining performance (Lavigna, 2013; Rainey, 2014). The public sector is comprised of governments and “publicly controlled or publicly funded agencies, enterprises, and other entities” (Dube & Danescu, 2011). Public organizations deliver public programs, goods and services, but do not sell those products in economic markets (Rainey, 2014). As a result, typical market indicators are not considered in decision-making and the value of goods are not based on market price (Rainey, 2014). Public value is created when the goods and services produced meet the aspirations and expectations of the citizens; efficiency and effectiveness increase the public value (Moore, 1995; Rainey, 2014). Government and other public organizations are subject to various oversight bodies, as well as rules and procedures implemented to enhance fairness and accountability (Rainey, 2014). There also tend to be multiple levels of hierarchy intended to act as checks and balances in the review and clearance process to ensure rule adherence (Rainey, 2014). Despite the original intentions, the bureaucratic process can be cumbersome and perceived as inefficient by external observers and those working in government. The co-existence of bureaucracy and public service-oriented employees is somewhat paradoxical (Vigoda-Gadot, Eldor & Schohat, 2012); when dedicated employees feel frustration regarding their ability to get work done in this environment, it may threaten their sense of autonomy and engagement (Lavigna, 2014).

The nature of working in government presents a politicized environment that can negatively impact engagement. Government agencies are led by elected officials or political appointees whose
terms are brief; this turnover in leadership can create instability within the organizations and amongst civil servants (Lavigna, 2013). Elected and political leaders initiate new, politically-driven agendas and priorities; career civil servants face pressure to implement changes relatively quickly. It is important that employees are engaged and maintain stability within their local environment (Lavigna, 2013). Shifts in priorities can be substantial with the change of administrations. Brief tenures in leadership also tend to create a short-term focus in terms of goals and this has potentially negative implications on the longer-term accomplishment of mission and goal clarity (Lavigna, 2011; Lavigna, 2013; Rainey, 2014). Decision-making is inherently influenced by political agendas and external stakeholders which can stifle autonomy and perceptions of fairness (Lavigna, 2013). This environment can affect the effectiveness of the federal workforce: “The external influences that government agencies must manage necessitate a level of reaction that often competes with the ability to move ahead and deliver on mission” (Clark, 2014). Because of its political nature and expectations for accountability, the government is often scrutinized by the public and the media; public servants feel the brunt of negative attention and perception (Jarvis, 2014).

By virtue of their salaries and programs being dependent on government appropriations, government employees are vulnerable to political battles over budgets. On October 1, 2013, failed negotiations in Congress to pass a budget led to a lapse in federal appropriations and a government shutdown affecting 800,000 federal employees (Washington Post, 2013). DHHS, one of the largest federal agencies, placed over 62,000 employees on furlough, which is temporary leave without pay (USA Today, 2013). The abrupt furlough of “non-essential” staff was emotionally traumatic to the federal workforce, the majority of whom take great pride in their work and mission (Jarvis, 2014; Washington Post, 2013). In the wake of recent pay and hiring freezes, sequestration cuts, and reduced budgets, the shutdown was another demoralizing blow to the federal worker and, as a consequence, left the workforce feeling more disengaged (Jarvis, 2014). In the midst of this ordeal,
anti-government rhetoric abounded and questioned the overall value of the federal workforce. Recent events combined with the constant criticism of government negatively affects public servants’ engagement, satisfaction and commitment, and may contribute to the loss of talent (Lavigna, 2013; Palguta, 2014). The fallout from the shutdown has made it more difficult to attract and retain employees (Ketter, 2014).

Reliance on federal appropriations as the predominant source of funding has implications for the sustainability of the workforce as well as programs. Sequestration cuts were enforced in 2013 wherein federal funding was withheld in order to reduce the federal deficit; as a result, many federal programs lost funding and had to reduce services (White House, 2013). State and local programs that are recipients of federal funding were also negatively impacted by these cuts and the government shutdown (Pattison, 2014; Rainey, 2014). Sequestration combined with other budget reductions impede the workforce’s effort to successfully deliver programs and services. Budget restrictions and federal regulations limit the financial incentives that can be offered to federal employees for a job well done. Compensation, including pay, raises and bonuses, is a tool used to recognize good performance and increase employee satisfaction (Lavigna, 2013). Excellent performance ratings can yield end of year performance awards in some agencies; however, overall compensation is limited as compared to what is offered in the private sector. Although compensation incentives are lacking, federal employees do have good job benefits, including guaranteed pensions and health care. Employment protections prevent federal employees from being fired at-will after a one-year probation period, which equates to long-term job security for most (Lavigna, 2013). While job security is very appealing to employees, there is also the undesirable side effect of maintaining a pool of poor performers in government service (Lavigna, 2013). Government-wide data from the 2015 FEVS indicate that only 28% of respondents feel that appropriate action is taken to deal with poor performers in their work unit; the proportion is slightly
more favorable at 34.5% among CDC employees (OPM, 2015). Higher performing employees’
engagement may suffer because the retention of poor performers is considered unfair and
diminishes their work efforts.

Although many features of working in the government may pose challenges to engagement,
people in government service may be uniquely motivated to operate in this environment. Public
service motivation (PSM) is “an individual’s predisposition to respond to motives grounded
primarily or uniquely in public institutions and organizations” (Perry, 2000). Empirical evidence
suggests that public sector workers place more value on service and contributing to society than
private sector workers (Perry, 2000; Wright, 2007). Other research has demonstrated that employee
engagement is higher among public sector employees as compared to public sector employees
(Vigoda-Gadot, Eldor & Schohat, 2012); while PSM was not explicitly measured in this study, the
authors suggest additional work in this area. Research also shows that employees with higher levels
of PSM are more likely to be satisfied and engaged than employees without PSM (Lavigna, 2013).
PSM is influenced by many factors, one of which appears to be the employee connecting to the
importance of the organizational mission, performing meaningful work, and understanding how
their work benefits the organization and society (Wright, 2007). A strong public service ethic
appears to be positively related to employee engagement.

B. Conceptual Framework

The conceptual model presented below (Figure 1) demonstrates the systematic process of
gaining insight into a federal public health employee’s experience of engagement, perceptions of
organizational drivers of engagement and the influence of the governmental context. As the term
“engagement” has become somewhat colloquial, it will be important to assess how employees define
engagement and their perception of the current state of engagement within levels of their organization. Experiences and perceptions of the five organizational drivers impact on engagement will be assessed; engagement is an individual choice, but as the arrows indicate, the organizational drivers influence individual engagement, which is represented in the innermost circle. A strengths-based approach will be used to determine how the drivers facilitate engagement. An “other drivers” category has been included in the conceptual framework to elicit feedback about other possible drivers for engagement that may be present and predominant in the organization. The outer circle depicts how the government context of working in a federal public health agency may impact the organizational drivers and, thus, the individual. There are unique features of working within a government setting that may impact engagement. The constructs of a politicized environment, funding, job security, financial incentives, bureaucracy, turnover in leadership and public service ethic will be explored as it relates to how employees perceive engagement related to these issues. The visual depiction echoes the ecological model, as there are multiple levels that may influence an individual’s engagement. An employee’s engagement behaviors are shaped by the organizational environment and government setting; this study will be an opportunity to explore the organizational and governmental contexts to more fully understand how they impact engagement. It is anticipated that the findings will help to identify and illuminate organizational strategies that have been shown to enhance engagement. Ideally, other similar public health organizations can leverage these drivers to improve engagement, performance and outcomes.
Figure 1: Conceptual Framework- Organizational Drivers of Employee Engagement in a Governmental Public Health Agency
A. Research Design and Methodology

A descriptive case study design was used to study employee engagement within CDC. One of the defining characteristics of a case study is the exploration a phenomenon in its real-world context (Yin, 2014). Engagement itself is a subjective phenomenon that is individually experienced but also experienced within the culture and context of an organization (Shuck, Collins, Rocco & Diaz, 2016). The governmental setting of this project provided an additional level of context in which to interpret the experience and organizational drivers of engagement. An organizational unit within CDC served as the case in this embedded, single-case design, as the main phenomenon of interest is the presence and support of engagement drivers within the organization. Individual employees were subunits of study in order to fully capture and understand their experience of engagement.

A qualitative research approach was used to address the study questions. Qualitative research “seeks answers to questions by examining various social settings and the individuals who inhabit these settings”, thus offering a greater depth of understanding (Berg, 2007). Qualitative inquiry serves as a tool to gain a deeper understanding of an individual’s perspectives and experiences while being sensitive to the context in which they are immersed (Patton, 2015). Engagement has been studied a great deal from theoretical and measurement perspectives; however, little work has been published to describe engagement from an employee’s perspective (Shuck, Rocco & Albornoz, 2011). This dearth of qualitative inquiry is especially surprising because the nature of engagement is very personal. It is worth noting that Kahn’s (1990) foundational ethnographic study of engagement utilized qualitative methods to elicit perceptions, behaviors and experiences around engagement; his research remains the most comprehensive conceptual model
and empirical test of engagement to-date. Recently, there has been a call for more integration of qualitative research methods in the human resources development arena on engagement in order to procure richer data and further explore context (Kim, Kolb & Kim, 2012; Shuck, 2012; Shuck, Rocco & Albornoz, 2011).

The appreciative inquiry (AI) model was used as a lens through which to answer the research questions. An AI focus seeks to bring out the best in people and organizations by examining strengths and taking a positive approach to change (Cooperrider and Whitney, 2005). It is more typical in research and scientific inquiry to have a problem-based orientation, where the focus is on identifying what is wrong and solutions are developed to fix the problems (Hammond, 2013). However, AI assumes that there are inherent strengths in an organization and uses dialogue about those strengths as a basis to envision an even stronger future (Cooperrider and Whitney, 2005). This study sought to showcase promising practices of engagement from a highly engaged organization; therefore, directing the focus on identifying gaps and barriers of engagement is antithetical to the premise. Rather than focus on the barriers that may be present as it relates to employee engagement, an AI approach highlighted the positive aspects of engagement within this case study. There is evidence from the positive psychology and positive organizational scholarship domains that a strengths orientation has contributed to an increase in organizational performance (Botha & Mostert, 2014; Luthans & Youssef, 2007) and an increase in employee engagement as demonstrated in the Gallup (2013) research. A strength-based approach is critical in identifying promising organizational strategies and practices to improve engagement; these lessons may be applied elsewhere at CDC and at other public health agencies.
I. Case selection

Case studies utilize a purposeful sampling strategy to select a sample based on the richness and depth of information that can be obtained within the specific area of inquiry (Patton, 2015). For this study, a single, exemplar case was sampled as an opportunity to gain insights on engagement and its drivers within a federal public health agency, which have yet to be described in the literature. An exemplar case can effectively explore a phenomenon of interest in-depth while elucidating its intricacies (Patton, 2015). The selected case needed to be an organization at CDC that excels in employee engagement and could provide a “best practice” model of positive engagement in order to align with the AI approach. Case inclusion was based on two criteria. In order to identify an organizational unit that would be an excellent model of employee engagement, the list of 2015 CDC Honor Award recipients was a resource. The CDC Honor Awards acknowledge “groups and individuals who have particularly distinguished themselves in service to public health” and “advance CDC’s distinguished legacy of improving public health”. The majority of award categories related to scientific and programmatic activities; while there was not an explicit “employee engagement” award, there is a category of “Excellence in Workforce Recognition” that is well-aligned with the topic of engagement as recognition of employee achievement is an indicator of engagement. The criteria for the “Excellence in Workforce Recognition” award is as follows:

To honor CDC organizational units that promote and instill a culture of recognition by identifying and making opportunities to formally or informally acknowledge behavior, effort, or results—often beyond usual expectations. Aspects of recognition include demonstrated consistent and unique efforts to build a strategic, consistent practice of recognition of staff in a personal, meaningful, timely, and innovative manner. This category is intended to acknowledge a CIO/division/branch that uniquely recognizes and rewards staff to a point where engagement, retention, and promotion are encouraged and furthers CIO/division/branch ability to meet its organizational goals.

Only organizational units within CDC (centers/institutes/offices, divisions, or branches) were eligible for this particular award. A branch within the National Center for Chronic Disease Prevention and Health Promotion was the most recent recipient of the award for demonstrating
“exemplary management and leadership in workforce recognition” at the start of this research. A second criterion of a 2015 FEVS EEI score of 80% or greater was used to objectively confirm a high level of engagement; the CDC average EEI score was 70%. Based on these criteria, the Applied Research and Evaluation (ARE) branch within the Division for Heart Disease and Stroke Prevention (DHDSP) was selected as the exemplar case. The branch EEI score was 84%.

DHDSP's mission is to serve as the nation’s public health leader for achieving cardiovascular health for all and reducing the burden of disparities in heart disease and stroke. The ARE branch is comprised of employees at the branch level and within two teams totaling approximately 40 people who provide leadership on the development, conduct, and use of applied research and evaluation to guide heart disease and stroke prevention efforts; plan, develop, implement and evaluate projects related to applied research, program evaluation, and public health economics; and translate and disseminate applied research and evaluation information to ensure utility and use among stakeholders and partners. The division is a mix of full-time equivalents (FTEs), contractors and fellows, and includes a variety of positions including health scientists, policy analysts, behavioral scientists and students.

The senior leadership team of the ARE branch agreed to participate in and support this project. The lead researcher (V. Byams) was invited to attend a branch meeting to introduce the research study and extend an informal invitation to participate. Contact information was provided for all branch staff and invitations to participate in the project were sent via email along with availability for scheduling interviews. Prospective participants contacted the lead researcher to schedule an interview. Participants signed an informed consent form prior to beginning the interview. This project was reviewed by the human subjects contact at CDC and by the institutional review board at the University of Illinois at Chicago, and was determined to be exempt by both institutions (Appendix A).
B. Data Collection and Analysis Plan

*Semi-Structured Interviews*

Qualitative interviews were conducted with ARE branch members and served as the primary sources of data. Qualitative interviewing enables the researcher to gain a deeper understanding of a phenomenon from an individual’s unique perspective and experiences (Patton, 2015). A semi-structured interview format was used to provide a thorough description and gather rich context information while using targeted probes to answer the research questions (Miles, Huberman & Saldana, 2014). An interview guide was utilized to direct and focus the inquiry so that consistent information is explored across interviewees (Patton, 2015). There were two versions of the interview guide for use with staff and leaders (Appendix B, Appendix C). Although the interview guide grounded the overall content of the interview, the semi-structured format allowed the freedom for the interviewer to ask a follow-up question or probe further based on an individual’s response to a question (Patton, 2015). The questions in the interview guide were affirmative in order to align with the AI, strengths-based approach. As such, the questions asked the respondents about personal and organizational highpoints related to their experience of engagement (Cooperrider and Whitney, 2005). The staff interview guide was piloted by three individuals not associated with the case organization and was refined prior to study implementation. The research questions, measurement constructs and factors are detailed in Appendix D. The goals of interviews were to: 1) determine how the respondents’ define engagement and how they perceive engagement within their organization; 2) assess perceptions of how certain organizational drivers have contributed to their engagement; and 3) determine how working within the federal government may impact perceptions of engagement.
**Document Review**

Documentation was collected and reviewed as additional data sources to explore Research Question 2 regarding the organizational drivers of engagement. A variety of documents from within the ARE branch were sought to determine how the organization supported and facilitated engagement. The branch chief provided several organizational documents relevant to organizational purpose, functions, and employee engagement; a description of the documents is provided in Appendix E. The documents served as additional sources of evidence to corroborate the interview data and provided supplemental information (Yin, 2014).

**Reflective Journaling**

Reflective journaling was used to record and summarize personal thoughts about each individual interview and the data revealed. This tool served as documentation of data interpretation and early analysis during the interview process. Reflective journaling also provided insight regarding areas to explore further in subsequent interviews based on the previous reflections. Reflection is also a useful tool in the qualitative data analysis process and is described further below.

**Data triangulation**

Data triangulation was incorporated into the data collection and analysis. Triangulation is a method that uses multiple sources of data to strengthen the interpretation the findings (Patton, 2015). The use of triangulation is essential to corroborate the same findings across data sources (Yin, 2014). The employee interviews and document review provide multiple, independent sources of evidence from which to confirm the findings. The use of interview and document review as separate methods also helps to strengthen the evidence (Patton, 2015). Triangulation may also
uncover inconsistent or conflicting findings that will require additional interpretation and exploration (Miles, Huberman & Saldana, 2014).

i. Data Analysis

Qualitative content analysis was used to analyze the interview data. Qualitative content analysis is a technique for interpreting narrative data to examine meaning, themes and patterns (Zhang & Wildemuth, 2009). A deductive coding scheme was employed and a list of a-priori codes were developed based on the conceptual framework, research questions and the interview guide (Miles, Huberman & Saldana, 2014) (Appendix F). There were additional themes that arose from the interview data; inductive coding was used to create new categories and classify emergent themes. Five critical organizational drivers for employee engagement were identified based on the literature. However, an “other drivers” category has been included in the conceptual framework and research questions to elicit feedback on other salient drivers of engagement within the organization. The data were categorized by identifying patterns and themes relevant to the research questions.

The qualitative data from transcribed interviews were entered into Atlas.ti 7© qualitative data analysis software. The researcher (V. Byams) was the primary coder; a secondary coder also reviewed interview data to ensure reliability of codes and interpretations. After a-priori codes were applied throughout the interviews, a query report was created for each a-priori code category that included all quotes classified with that code. All quotes were reviewed within each a-priori code category to determine whether other themes (and codes) were emerging. A-priori and emergent codes were applied to paragraphs of text, not line by line; this technique of coding allowed the relationships between codes to be seen in greater context. A reflective analytic memo was created for each a-priori code during this process. The reflective analytic memo was used during coding and
analysis to more deeply consider themes that occurred across interviews and develop new codes based on these themes.

During the analysis process, there were multiple cycles of reading and reviewing the quotes, as well as adding codes and collapsing codes as appropriate. Analytic memos were also used during this process to track coding and analytic decisions. Atlas.ti 7© code co-occurrence tables were used as a tool to organize and sort the data based on overlapping codes. When codes co-occurred, that indicated that two or more codes were used for the same quotation and that the codes are associated with each other in some way (Contreras, 2011). The use of code co-occurrence tables helped to identify what concepts should be explored further and how concepts related to each other. Select results from code co-occurrence tables with relevant c-coefficients were provided for a-priori codes and factors considered significant throughout Chapter 4. C-coefficients served as a quantitative measure of the strength of associations between codes. While c-coefficients were useful for identifying potential patterns, they were not used in isolation to exclusively interpret meaning and relationships. Careful reading and review of the quotes along with memos were used in conjunction with c-coefficients to interpret the data. Matrices were also used to systematically display, further analyze and interpret the qualitative data (Miles, Huberman & Saldana, 2014).

The documents provided by branch leaders were uploaded into Atlas.ti 7© and the same coding and analysis scheme was applied to the document review. The documents provided additional insight into the organizational context and practices.

ii. Data Management

Interviews were recorded and transcribed. Audio files and interview transcripts were saved to a password-protected computer. Hard copies of interview transcripts were kept in a secure file
cabinet and did not contain personal identifiers. Audio files and transcripts will be destroyed after the completion of all research activities.

C. Validity Considerations

The selection of the data collection methods and analysis were intended to limit threats to validity and reliability. Multiple strategies were used to ensure the quality of the proposed research. The Total Quality Framework is a useful lens through which to assess the quality of qualitative research and potential threats to validity; the four components of this framework are credibility, analyzability, transparency, and usefulness (Roller & Lavrakas, 2015). Credibility addresses the completeness and accuracy of data during the data collection phase (Roller & Lavrakas, 2015). Purposive sampling of the case was informed by specific eligibility criteria in order to minimize bias. All members of the ARE branch were invited to participate through three separate contacts. The use of a measurement table and interview guide helped to ensure construct validity and appropriate measurement of research questions. The use of an interview guide provides increased reliability in ensuring that all respondents will be asked the same line of questioning for consistency.

Analyzeability addresses the completeness and accuracy of the analysis and interpretations (Roller & Lavrakas, 2015). Audio recordings of the interviews were professionally transcribed to enhance the quality. A secondary independent coder was used to ensure consistency in the categorization of data and identification of themes. As described above, analytic memos and reflective journaling were used to record coding, analysis, and interpretation decisions. After several rounds of initial coding and early analysis, preliminary findings were presented to ARE branch members during a branch meeting as a member check for validity. As previously described, the use of triangulation enhanced the validity and reduced bias by confirming findings across multiple data sources and methods with convergent lines of inquiry (Maxwell, 2013; Yin, 2014). The transparency component of the Total
Quality Framework addresses the completeness and disclosure in reporting (Roller & Lavrakas, 2015). The use of semi-structured interviews encouraged the collection of “rich”, detailed data that can provide an in-depth exploration of how the case contributes to development of engagement drivers and ground the findings (Maxwell, 2013). The collection and analysis of detailed data improves the transferability to different settings (Zhang & Wildemuth, 2009). The last component of this framework, usefulness, addresses the ability of the research to add value within the broader context of the field (Roller & Lavrakas, 2015). This DrPH research is rooted in a practice perspective to discover insights that can be integrated into organizational systems, and implications and recommendations for practice are offered.
IV. CHAPTER 4: RESULTS

This DrPH research had three primary research questions. Research question 1 had two sub-questions. Research questions 2 and 3 each had six sub-questions. Two methods were employed to address these questions: Semi-structured Interviews and Document Reviews. In addition, Reflective Journaling was utilized following each interview to help contextually ground the data.

Twenty-four semi-structured interviews were conducted over a three-month period (March 2017 – June 2017) with ARE branch staff and leaders. Each interview took an average of 90 minutes to complete (range: 45 minutes – 2 hours). The interviews aimed to answer research question Q1 and sub-questions Q1.1-Q1.2; research question Q2 and sub-questions Q2.1-2.6.1; and research question Q3 and sub-questions 3.1-3.6.

Branch documents were collected from branch leaders and reviewed for relevance to organizational engagement (Appendix E). The document review was conducted to corroborate findings from the interviews for research question Q2 and sub-questions Q2.1-Q2.6.1 related to organizational drivers of engagement.

Findings from each of these methods, and the research questions they addressed, are presented in this chapter.

A. Research Question 1: Current State of Employee Engagement

Research Q1: What is the current state of employee engagement in a federal government public health agency?
Research Q1.1: How do employees define engagement at the organizational unit (branch) level?
Research Q1.2: How do employees characterize engagement within their organization?
**Employees’ Current Experiences and Perceptions of Engagement**

While the ARE branch had been identified as an exemplar case of high employee engagement at CDC as described in Chapter 3, people have varying definitions and interpretations of the term “employee engagement”. In terms of this DrPH research, the construct of employee engagement was defined as an individual’s investment of cognitive, emotional and behavioral energies directed toward organizational outcomes. However, respondents were asked to define and characterize employee engagement from their perspective, and among other staff and leaders. Respondents were also asked about their perceptions of the level of employee engagement, as formally defined in this research, at the branch and agency levels. There were no pre-defined theories on how respondents would respond to this line of inquiry; all of the concepts that follow were emergent. This research question explores respondents’ conceptualization and experience of employee engagement.

**Defining and Characterizing Employee Engagement**

In the interview guide, respondents were asked to think of what comes to mind when defining or describing the term employee engagement; the a-priori code *Defining employee engagement* was used to capture this concept. Respondents were then asked to think about a peak experience or high point since working in the branch where they felt the most engaged in order to place their definition of engagement within a real-life context; this was described with the a-priori code *Characterizing employee engagement*. The following factors *Voice*, *Leadership support*, *Relationships and rapport*, and *Teamwork* emerged as significant in how respondents conceptualized employee engagement.
Voice

The concept of Voice emerged prominently in how respondents defined employee engagement. Voice was defined as when the respondent speaks to the opportunity or experience of providing input into a decision, project or process or an instance that their input is sought by leaders. Also, respondents’ views are sought out by colleagues or leaders; they are listened to, feel heard and see that their opinions and contributions matter. Voice as a construct was mentioned by 19 respondents and co-occurred with Role of leadership, Relationships and rapport, and Leading an activity (TABLE I). In Defining employee engagement, respondents mentioned Voice regarding the ability to give input into their work. Most conveyed that they valued being included in decisions and that having input is evidence of their contribution to the work. During this process, their perspective and expertise are valued as a member of the organization.

I think making sure employees feel like they can provide input into projects, that they feel like there’s a place for them, that they feel motivated to work and that they feel like their work will influence things. (Factors: Defining employee engagement, Voice, Inclusive environment, Feel motivated, and Work makes a difference)

Someone who feels heard and their ideas are acknowledged, not necessarily adopted, but acknowledged, I think is a good sign of engagement. And so as a result of that acknowledgement, then the employee provides more input, ongoing input, and just an increased work ethic. (Factors: Defining employee engagement and Voice)

I guess feeling like your voice is heard, like you are asked to weigh in on particular questions that are relevant, and that you’re heard and that there is some evidence of some action that’s taken that is evidence that either my voice or other employees’ voices were heard. So to me, that I’m approached…but then there’s some evidence that the action taken is based on that input and/or an explanation of why like that couldn’t be done so we heard you, this is what we heard from everybody, ultimately, you know that transparency, like ultimately we have to go forward with something else. To me, that shows an engagement of someone who is reaching out to me and I can respond and I’m heard, but that the engagement is kind of both ways and the action is a reciprocation showing that what I contributed was valued and it was a true engagement. (Factors: Defining employee engagement, Voice, Role of leadership and Transparent information sharing)

In terms of engagement, I did come in as a fellow and met with other fellows who were on different CDC teams. My experience was very different from theirs. I was seen as a team member. They had such a bad experience because they were basically told to do this, do that and I don’t care what you have to say. Do your evaluation work and that’s how it was. Here, I was seen as a team member, a contributing team member and that was an expectation that [my team lead] set. (Factors: Defining employee engagement, Voice, Inclusive environment, Lack of position hierarchy, Expectations, Role of leadership, Agency- negative perceptions and Alternative explanation)
When respondents characterized their peak experience of engagement within the branch, there were frequent mentions of *Voice*, specifically about the role of leaders in seeking input and being inclusive of the ideas contributed by staff. The code *Role of leadership* (defined as a reference to the organizational leaders’ attitudes and practices) strongly co-occurred with *Voice*.

I feel like with [the branch chief’s] leadership, he’s been able to help the team leads that have come in to really continue to keep the staff engaged, and definitely seeks the input of each of the teams when making big decisions like replacing a team lead should a team lead leave. So you really feel like you’re a part of the decision making process or actually, your input is taken into consideration when having to make major decisions about staff and projects. (Factors: Characterizing employee engagement, Voice, Decision making and Role of Leadership)

I think there are a number of things [that characterize a peak experience]. One is being involved in meetings where decisions are made... I just feel that my opinion is appreciated and I feel whether it’s management team or staff in general, I feel people come to me for information… (Factors: Characterizing employee engagement, Voice, and Regular meetings)

It was the fact that I felt there was a...certain level of deference to the expertise that I offered as well as the team members offered and so that felt good in terms of them really listening to...them being leadership, really listening to what it was that we were proposing to develop. And then once we actually begun, you know, once we actually got their okay and actually begun, that there was continual engagement to find out how we were doing and how to figure out what kinds of support we could use… (Factors: Characterizing employee engagement, Voice, Expertise valued, and Leadership support)

*Voice* strongly co-occurred with *Inclusive environment* (defined as emphasis on entire staff being valued, respected and/or part of the collective work) and *Lack of position hierarchy* (equal opportunities no matter title or position). Both of these codes reflected the idea of inclusion and appreciation for different perspectives in connection to having a say in the work, as seen below.

So I can say that when it comes to interests, each year we are asked to propose projects that we would like to work on or that we feel would kind of allow the branch to gain visibility or the team to gain visibility, and everyone is evenly given the opportunity to propose something. (Factors: Designing/developing work, Inclusive environment, Opportunity, Voice, Promote branch and work, and Role of leadership)

When I hear the term employee engagement what comes to mind is involving staff from all levels in either helping to decide processes or ensuring that they understand processes and procedures...engagement primarily means to just include others in the process and decision-making...being a part of the solution or part of the activities. (Factors: Defining employee engagement, Voice, Inclusive environment, Lack of position hierarchy, Autonomy and Decision-making)

In a lot of my other projects I’ve been given a voice, so yeah, all of them have been really positive experiences so far. Given a voice is really important because that just means to me that my opinions matter in these instances and
these projects. And knowing that my ideas, when we were brainstorming, those are being taken into consideration, even though I’m a fellow, but in this team and branch, it doesn’t matter where you’re from. (Factors: Characterizing employee engagement, Voice, Inclusive environment, Role of leadership and Lack of position hierarchy)

**Relationships and Rapport**

The concept of Relationships and rapport is defined as collegial, interpersonal relationships and interactions with colleagues and leaders, and the ability to be honest and straight-forward in these relationships. Also, there is a sense of camaraderie and connection which is not necessarily limited to work-related interactions. This concept emerged strongly as all 24 respondents mentioned this code. When respondents were asked to define employee engagement, they frequently highlighted the importance of a connection with work colleagues being integral to engagement.

I think about connectedness, you know, being connected with others [in the branch]. I think about positive interactions. I think about being asked and also being listened to. (Factors: Defining employee engagement, Voice, Relationships and rapport)

I think that this branch does a really good job of not only helping you grow professionally, but also knowing when to engage and have fun personally and getting to know you…not only being engaged in projects and getting opportunities, but also having the opportunity to get to know your coworkers a little bit too. (Factors: Defining employee engagement, Relationships and rapport, Opportunity, and Work-life balance)

I think being engaged at a professional level, so like in the quality and type of work you’re doing and being engaged in terms of seeking out new projects and new things to work on and then I think, also engagement in a social aspect, so maybe extracurricular or even professionally being socially engaged with the people you work with and developing that kind of rapport or relationship. (Factors: Defining employee engagement, Relationships and rapport, Designing/developing work, and Social activities)

As seen above, respondents consider engagement important from both a professional and social perspective; they mention the social component as the flip-side to the professional component. It is of note that when respondents were asked at the end of the interview what they valued most about working in the branch, the most prevalent response was related to the people and relationships with branch colleagues (TABLE II).
Teamwork

The concept of Teamwork was mentioned frequently when respondents recalled their peak experience while characterizing engagement. Teamwork was defined as colleagues cooperating, working collaboratively and synergistically towards shared goals. This emergent concept was mentioned by all 24 respondents throughout the interviews. When Teamwork was mentioned, it was within the context of meeting challenges and working together towards solutions that will benefit the branch as a whole.

We [had] a challenge that I could not figure out on my own or with the other person who is on that contract. To be able to go back to my team and talk about what is happening on that contract and get not just one, but like four or five great ideas on how to go about and try to address what was happening at the contract, it felt great. Even with the challenge of that work, I went back, I used that information. I had my other team member who sat in that meeting. We both got that information and then we both went back to our next contractor’s call, talked it out and it felt great to have my teammate next to me; we were doing that. (Factors: Characterizing employee engagement, Teamwork, Feedback and Navigate challenges)

A recent experience where I felt very engaged was recently there was kind of a project to give a presentation to our new division director and it’s kind of like a one-week thing of everyone on the team was all working very hard just to really get things done in this week before a few members did the presentation for him. So that was really very engaging just because I felt like everyone on the team...it was kind of like all hands on deck. Everyone on the team was doing their part in their own way and everyone dropped some of the other things that they were doing just to make sure that we got this done because it was important to all of us that the team looks good. So that was good. (Factors: Characterizing employee engagement, Teamwork, Committed and dedicated colleagues, and Promote branch and work)

 Obviously it was two of us presenting, but we were able to use some team meeting time to think about what we wanted to present. My partner and I came up with a way we wanted, kind of the format and how we wanted to present all of this information and then were able to go back to our team, get their feedback, think about what we were missing or what could be presented more efficiently. And then we also wanted to create kind of like a one-page handout to summarize all the information and that really became a good team effort. A couple of days before, everyone was jumping in and working super collaboratively and super efficiently to make sure everything got done. (Factors: Characterizing employee engagement, Teamwork, Internal collaboration, Continuous improvement, Regular meetings, and Leading an activity)

Respondent perceptions of Teamwork seemed to go beyond the surface level of colleague interaction and collaboration; however, not surprisingly, Teamwork did strongly co-occur with concepts related to collaboration including Relationships and rapport and Internal collaboration (TABLE III)
Voice, Relationships and rapport, and Teamwork were not identified in the original conceptual model but emerged as significant concepts that shape how employees defined and experienced employee engagement. These three concepts also emerged as significant in exploring the organizational drivers of engagement in Research Question 2, which will be described later in this chapter.

**Perceptions of Employee Engagement at the Branch Level**

After having an opportunity to relay their own definition and characterization of employee engagement, the respondents were asked to reflect on the level of engagement within the branch based on the definition used for this DrPH project. Respondents were given the following definition of employee engagement:

*Employee engagement is an individual’s investment of cognitive, emotional and behavioral energies directed toward organizational outcomes. This means that a person determines the work is meaningful and feels valuable in their work role. They feel a sense of safety and trust in work situations. These factors allow a person to bring a high level of focus and enthusiasm to their work. This investment of positive energy leads to increased effort towards work and the accomplishment of specific work goals.*

Respondents were asked to think about this definition and describe the current level of employee engagement amongst the staff and leaders in the branch. Respondents were also asked to rate engagement on a scale from 0 to 100 as part of their description. The a-priori code Perceptions-branch was used to capture this question.

**Branch engagement - high**

Twenty-three respondents perceived branch engagement to be relatively high as indicated by their narrative description and/or their numerical rating (Code: Branch engagement - high). Of the respondents that offered a numerical rating from 0 to 100, the average rating was 96.5. Respondents laud their colleagues’ work ethics and collaborative and supportive efforts in accomplishing work.
There is a recognition of staff having individual strengths and skills that contribute to the collective efforts.

I think we have a pretty engaged workforce from my perspective. My experience has been very collaborative. I think people are interested in supporting not just one another but the work task at hand. I personally try to focus my work on the shared goals between myself and whoever else I’m working with and the organization, and I think that’s something that our group does really well, is that we focus—I mean inevitably there are challenges with the process of getting the work accomplished but I think everybody has a pretty shared perspective about wanting our central goals to be met. I think [it’s] like maybe 80, 85%. But to me, that feels quite high. (Factors: Perceptions- branch, Branch engagement- high, Mission clarity and alignment, Dedicated to work, Teamwork, Internal collaboration, and Navigate challenges)

I would say it’s very, very high. I know in the conversations we have outside of team, you know, the office chitchat, we all feel valued. We do feel safe in the work we do. We do feel valuable. Again, I think that’s really rare. If we go back to what my former colleagues in the fellowship program said, all of them did not feel safe. They did not feel valued. They were just number pushers and they were just there to get the work done and that’s kind of it. Where here it is a—I look at where I am now from where I was, and I’m the product of the team [my team leader] created, that environment that she nurtured me, the team nurtured me. I’d probably give it a 95. It’s the best engagement I’ve ever been a part of in my professional [career] and it’s not even a question. (Factors: Perceptions- branch, Branch engagement- high, Alternative explanation, Feel safe, Staff feel valued, Leadership support, and Informal learning and development opportunities)

There is a relatively strong co-occurrence with Committed and dedicated colleagues (defined as when the respondent spoke with high regard of team members and other colleagues; referred to their intelligence, expertise, commitment, and other similar characteristics) and Dedicated to work (defined as when respondent talked about them or colleagues being interested in and dedicated to their work; the work itself is a motivating factor), which are reflected in the quotes (TABLE IV). Respondents also spoke about both leaders and colleagues reinforcing an engaged environment.

Well, based on the definition that you gave, I would say very high. I think that people are… I work with a very highly motivated group of individuals and I think personally, for me, working with people who are motivated and determined and excited about the work makes me want to do better. And I think that sort of effect happens throughout our branch. I think that we do better each other because of that, we better our work, we better the work for our grantees, but we also better the work for each other. I think that people in our branch are very supportive of one another and understanding. I think we all bring something very different to the table and I think that we understand that and recognize that, which makes us a really good team. We recognize everybody has different strengths and we really try to emphasize those and highlight those and bringing those to the table to our work. And I think that we’ve been given opportunities to continue learning more about this topic, which makes it also a great way for us to be able to keep being excited about this work. I’d probably say that many people in the branch work on a variety of projects and I think that also helps in our engagement as well. But yeah, I think overall, I think it’s a very high level of
engagement, which I think continues to motivate and make us work better. I’m always really skeptical of giving like a 100, but I would say yeah, 98 or 99. I mean really, I think that we are an engaged group. I really do. So I would rate them very high. (Factors: Perceptions- branch, Branch engagement- high, Committed and talented colleagues, Diversity, Drive, Engagement is contagious, Feels motivated, Informal learning and development opportunities, Strengths-based focus and Varied work)

So I feel like we are a very productive bunch. I feel like everyone feels that as an individual they have something important to contribute… there’s a lot of signs of just going above and beyond. There’s a lot of sacrifices that are made, like working at home or doing more than we need to, to make sure that our products are the best they can be or to make sure our communication is to the point as it can be. So there’s a level of, I think striving for excellence from individuals, which I think also makes…that’s a collective kind of culture that we strive for excellence. And it’s very hard for me to tease out because I feel like the branch management sets that tone and that culture, like there is that expectation and in a way like I feel like they are the parents without saying like these are the expectations, they can do that kind of look, you know… but I feel like they do that kind of as the loving parent. They set a culture and a tone, but also all of the individuals who work in the branch, all the staff seem to also have that. So I have often contemplated like which came first or which influences the other more, but at this point to me, it’s become so merged and blended that it’s kind of hard to… and I think it’s that, yeah, I don’t know like if all of these individuals, if they were put in a different setting if they would continue to have the same kind of productivity and willingness to sacrifice if they weren’t kind of in such a kind of trusting and empowering culture. I would rate it like 90%. (Factors: Perceptions- branch, Branch engagement- high, Branch identity, Committed and talented colleagues, Dedicated to work, Drive, Expectations, Focus on productivity, High quality work, Role of leadership and Trust)

Perceptions of Employee Engagement at the Agency Level

While this DrPH research is focused on employee engagement within this branch unit, it was important to place the branch experience within the broader agency. Since the branch is an exemplar case of engagement, it was informative to place it within the context of perceived engagement at CDC. Respondents were asked to describe the level of employee engagement at the agency level as a comparator to the branch. Respondents were asked to refer to the DrPH research definition and describe the current level of employee engagement amongst people employed elsewhere at CDC. Some respondents rated engagement on a scale from 0 to 100 as part of their description. Respondent perceptions could be gleaned from previous work experiences at CDC or based on interactions with friends and colleagues working outside of the branch in other areas of the agency. The a-priori code Perceptions- agency was applied to this line of questioning.
There were three most frequently mentioned concepts regarding perceptions of employee engagement elsewhere in the agency. Eleven respondents mentioned the construct *Agency- engagement varies* which was defined as when a respondent is describing engagement at the CDC agency level, they state that engagement can vary across the agency dependent on the organizational unit. However, respondents frequently mention both *Agency- positive perceptions* (relays a positive perception of employee engagement at the CDC agency level; n=17) and *Agency- negative perceptions* (relays a negative perception of employee engagement at the CDC agency level; n=17), often overlapping within the same quotation (TABLE V). Respondents conveyed a duality and complexity in their perceptions of employee engagement at the agency.

I think more often than not you hear the negative stories. So you hear people or you get in conversations with folks that are disgruntled about their workplace or their work environment. That, you know, their supervisor doesn’t hear them or doesn’t listen to them. You know, that they’re sort of helpless to change the issues or environment that is around them. That their supervisors are not supportive. It could be work-life balance types of things. So more often than not I think when you hear about or talk with folks...and again I don’t hear that like multiple times every day, but on occasion when you hear it, you hear people complaining or disgruntled about certain things in their workplace. So you hear more of the negative of, you know, I’m not engaged because my supervisor doesn’t listen to me or they just tell me what to do; they don’t value my contribution or input or, you know, I needed to telework and I wasn’t allowed to or those types of things. That said, I guess there’s also the converse in that I also occasionally have folks with, discussion with folks who like I said the examples of, you know, folks in TB or in HIV or whatever that area very passionate and committed to the problem in particular and the work that they’re doing and because of that, they’re very engaged in the work and the workforce. So, I hear a little bit of both sides, but again I think more often than not, when you hear from folks or talk with folks you hear some of those complaints or issues and challenges. (Factors: Perceptions- agency, Agency- positive perceptions, Agency- negative perceptions and Agency- engagement varies)

From what I’ve heard and what I understand as a culture, I know people who work at CDC tend to be very mission-focused. They are here for a reason. You know, the work that we do is fundamentally about advancing public health missions and I think that just being aligned with that goal in and of itself probably fosters some engagement. I’ve also heard that from a day-to-day perspective in terms of work tasks, I think there is a lot of variability and I think it has a lot to do, from what I’ve heard, it has a lot to do with the leadership in any given organizational unit. I mean I’ve heard some people have micromanaging just like to the millionth degree and are miserable within that environment, and others who have other kinds of experiences. I’ve heard of other groups that seem to have a very high level of employee engagement like ours, but my assessment is that it really varies quite a bit across the agency. (Factors: Perceptions- agency, Agency- positive perceptions, Agency- negative perceptions, Agency- engagement varies Public service ethic, Perceptions- branch, and Branch engagement- high)

I’m just thinking about a friend I have that works in the labs here and he seems really positive about the work-life culture there and I know he is a very dedicated and hardworking person. So that comes to mind, just the positivity about the workplace culture there. I think where I was before, even though there wasn’t like kind of the warm fuzzy feeling from the management necessarily, I feel like the people there were all like motivated intrinsically to
do good work. So I think that must be positive, or I mean there must be experiences like that around the agency. On the other hand, I've heard from some people who have worked in environments that have been completely uncomfortable, unsafe, and that they've described feeling kind of miserable. So I know there must be some of those settings as well. (Factors: Perceptions- agency, Agency- positive perceptions, Agency- negative perceptions and Agency- engagement varies)

There is a sense that there are many CDC employees that are dedicated to the public health mission and working hard. However, there is also a sense that there are some places within the agency that have environments antithetical to engagement because of poor supervision or other challenges. Several respondents made the assessment that the level of engagement in the branch was greater than engagement elsewhere at the agency.

I think just like working with people across the agency and then having personal relationships with people in different divisions, centers, branches, different locations, there is the strong sense from those interactions that the level of engagement is not as high, especially in terms of ownership or seeing importance in the work that's being done and then definitely that trust and feeling open, especially with leadership. (Factors: Perceptions- agency, Agency- negative perceptions, Agency- branch engagement > than agency, Trust, Autonomy, Ownership, Perceptions- branch, and Role of leadership)

So having worked at other places at CDC, I feel that this bunch is one of the most engaged besides the last group I was with, actually [they were] extremely engaged as well and a very happy bunch. Across CDC I do have friends and colleagues in other places that aren't as happy. I know some that are actually miserable. So I would say across the board we are at a more engaged level than some other places. (Factors: Perceptions- agency, Agency- negative perceptions, Agency- positive perceptions, Agency- branch engagement > than agency, and Perceptions- branch)

B. Research Question 2: Organizational Drivers of Employee Engagement

Research Q2: How have certain organizational drivers contributed to employee engagement in a federal government public health agency?
Research Q2.1: How does the establishment and alignment of purpose support employee engagement?
Research Q2.2: How does the empowerment of the workforce support employee engagement?
Research Q2.3: How does the encouragement of growth support employee engagement?
Research Q2.4: How does the provision of support by an organization support employee engagement?
Research Q2.5: How does the promotion of fairness support employee engagement?
Research Q2.6: What other organizational drivers support employee engagement?
Research Q2.6.1: How do other organizational drivers support employee engagement?
Five constructs were identified in the original conceptual framework as critical drivers of engagement at the organizational level: \textit{ESTABLISHES AND ALIGNs PURPOSE}, \textit{EMPOWERS THE WORKFORCE}, \textit{ENCOURAGES GROWTH}, \textit{PROVIDES SUPPORT AND PROMOTES FAIRNESS}. An \textit{OTHER ORGANIZATIONAL DRIVERS} construct was also created to acknowledge the potential discovery of additional organizational drivers. For each construct, one or more separate factors were identified as important components of that original construct and were measured through the collection of data (Appendix D). These factors were defined by using a-priori codes. Additional factors were defined using emergent codes. An exploration of these five main constructs, the related factors identified, and newly discovered constructs follows.

\textbf{ESTABLISHES AND ALIGNs PURPOSE}

The construct of \textit{ESTABLISHES AND ALIGNs PURPOSE} was defined as when an organization and its members have a clear purpose, and goals and activities are aligned to that purpose. The original a-priori codes \textit{Clear mission}, \textit{Strategic alignment} and \textit{Role of leadership- purpose} were used to capture this construct. After further examination of the data and reflection, the concepts \textit{Clear mission} and \textit{Strategic alignment} overlapped in such a way that they seemed to measure the same concept. When respondents spoke about the mission, they also spoke about how their work related to and aligned with the mission. Therefore, the two concepts were collapsed into a new code \textit{Mission clarity and alignment}, which was a significant factor for engagement. The interviews and document review revealed additional emergent factors \textit{Branch as resource} and \textit{Partners in the field} as important to this organizational driver.
Mission clarity and alignment

Mission clarity and alignment was defined as when the respondent spoke about understanding and fulfilling the organization's purpose and priorities through their work; they also spoke about how their or others' work contributes to the branch mission and priorities. Respondents were first asked to define and describe the common mission or purpose that unites everyone in the branch. Respondents were then asked to think about a time they felt their work contributed to the branch’s success and fulfillment of its mission. They were also asked to speak about what aspects of the situation created a feeling of engagement. Respondents had a clear understanding of the branch mission and how their work aligned. They spoke frequently about how their work in research, evaluation, and translation was in direct support of the mission; the code Function focus (defined as references to the importance of work functions related to evaluation, policy, translation; also implementation of science, research, and methodology) strongly co-occurred with Mission clarity and alignment (TABLE VI).

In my branch [and on] my team, we do evaluation research and we utilize research methodologies. It's really built on the focus of how can we translate skills and knowledge to our grantees, how can we collect this information, synthesize it and then share it back out with people who can use it in the field of public health. So I don't know if that's like a stated mission but it seems like that’s… and I mean we do have a stated mission, we have a mission statement within the branch, so I guess I could probably try to repeat that. But it seems to me like the spirit of it is really centered around building that evidence, sharing it out and being a resource not only for our grantees but for others across the division that they can call upon our expertise and resources to really help improve the work that they do as well. (Factors: Mission clarity and alignment, Function focus, Build/expand evidence base, Outcomes oriented, Partners in the field, and Branch as resource)

I think translating research, translating the evidence into digestible and understandable ways that we can provide to people in the field on cardiovascular disease and then evaluating programs; evaluating projects to identify best practices and identify strategies that work, for cardiovascular disease correction, I think that really does capture an idea of what we do. But I think also we're a motivated group of individuals who want to make sure that we are providing the best, most up to date and helpful evidence and research for people to be doing cardiovascular work and providing them with the tools and resources to do that effectively. (Factors: Mission clarity and alignment, Function focus, Drive, Topic focus, Build/expand evidence base, Outcomes oriented, Partners in the field, and Branch as resource)

Respondents communicated a strong focus on their work improving outcomes within the field of heart disease prevention, which appeared to be central to how people interpreted and
executed the branch mission. The code Outcomes oriented, defined as work in the branch contributing to outcomes, program improvement and demonstrating impact, strongly co-occurred with Mission clarity and alignment. Employees’ efforts are directed toward tangible outcomes.

[The mission] that unites everyone? That we’re all trying to… the work that we’re doing is for program improvement, we’re trying to increase the evidence base and I think that is what kind of drives everyone is we want to be able to prove that the work that we’re doing actually has benefits and is for the greater good and it’s the right work. (Factors: Mission clarity and alignment, Outcomes oriented, Build/expand evidence base, and Public service ethic)

Our branch puts on so much emphasis and value on evaluation and helping the field of cardiovascular disease, helping move that needle and understanding what’s going on in the field. I think [my supervisor] made this project seem very important and I did know that going in, but I think he really did put that emphasis on it to know that what we’re doing really will have impact. I think that was really helpful, emphasizing that mission and also my engagement with the project in general, knowing that what I was doing was important. (Factors: Mission clarity and alignment, Outcomes oriented, Topic focus, Partners in the field, Work makes a difference and Role of leadership-purpose)

**Branch as resource**

Branch as resource emerged as a significant concept. Due to the nature of the work, branch employees characterized their organization in a service-oriented role. Branch as resource is defined as when the respondent spoke about the branch as serving as a resource for internal (CDC) and external stakeholders; it included the provision of technical assistance to grantee and partners; the provision of subject matter expertise and guidance; provision of support, advice, counsel and trainings. The role as a resource was often in relation to internal and external collaborations; in fact, Branch as resource strongly co-occurred with CDC collaboration and External collaboration (TABLE VII). The branch conducts its evaluation and translation work in support of programs that are often housed in other branches in the division. Respondents spoke to this service role in relation to the mission.

Our branch chief says “If you build it they will come”. [The mission is] to be seen by all the groups we work with as leaders in research and evaluation. To be seen as a service-oriented branch and a high quality scientific branch, and to be a branch where people are valued and respected. (Factors: Branch as resource, High quality work, Function focus, Staff feel valued, and Mission clarity and alignment)
I think the general mission is...so the aim is health promotion and disease prevention, but I think the goal or the mission by which that is accomplished is really focusing on science. So like either producing the science in terms of managed groups and data or analyzing the science or applying the science in terms of translation. And then providing technical assistance to our states as they use the science and then as they evaluate the programs that use the science. So a lot of our work is creating, translating, evaluating, and supporting. And that's not just within our branch and our grantees, but across the entire division. Our relationship to the other branches is just along the same line. Whether we're collaborating with them to create or we are translating what has been created—whether from internal or external—or evaluating, sometimes internal projects or running national state evaluations, and then providing technical assistance and subject knowledge expertise. (Factors: Branch as resource, Mission clarity and alignment, Function focus, CDC collaboration, External collaboration, and Partners in the field)

The purpose of the document was to support our grantees and partners in finding good data sources, quality data sources, for their reporting and things like that. So I think that certainly ties back to the mission in making sure that the data we're using is kind of the highest quality. As a part of that process, I got to meet with a lot of other leaders in our division, outside of our branch, to get their input… (Factors: Branch as resource, Mission clarity and alignment, CDC collaboration, External collaboration, and High quality work)

In reviewing branch documents related to its role and functions, the Branch as resource concept is reinforced. A summary is provided for both teams within the branch and the description highlights the provision of evaluation technical assistance to division grantees, as well as the development of various resources to support division grantees in implementing cardiovascular disease prevention strategies. Another branch document calls attention to “providing expertise and technical assistance to internal and external partners as well as “preparing and disseminating scientific papers, resource guides, and other tools to help facilitate the translation of knowledge to action”.

**Partners in the field**

The code *Partners in the field* emerged as relevant to both the *Mission clarity and alignment* and the *Branch as resource* factors; overall, it was mentioned by 22 respondents. *Partners in the field* describes how the partners in the field (e.g. grantees, public health practitioners, community health workers, public) can use products and resources and apply them to their work in a practical way. Also, the code can denote a connection to what is happening in the "real world" setting. Respondents are
conscientious of how their mission and related activities impact the recipients of their work products.

To put it simply, [the common mission that unites the branch] is evaluation and translation. It’s kind of in separate parts of the separate teams, but really to provide quality evidence that programs are accomplishing what they set out to and also stay in the forefront of research and best practices within evaluation and also translating that into products that people in public health can use that are useful for their day-to-day work. So doing this research evaluation and translation, kind of forming it into useful things for health practitioners. (Factors: Mission clarity and alignment, Partners in the field, Function focus, Build/expand evidence, Outcomes oriented, and High quality work)

I think [the mission is] improving health outcomes but from the heart disease and stroke prevention perspective and really providing that technical assistance or [those] guides or products that will be helpful in the field depending on our audience. And it’s really nice to see a branch that’s really product driven and targets audiences specifically for each of the products. (Factors: Mission clarity and alignment, Partners in the field, Branch as resource, Topic focused, and Work products)

I think supporting the programs is a big one with the state and local health departments. A lot of our work in different ways is focused on how can we get what we know from the science out there to help the programs be more efficient, more effective. (Factors: Mission clarity and alignment, Partners in the field, Function focus, Outcomes oriented, Branch as resource and Supporting work at state and local level)

Respondents place a positive value on their work connecting and being of use to partners and the public. As seen below, respondents comment that it enhances their motivation and makes their work more meaningful.

I think I’m motivated by a need that needs to be met and being able to do something that someone has identified as a barrier or a gap and being able to do something to address that. I like being able to do that. So I’ve worked on some ways to expand the evidence base and so seeing and talking to program staff and our partners in the field and having them say this is a need, this is important and it will help us do our work, that really motivates me. I really want to have a connection to those that are in the field doing the work. I don’t want to just be doing my work in a vacuum, so I think that allows me to feel that my work is meaningful and it will be used, it will be valuable. (Factors: Partners in the field, Mission clarity and alignment, Build/expand evidence base, CDC collaboration, External collaboration, Feel motivated, Work addresses gap and Work makes a difference)

I’ve had the opportunity to work on evaluations of some of our national programs and also doing some evaluation research, and out of all of them, I’ve been able to produce products that have been publicly posted that a lot of the public has taken and used. And so that’s very fulfilling and it makes me feel like my work is valued and it also has brought attention to our branch. (Factors: Partners in the field, Mission clarity and alignment, Function focus, Promote branch and work, Branch products valued, and Staff feel valued)

A branch document sharing a summary of branch functions highlights activities that have utility to partners:
Building Practice-based Evidence: Identify, evaluate, and disseminate practices from the field that are promising or emergent using approaches such as systematic screening, evaluability assessment and effectiveness evaluation.

Evaluation of Programs: Conduct evaluation of programs in the field using mixed methods approaches, including case studies, and performance measurement to assess implementation and effectiveness.

Practice and Policy Research: Conduct research and surveillance of federal, state and local practices and policies to inform scale-up and implementation of evidence-based interventions. Our approach involves engaging subject matter experts and developing and applying new methods to translate research into practice.

Dissemination Science: Disseminate our work to partners by developing and implementing products and tools to keep them informed about the most recent advancements in heart disease and stroke prevention.

*Partners in the field* strongly co-occurs with *Public service ethic*, which is defined as when a respondent shared a desire and/or experience related to serving the public and making a difference through their work – this relationship will be explored further under Research Question 3 (TABLE VIII).

**Role of leadership- purpose**

*Role of leadership- purpose* was the final a-priori code used to explore the *Establish and Align Purpose* driver. It was defined as mentions of the organizational leaders’ attitudes and practices in establishing and aligning purpose. *Role of leadership- purpose* was mentioned by 18 respondents overall. Respondent comments regarding *Mission clarity and alignment* were frequently related to how leaders helped reinforce alignment with the mission, especially through translation and dissemination activities so that the information can be applied (TABLE IX).

I would say the mission that unites us is the application of evaluation results, the translation of information – can be evaluation, can be outside of it – to improve [cardiovascular disease]. I would say that we have this big evaluation framework but I think for us it’s focusing on the last two steps and that’s when you get your results and then disseminate those results. And I think what we’re trying to do, or what as a branch we’re trying to do, is provide people with the results or the information – because that’s that translation piece – to make data driven decisions to improve their programs. I think that’s what [the branch leaders] are really trying to drive home. It’s about getting us to ensure that we take that next step and that our partners know that there is more than just getting the results. It’s
doing something with it, because if you don’t do something with it, how are we improving heart disease and stroke prevention? We’re not. (Factors: Mission clarity and alignment, Function focus, Topic focus, Build/expand evidence base, Outcomes oriented, Role of leadership- purpose and Partners in the field)

Actually, [the branch leaders] were very focused on helping [make the connection between my work and the mission], they gave lots of great ideas about dissemination and how the work should be shared. They really helped me focus a lot on translation and dissemination and as a result, we’ve gotten much better at it. So like when we first started, it was more around let’s just get the work done, let’s do it, let’s approach it, let’s get the results and share the results, but we really didn’t have kind of a route for sharing, we hadn’t created a plan. And now we’re on our third or fourth rotation of that kind of project and it’s much more seamless, like we do it in a way that automatically ensures we have a dissemination plan and that we have documents to disseminate and who we should be sharing them with and those kinds of thing. So I think seeing how much better we do, something that we already did pretty well is a testament to how much [the leaders] have invested in terms of sharing ideas around dissemination and around translation and really getting us to the next level in terms of being able to put out work together. (Factors: Mission clarity and alignment, Role of leadership- purpose, Continuous improvement, Function focus, Consult with supervisor/leader, and Leadership support)

[My supervisor] really helped to ensure that the strategies that we were focused on and the way that we were framing the assessment and the evidence that we were finding really aligned with the aim or mission of not only the branch, but also the center and grantee needs. And a lot of that was accomplished by creating partnerships with external partners at state health departments and organizations…and then also [partnerships] with branches across the division for them to help vet it for us. (Factors: Mission clarity and alignment, Role of leadership- purpose, CDC collaboration, and External collaboration)

One of the team leads describes their role in helping employees recognize the connection between their work and the branch mission below. The team lead actively facilitates discussion around clarifying alignment. Successful alignment is reinforced when activities receive positive feedback from division leadership.

I try to give folks the autonomy to develop work and develop project ideas but also try to stay involved enough to where I can provide input on making sure that things align. And when there are questions on whether it’s aligning or priority, it’s on my one-on-one agenda for meeting with [the branch chief] and then sharing that feedback back with team members to try to help folks better understand …what we need to be thinking about in terms of alignment of those goals and alignment of the division priorities and the branch priorities. Then I think the other thing that we try to do—we do this in branch meetings when we can—to share feedback from the [division] director’s office on the value of our work whenever we hear it and then I think for me on a team level, I always try to take back like when we have our meetings with our division leadership or senior leadership, I always try to bring back the successes or the alignment of our work across the division so when our division director highlights how much he liked you know, X, Y, or Z, I make sure to bring that back to the specific team members who worked on it but then also to the team so that the team sees that the work that we’re doing does matter up the division chain and then people recognize that. (Factors: Strategic alignment, Role of leadership- purpose, Work aligns with mission, Autonomy, Branch products valued, Consultation with supervisor/leader, Designing/developing work, Feedback, Promote branch and work, Communication and Regular meetings)
**EMPOWERS THE WORKFORCE**

The construct of *EMPOWERS THE WORKFORCE* was defined as when an organization encourages employees to exercise their initiative in how they get their work done; also, the organization allows employees to have ownership of work and outcomes. *Autonomy* and *Role of leadership- autonomy* were the original a-priori codes used to explore this concept and are significant factors for this construct. Additional factors emerged from the data and are described below.

**Autonomy**

*Autonomy* was defined as when the respondent speaks to the power to shape and direct their work and environment. The respondent also refers to the lack of micromanagement or over-management by branch leaders. This concept may include mentions of freedom related to how work gets done. Respondents were asked to think about a time they experienced a sense of ownership and autonomy within this branch. Furthermore, they were asked what was it about the situation and the organization that supported them in feeling engaged. *Autonomy* was one of the most grounded codes overall in terms of frequency of mentions (n=121); it was also mentioned multiple times by all 24 respondents. Given its pervasiveness throughout the interviews, the construct of *Autonomy* was a significant factor for the construct *Empower the Workforce* and engagement overall. Respondents described a sense of freedom in getting work done and not being micromanaged (TABLE X).

*Nobody has micromanaged me ever. I feel like I have the freedom to do my work obviously meeting deadlines and such, but I feel like I have the ability to actually do my work at my pace and to me, having that sort of room to do that also really helps me to excel in my work because I don’t feel like I have any…yes, I feel like I do work in a very face paced environment and I am working quickly, but I also feel like I’m not going to get in trouble. I never have this fear of like I’m going to get in trouble because I don’t do something or if something falls through the cracks then it's not going to be good. I always feel like I have…I feel very safe here. (Factors: Autonomy, Feels safe, Organizational drivers- other, Accountability, and Flexibility- scheduling and telework)*

*I think in our branch there is a high level of trust that the employees—there’s not micromanagement with the supervisors. The supervisors know that the employees know what needs to be done and there’s a trust that we will get*
that done so there’s no like day-to-day check-in’s just to like looking over your shoulder to make sure you’re doing what you’re supposed to be doing. So I think that’s a big driver. I feel trusted and I also feel supported to know that if I do need something, I can go back to my supervisor and to my team to ask for help and to ask for information. (Factors: Autonomy, Trust, Organizational drivers- other, Leadership support, Consultation with supervisor/leader, and Role of leadership- org drivers other)

Four additional factors emerged prominently as being significantly related to Autonomy and experiencing a sense of engagement. While these factors are distinct in terms of definition, they are related concepts and often overlap in respondent quotes.

Ownership

When respondents described Autonomy, they frequently mentioned having ownership of the work; the code Ownership strongly co-occurred with Autonomy (TABLE XI). Ownership was defined as when the respondent referred to having primary responsibility for the execution and/or outcomes of a project or activity. Respondents spoke about having a high level of responsibility and the ability to carry through that sense of accountability and investment in their work.

So for several of the products or projects that I coordinate there is definitely a sense of ownership. I think that leadership helped because even though I’m [a fellow], there is still a lot of responsibility that’s given and they allow you to take ownership because once you are assigned a project, they really let you do it. Of course there are still checks and balances, but still you are really given control to coordinate it and lead it. So I think that really helps [engagement] in terms of creating a sense of ownership. (Factors: Autonomy, Ownership, Leading an activity, Consultation with supervisor/leader, Lack of position hierarchy, Informal learning and development opportunities, and Role of leadership- autonomy)

I think that [branch leadership] helps to foster engagement by kind of allowing for ownership in certain projects, so like there are projects where you’re just engaged mainly doing one small task and then projects where you are part of the development and moving it along the trajectory of where it’s going. (Factors: Autonomy, Ownership, Organizational drivers- other, Role of leadership- org drivers other and Designing/developing work)

I think that [with those two projects], I feel a great sense of ownership. I think people are kind of relying on me to lead them. I think it’s a pretty direct link to ownership because it was basically like, hey, will you do this? So that kind of implies that you’re the owner of that responsibility. And autonomy, you know, there was never anyone asking me how are you gonna do this? When will you get it? That all came from me kind of thinking it through and deciding the best approach and the timeline and following back up. (Factors: Autonomy, Ownership, Leading an activity, Designing/developing work and Take initiative)
Respondents connected Ownership with having a high degree of agency, which allows them to be more invested and engaged in the work.

**Leading an activity**

*Leading an activity* emerged early on in the interviews and is defined as when the respondent refers to the role of leading or co-leading an activity (e.g. project, product, assignment, presentation, etc.); respondents may also speak to the type of responsibilities in that role. This construct was mentioned by 22 respondents and, as would be expected, frequently co-occurred with Autonomy and Challenging work (defined as when a respondent is able to take on different and/or more difficult work assignments that stimulate their interests, usually in conjunction with increased responsibility) (TABLE XII). *Leading an activity* also strongly co-occurred with Ownership as the concept speaks to a higher level of responsibility when taking on a leadership role. Mentions of *Leading an activity* frequently related to having an expectation that everyone in the branch will take on a leadership role and a level of responsibility for an activity.

I can say that for the most part, I've been able to feel ownership with the majority of the projects that I work on and the majority of the things that I work on simply because I've been able to voice my opinion openly and honestly and seek out the expertise of others on the team to really help me to formulate something that I feel like is mine. Even if I've gotten input from others, I can feel like it's mine and I've had the opportunity to lead or co-lead these projects. Everyone on our team, there's...I don't think it's necessarily a policy that is written, but we've all had the opportunity to lead or co-lead a project. So, even those [staff] that come in at a GS-12 or are fellows, they may not lead a major project but there are smaller projects that they get to lead and so it really makes you feel like you own it, like it's yours. (Factors: Autonomy, Leading an activity, Ownership, Lack of position hierarchy, Teamwork, Voice, and Internal Collaboration)

I have a project, I guess one of the projects that I lead that I'm most engaged in. So ever since I started, I've contributed to it and I've always led it. There was just the expectation of you write the scope of work, you create the design of what you want, what are the goals of the project, but there's always a touchpoint, so I'm always able to brainstorm or consult with the team lead or the branch team. So I'm never just creating something...I can create something in my own space, but I don't just go and implement without kind of sharing and getting an approval before I've gone too far down, you know, before I've written a whole scope of work and they say no, that's not possible. So, ever since then, I've felt like I had autonomy on that project and I feel like each year kind of my maturity increases and I feel like there's even more and more where the team lead [says] well, you know the project [best]. (Factors: Autonomy, Leading an activity, Designing/developing work, Expectations, Teamwork and Consultation with supervisor/leader)
The opportunity to lead projects and have responsibility for work, quality and outcomes appears to be positively related to employee’s level of investment and engagement. There is also an implied inclusivity associated with taking on leadership responsibilities; respondents note that employment status and length of tenure do not inhibit the ability to lead activities. Fellows describe the opportunity and impact of having a leadership role.

So maybe just even using those terms of [branch leadership] saying that I’m an expert as a fellow, I’m like okay, if that’s what you think of me and that’s how you perceive me, then that’s sort of the level of work I feel like I need to be doing as an expert level and I’ll do what I can to fulfill that. So maybe that’s it. Now that… sorry, I feel like I have these little epiphanies as I continue talking about it. But I think that was it. I think I was a little surprised at first to say, oh, I’m an expert? But I’ve only been here for not even a year, how am I the expert? But then, it started to become clear to me that I did know a lot more than the other team members on this topic and that’s what I needed to bring to the table. And they really did look to me for that expertise. And so then I started being a little bit more confident in that and taking on that autonomy and that leadership of fulfilling that role. (Factors: Autonomy, Leading an activity, Ownership, Lack of position hierarchy, Strengths-based focus and Expertise valued)

As I said before, for me there are several projects that I work on that I coordinate. So for several of the products or projects that I coordinate there is definitely a sense of ownership. I think that leadership helped because even though I’m a fellow, there is still a lot of responsibility that’s given and [branch leaders] allow you to take ownership because once you are assigned a project, they really let you do it… (Factors: Autonomy, Lead an activity, Ownership, Lack of position hierarchy, and Role of leadership- autonomy)

Voice

The concept of Voice originally emerged as a critical factor in how employees define and characterize employee engagement as a part of Research Question 1. Voice was not identified as a factor in the original conceptual model, but based on responses it aligns within the Empower the Workforce driver. Voice (defined as when the respondent speaks to the opportunity or experience of providing input into a decision, project or process or an instance that their input is sought by leaders) is also mentioned within the context of Autonomy in terms of employees being involved in decisions and the development of projects, and also being able to influence the direction of projects (TABLE 1).
So I think employee engagement really means the ability to express your ideas and then do work or participate in work related to the advancement of the ideas that you happen to generate within the context of where you work. So in my specific context, it’s more around, I know what the general goals of the division are and then I’m allowed the room to come up with ideas and craft those ideas and rally my team around the support of that. And that to me is employee engagement. (Factors: Autonomy, Voice, Defining employee engagement, Teamwork, Mission clarity and alignment and Internal support)

I think there was a lot of leadership asking for my ideas, like specifically saying, what do you think we should do related to this? How can we best get this kind of information? Much of the discussion that we were having around it was not leadership really saying this is what we’ve decided, it all seemed like a very open, fluid kind of situation where leadership…were really asking for input and ideas and then asking for those ideas to be implemented. There was a lot of focus on not just information gathering, but generating kind of how to do it, when to do it, what decisions should be made. So I think the more responsibility that was given to me, the more I felt engaged. (Factors: Autonomy, Characterizing employee engagement, Voice, Ownership, Role of leadership, and Challenging work)

One of the leaders describes the importance of having autonomy and the ability to give input from the perspective of an employee and supervisor.

Probably some of it is influenced by my own preferences. I like to feel like I have autonomy in my work, but also have enough clear direction in where I’m going, but have the autonomy to help kind of decide and figure out how I get there. That has been important to me for job satisfaction in the past and I guess continues to be and so I think I’ve adopted that to some extent as a philosophy and I’ve seen that in other workplaces I’ve been in to where folks do not feel like they have as much input or say into the work and seem to lose motivation or interest in the work. (Factors: Voice, Autonomy, Clear direction, and Alternative explanation)

**Role of leadership- autonomy**

The role of leadership in creating an environment that encourages autonomy is another critical factor and was captured by the a-priori code *Role of leadership- autonomy*. It was defined as the organizational leaders’ attitudes and practices regarding employee autonomy and ownership. *Role of leadership- autonomy* frequently co-occurred with the code *Consultation with supervisor/leader*, which was defined as when the respondent talked about consulting with their supervisors or other branch leaders as a means of “checking in” to provide them information, to seek guidance or advice, to ask questions, or to troubleshoot issues with a project (TABLE XIII). Respondents had ownership of projects but appreciated the opportunities and instances to consult with leaders about the direction or status of projects; it increased their feeling supported and feelings of engagement.
When it comes to reporting out on a project that I lead, or any questions related to it, leadership comes directly to you. They may give...like the branch chief may give my team lead a heads-up and then she'll alert me that he's going to come and talk to me, but he will come directly to me to talk to me. Or, you know, if my team lead has questions, they will come directly to me. We each have one-on-ones with our team lead to go over our projects and that's an opportunity for us to really express how the project is going, how we're doing, whether we have needs that aren't being met or if there are things that are going extremely well. My team lead just wants to hear it all and it is very open to it and provides suggestions when we need to troubleshoot things. But we have those weekly and so it really gives you the opportunity to just kind of talk through things and I appreciate that. (Factors: Role of leadership- autonomy, Consultation with supervisor/leader, Autonomy, Leading an activity, Regular meetings, Feedback and Responsive leaders)

For this evaluation project, again, to be very honest as I have...but the branch chief is involved in the project, but he stepped in when he needed to, but also did a very great job of knowing when to step back and let me and another fellow do some of that work. He expected us to take ownership of it, but he also supported us in taking that ownership. If leadership needed to be pulled in, that's the role that he served. And when he needed to provide some of that expertise and evaluation on a program, he was there if needed. But he really, I guess now that I'm thinking about it, he did a very good job of that. He really did. He let us run with the project. I felt like he never said explicitly that this is what I want you to do, but be in some way or the next said that this is...you know, we pulled you in because you are the expert at this and we want you to bring your expertise to the table so do what you think is fit. And I guess I knew that I was able to, again, do the work that I needed to do and if I needed his support or he needed to step in, he would be there, but be supported me in how I was doing it. So I always felt that I could be a leader in some sort of way, but knowing that I was going to have that sort of guidance or support if needed. (Factors: Role of leadership- autonomy, Consultation with supervisor/leader, Autonomy, Ownership, Expectations, Leadership support, Expertise valued and Leading an activity)

Below, a team lead and the branch chief, respectively, described how they approach their role in providing autonomy with guidance to employees. They were intentionally conscientious about giving staff control of their own projects and saw their roles as advisory.

I don't think any of us are micromanagers so people are given a lot of leadership responsibility. The branch chief never micromanages the way I lead the team or the work that we do. To me, a lot of it is trust in terms of like I think he trusts me and I trust people on my team to bring to me the things they need to bring to me and have me weigh in on things I need to weigh in on, or have me look at things and to handle the things that they should be handling, and to know the difference between those things. People know that they are leading projects and that I'm here to help them, because I always look at my role as more of a supportive role. So I'm here to support whatever they're doing and to help them with things. Obviously, I have to review clearance on things like that but in terms of the day-to-day work, they do their projects. They pull me in when they want my advice, when there's a problem, or when I need to run interference with other leadership in other branches or divisions and kind of as needed. Everybody's different with that so I basically leave it up to them. I always tell them in their one-on-one's that's their time to use how they want to with me. Some of them want to give more updates, some just bring a couple of problems, some people like to process out loud more, some people have a couple of questions, but I trust all of them to lead their projects and tell me if there's something I need to know, I trust they'll let me know. (Factors: Role of leadership- autonomy, Autonomy,
My approach is to be available to inform and advise, guide the work if necessary. But to also be comfortable not being involved in the work if I'm not needed. I try to give folks the autonomy to direct and lead the work as they see fit and I hope that I have value if I'm engaged so if they need me they'll come to me and ask me and I'll always give them an opinion. I mean if you ask me, you're going to get my opinion. I'm going to tell you what I think you should do, but if you don't need to ask me, that's fine, too. I'm not going to typically jump in and darken your doorway and say oh, you know, you should be doing it this way sort of thing. I actually don't have time to pay attention to all that stuff. I'm just as happy to let people do it their own way and get it done. They may get through them better if I'm not involved. So I've seen examples or times like heck, they don't need me to work on or direct the project because they can do it or they're doing it better without me. So I've seen repeated examples of I don't need to be involved. So it's been sort of reinforcing over the years. So it's a survival tactic that I recognize that I don't need to be involved for the work to be successful. (Factors: Role of leadership- autonomy, Autonomy, Consultation with supervisor/leaders, Leading an activity, Leaders- need to delegate, Ownership, and Expertise valued)

**ENCOURAGES GROWTH**

The construct of *ENCOURAGES GROWTH* was defined as when an organization provides learning and development, career advancement and challenging work opportunities; these opportunities are not only available but also valued by the organization. The a-priori codes *Learning and development opportunities, Challenging work and Role of leadership- growth* were used to measure this construct. While *Learning and development opportunities* (defined as when the respondent discussed opportunities to improve knowledge, skills and competencies related to work and/or personal development; this concept also included discussion of career advancement opportunities) was identified as an a-priori factor, it was determined to be too broad a concept to be meaningful. During analysis, the two more specific factors of *Formal learning and development opportunities* and *Informal learning and development opportunities* emerged prominently from the interviews and were determined to be significant within the *ENCOURAGES GROWTH* construct.

**Formal learning and development opportunities**

In assessing branch learning and development opportunities, respondents were asked to think about the most challenging and/or exciting career development opportunity they have
experienced in this branch; this experience could also be a work assignment that stretched and challenged them in a positive way. Furthermore, respondents were asked to describe the exciting or challenging career development opportunity and how it created a feeling of engagement. Formal learning and development opportunities was defined as references to the ability or opportunity to take work-related training in the branch; it may also include references to specific training or classes that they have taken including CDC and non-CDC courses and long-term training. Other formal opportunities included conference attendance, emergency response rotations (e.g. Ebola and Zika virus responses) and details, which are temporary assignments to backfill a position within the branch or to fill a temporary vacancy at another organizational unit within CDC or another federal agency. Formal learning and development opportunities was mentioned by 19 respondents. Respondents frequently mentioned these more formal learning opportunities when asked what organizational factors within the branch helped to facilitate engagement, which was represented by the concept Organizational drivers- other (defined as references to any other organizational drivers outside of a-priori organizational drivers including other factors in the work environment, colleagues, policies and/or practices that respondent considers important to feel engaged) (TABLE XIV). Respondents described having access to a variety of training and formal learning opportunities, some of which were organized and provided by the branch leadership.

In terms of the opportunities that the branch gives you for engagement, we get to go to a lot of conferences and trainings and that's really encouraged so that's a really big positive. On one hand we can do that because of the training fellowship, but even for those who are not fellows, who are FTEs or contractors, they are still really encouraged and allowed to go to conferences and given the opportunity to engage with other professionals. So that's a really good thing. And then we have trainings like facilitation trainings and other skilled trainings that we do through CDC University and through other mechanisms; it's really supported by the branch leadership. (Factors: Formal learning and development opportunities, Organizational drivers- other, Role of leadership- org drivers other, and Fairness)

I think that was definitely good organizationally to provide trainings for us, such as that [StrengthsFinder] training. We also did a trust training as well. One of the things that our leadership has done to really help us is when we have trainings, they are really trainings that kind of focus on our professional strengths and our personal strengths, too, and then they're able to organize us a lot better in terms of the projects that we work on and it helps in identifying future projects, too, based on kind of that knowledge that we have. (Factors: Formal learning and development
Another thing that [the branch chief] does is he’ll do some trainings, special trainings where he’ll take feedback from us on what are people interested in what we should be doing. One year we did a facilitation training where we had a third party come in, they were a facilitation company and they ran us through a 2-day certification for facilitating. It was awesome and that was something I use on a daily basis, whether it’s facilitating on call or I’m on a web forum or I’m leading a peer-to-peer call. Another [training] we did was the Speed of Trust and we went through understanding what is trust in your colleagues and your employees and how you can fix trust, how you can build stronger trust and how higher trust can lead to less drag and more efficiency in an organization. I used [tools from the Speed of Trust training] and I’ve turned one of the worst working relationships that I had here outside of my team [with an external partner], it just didn’t work… and now it is the best working relationship that I have currently. (Factors: Formal learning and development opportunities, Organizational drivers- other, Role of leadership- org drivers other, Leaders interested in developing staff, Voice and Trust)

Respondents also acknowledged receiving additional knowledge or other benefits from the trainings or experiences, which enhances engagement.

I mentioned before, just those training opportunities so that you’re much more well informed, really helps me become more engaged because then I feel that I have the background knowledge to provide input, provide more informed decisions if it comes to that. (Factors: Formal learning and development opportunities, Organizational drivers- other, and Voice)

I [have received] some relatively formal trainings that I really liked. I learned something new [outside of] my area of expertise. It’s something I needed for my work but I had not had that [type of] training before. I feel that [the training] really helped me to do my job better. (Factors: Formal learning and development opportunities)

Two of the branch documents reviewed describe branch-wide trainings on strengths (StrengthsFinder) and trust (Speed of Trust- Foundations). Attendees of the strengths training gave a brief assessment afterwards and very positive feedback was given:

- The entire day was GREAT!
- Interesting and helpful. Thanks!!!
- Good training!
- Great training! I feel encouraged and have a great appreciation for branch management.
- Excellent program that was very well facilitated.

In the interviews, respondents speak to the benefits they received from their experiences with training and other formal learning opportunities. They emphasized the increased knowledge
and skills gained through these activities that promotes increased engagement and increased contributions to the organization.

**Informal learning and development opportunities**

Informal learning and development opportunities was mentioned by 21 of 24 respondents and was defined as mentions of learning through experiences or informal venues; respondents may also express learning from colleagues and leaders. This factor strongly co-occurred with related concepts Challenging work, Leading an activity and Leaders interested in development (TABLE XV). Respondents speak about the value of learning through experience, and being more engaged and evolving professionally as a result.

I really value the supportive learning environment… I think is what it comes down to. That many of my experiences have been new over the past year and I still feel like I am learning and developing my skills as an evaluator and I feel like this is a very supportive environment to do that in. So the camaraderie between teammates contributes to that… my experience is everybody is willing to give you guidance when you ask and give advice on maybe what some additional areas for learning would be. A very supportive learning environment. (Factors: Informal learning and development opportunities, Relationships and rapport, Branch as positive environment, Feedback, and What do you value most)

I think when I [was promoted to a higher grade level], I felt more like I was in the leadership role. You know, for the first couple of years in the branch, I was often a support to a lead on a project and then there was a switch in the expectation that I would be a lead. And I think at that time, I was like hmm, maybe not, but my team lead saw that I was ready and once I got into it, it felt very natural. [My team lead] saw that I was ready before [I did]. I mean, when you come into a leadership role it does take some, I would say definitely the first year there’s a lot of learning from those experiences. And now, it’s just a lot more natural…so that was a career development for me. I just became more and more invested with my work and that expectation of that you are responsible for these projects, whereas, before when I was supporting, I was like well, that decision kind of lies on someone else. So all of that, I mean it has encouraged me to feel more engaged, but it has also required me to be more engaged. I’ve really had to invest everything into being a leader. (Factors: Informal learning and development opportunities, Leading an activity, Challenging work, Leadership support, Role of leadership- growth, Career advancement and Expectations)

Two respondents describe experiential learning somewhat in contrast to formal learning. While trainings have their own utility, the respondents speak to the value of learning by doing.

Yes, I've definitely had access [to trainings]. I didn't always take the training, but I know there's some available. I can definitely take trainings and learn a lot, but I think there are some things I don't even know that I have to learn until I've experienced that this is kind of an issue that could come up. So even though there are trainings and I definitely feel there are a lot of different resources I could use, you know, there are some things that you can really
just only learn from experience, I guess. (Factors: Formal learning and development opportunities and Informal learning and development opportunities)

Certainly there’s also an appreciation of ongoing capacity building in terms of formal trainings and conferences and those things, but sometimes actually giving someone the opportunity, for example, of serving [in a formal leadership role], I mean there’s no better way to learn all the stuff that is involved in that than doing it. And I know that it’s benefited me because now I understand [better]...

Respondents also mention the availability of these learning experiences and opportunities for career development even as fellows who are relatively new to the workforce and CDC.

[It is exciting as a fellow] to be part of a project right from the start where we talked to different stakeholders and different subject matter experts and being part of those conversations. That’s been a great development because just having that opportunity to communicate with [those] individuals and understanding the policy components from a much broader context, just being able to be in that room of people has always been great. And so just having the opportunity to manage that [project], that has been great career development for me. (Factors: Informal learning and development opportunities, Leading an activity, Challenging work and External collaboration)

[An exciting] opportunity I got was during my first year as a fellow, I was given the opportunity to review articles [for a journal]. So that was really a good opportunity in terms of career development. I’ve never published an article, but I’ve reviewed a lot and so it’s really cool to be that unknown peer reviewer and to get that experience. And then I think as well as that, just opportunities to present our work to division leadership. (Factors: Informal learning and development opportunities, Leading an activity, and Challenging work)

Leading an activity

First mentioned within the construct of EMPOWERS THE WORKFORCE, the concept Leading an activity is frequently mentioned and co-occurs with Informal learning and development opportunities (TABLE XII). The opportunity to lead and co-lead activities and step into leadership roles inherently provides a learning experience and development of leadership skills; the relationship between these factors will be discussed further in Chapter 5.

I think [leading those two programs] were definitely the biggest management jobs I’ve ever had. And I think it’s been challenging in that I learned a lot on the best way to manage and work with my co-lead and work with our other evaluators who work on the programs and communicating with our grantees as well. So I think I’ve just learned a lot through those experiences. (Factors: Leading an activity, Informal learning and development opportunities, Challenging work, External collaboration, and Internal collaboration)

When I first started [working on this program], I had several other team members being present on meetings facilitating introductions and just being there to take on more of that lead while I was learning. And then there came a time after 2-3 months when they had gradually dropped off. This is a very time intensive project so they had dropped
Challenging work

As seen in the preceding quotes, the concept of Challenging work also strongly co-occurs with Leading an activity, as well as with Informal learning and development opportunities (TABLE XVI). Challenging work was an a-priori code and was defined as when a respondent is able to take on different and/or more difficult work assignments that stimulate their interests, usually in conjunction with increased responsibility. Respondents often expressed appreciation for having the opportunity to take on challenging assignments and more responsibilities to enhance their professional development and increase their engagement.

I think I was given the opportunity to do something really innovative that actually had some...there's not agreement around it yet and so even at CDC we ran into some people that didn't agree necessarily with our approach... And being able to do that kind of work at kind of an earlier stage of my career, I think that was really engaging and exciting. I'm glad I had the opportunity to do something like that that was so meaningful and complex and really challenged me. (Factors: Challenging work, Informal learning and development opportunities, Opportunity, and Innovation)

I do feel like I always seem to be juggling a lot of projects. But I also think too, that that kind of comes down to...I don't feel like I'm looked at as a fellow in this branch; I feel like everybody is treated as equal so everybody is given opportunities to do and participate in things. I think that my workload is not ever lessened because I am a fellow. People expect, you know, because I've done great work, it doesn't matter who you are, we want you to continue doing this work and so I've been pulled on several projects because of that, which is always a great opportunity and maybe I just have a hard time saying no. I think that sort of engagement too has been really helpful, but has also been contributed back to my workload. (Factors: Challenging work, Workload, Workload-heavy, Fairness, Lack of position hierarchy, and Opportunity)

Two respondents used a variation of the phrase “filling big shoes” when they spoked about experiences with Challenging work; they appreciated the opportunity to take the lead on a project.

I think a little bit in terms of my own kind of accomplishments in work, I think about times when I've had...where like opportunity has aligned with skills has aligned with recognition has aligned with need. So it's kind
of when all the stars align. There’s like leadership support but also I’m interested in doing it and it serves a purpose
that is higher than maybe just like doing some of the regular day-to-day tasks. I think it was a lot of support and
opportunity. I think asking staff to step into shoes bigger than what they wear on a day-to-day basis is…it’s an
important opportunity, it’s an important way for people to be able to grow both their skill set and find their niche in a
group. (Factors: Challenging work, Characterizing employee engagement, Informal learning and development
opportunity, Leadership support, Work based on interests, Recognition and rewards, and Opportunity)

So I was approached by [the branch chief] to present an overview of the branch, branch mission, the work at
the branch level and in his words, not mine, I was filling his shoes. I was going to be [the branch chief] in this
presentation, which to me, felt like I had very big shoes to fill. You know, acting as the quote-unquote Branch Chief
and providing his part of a presentation to our new Division Leadership was one of the highest compliments… And so
it was challenging in that I wanted to convey all these really great things the way that [the branch chief] conveys them so
well. Not only did I have to make sure I was speaking about the branch in the way that he would like the branch to
be talked about, but also conveying all the main points and learning some of the other areas that I don’t work in
generally at the branch level. So learning those areas and what the work that they are doing, including the economics
work that happens at the branch level. It was definitely a challenge, but it was a challenge I was very excited to be
doing. (Factors: Challenging work, Leading an activity, Informal learning and development opportunities,
Opportunity, Promote branch and work, and Role of leadership- growth)

Branch leaders identify and share these opportunities when available, but also encourage
staff to take the initiative in requesting or volunteering for challenging assignments. A branch leader
describes their perspective of this process below.

[If employees want to take on different or more difficult work assignments], all they’ve got to do is ask. Yes,
so there’s some individual responsibility in that if someone is interested in something different or something new or
increased responsibility, there is some onus on them to come forward. I had a vacancy [for the deputy branch chief
position] and it took a while to go out and get a formal acting in so we had opportunities in the branch where people
wanted to help out and so some people at that time came forward but then other people, even after the fact, they would
come forward and talk about well, you know, I was really interested or I might really be interested in the opportunity if
it ever comes up again. I use the example about the onus being on the individual to speak up about when you want
new opportunities and things but then that also provides an example that’s happened in other cases where we do try to
announce when there’s an opportunity for some different or new sort of skills or engagement. In other cases, this would
happen more at the team level than a branch level. It may be a certain project. So, you know, if there’s a project
coming up and we need someone on the team to step up and take leadership of it, there’s the need or request from
management or leadership across the division to do something, who’s interested or willing? So announcing and sort of
identifying and promoting opportunities that then people can respond to or volunteer for and then also people stepping
up and saying I’m interested in an opportunity like this or this type of development opportunity should it come up.
(Factors: Challenging work, Formal learning and development opportunities, Take initiative, Communication,
Opportunity, Role of leadership- growth and Leading an activity)
Role of leadership- growth

In examining the Role of leadership- growth, it is an exploration of the organizational leaders’ attitudes and practices in offering and/or encouraging learning and development opportunities and challenging work. Nineteen respondents mentioned the Role of leadership- growth throughout the interviews. The concept strongly co-occurs with Leaders interested in development, Formal learning and development opportunities, and Career advancement (TABLE XVII). A review of the results from the 2017 FEVS demonstrated that there was a 100% positive response for the item “supervisor supports employee development”. Respondents reiterated that they feel supported in terms of accessing training and development opportunities, as well as being encouraged to pursue learning opportunities. As previously discussed, these learning opportunities contribute to employees feeling engaged.

In terms of opportunity, I feel like we work in a place like where our leadership is really open to hearing about our goals and then they kind of work past those goals, so they suggest things for us to do, they'll help with training, they'll provide opportunities to do something else like when I said I was interested in a senior position, but I wasn’t sure if I wanted to be in management, I got the opportunity to do a 90-day detail as the deputy of the branch. I was referred by the division to go to the CDC Leadership Management Institute and then I did a detail in [another CIO] as a team lead. So there was a clear discussion of what my goals were and then there was the opportunity for me to get experiences to meet those goals. And I’m not unique in that kind of situation; I’ve seen that happen with my colleagues the whole time I’ve been here. (Factors: Role of leadership- growth, Formal learning and development opportunities, Leaders interested in developing staff, Opportunity and Fairness)

They’ve always been very supportive of me doing training and going to conferences or buying books and I think that has contributed to my professional growth and my learning opportunities. The organization, as a branch, I think that both [the branch chief and my team lead] have been very supportive of different opportunities that come. I can’t really recall a time where they said no, I can’t even honestly recall a time where others have been denied. And I think that’s markedly different from other branches in our division, from other units across CDC... I know several people on our team who’ve been detailed for maybe six months or so to another agency. So I think that having opportunities to grow have been useful and probably has allowed people to want to explore, but also contribute back to the organizational unit. (Factors: Role of leadership- growth, Formal learning and development opportunities, Leaders interested in developing staff, Alternative explanation, Leadership support, Organizational drivers- other, and Role of leadership- org drivers other)

Branch leaders speak to their approach of supporting development opportunities for all staff. Again, there is a dual approach of providing opportunities in addition to personal responsibility by staff to take the initiative in pursuing opportunities. Leaders intentionally focused
on professional development and demonstrated support, whether through branch-sponsored
trainings or through individual consultations with staff, as can be seen by the quotes from the
leaders below.

I certainly think that we’re in an environment that’s supportive of training and development and learning
opportunities so we typically have folks going to conferences and professional meetings not just to present, but also to
partake of the meetings, to engage in professional training opportunities and to take CDC courses or others. I like to
think that or I perceive, that we are supportive and promoting of training and development opportunities, but it really
does fall on...it’s the onus of the individual to identify the training that they want to take. So I can’t say that as a
branch we have a list of additional extra external trainings or things that we encourage folks to do, but we encourage
folks to identify opportunities and then in general I think we’re very supportive of letting the folks do those types of
things. (Factors: Role of leadership- growth, Formal learning and development opportunities, Leaders interested in
developing staff, Leadership support, and Take initiative)

If people want to learn certain things... I have a couple of people that are interested in deputy director-type
work so they’re shadowing [the deputy director] and working on different things. When people first start, like fellows,
there are some things that they can’t officially do. I’ll have them shadow people or help write a statement of work or
things like that if they’re interested in getting an FTE... Once I understand what they’re trying to do — so somebody
says my goal is to be an FTE at some point — then I try to give them experiences that will make them marketable to
be able to say, yeah, I know how to write a statement of work. I mean they can’t officially be a Contracting Officer’s
Representative (COR) obviously but they can help with those tasks and shadow the people on the team that are COR
and see what’s involved in that. So it’s more just for each individual trying to understand what they’re trying to do and
then looking at an array of ways to help them learn that. We work with so many different groups, like somebody
wanted to learn from somebody in another division or another branch; there’s plenty of those kind of opportunities.
(Factors: Role of leadership- growth, Informal learning and development opportunities, Leaders interested in developing
staff, and Challenging work)

**FOSTERS COMMUNITY**

The original driver PROVIDES SUPPORT was defined as when the organization values
employees’ contributions and cares about their well-being; the concept also includes receiving social
support from supervisors, colleagues and external collaborators. While a sense of social support and
concern for well-being were relevant themes, the data relayed a stronger sense of creating and
nurturing community and connection among members of the branch. As a result, the driver name
PROVIDES SUPPORT was determined not to be appropriately aligned with the findings. This
driver was re-conceptualized and re-named as FOSTERS COMMUNITY in order to more
accurately reflect the findings. FOSTERS COMMUNITY was defined as when the organization
seeks to support and nurture the people and relationships to help create a supportive work
environment. Also, the organization values the employee and their well-being. The original a-priori
codes used to measure the construct PROVIDES SUPPORT were Internal support, External support
and Role of leadership- support. The a-priori code Internal support was used when the respondent
conveyed feeling supported by members in the branch or relayed positive work interactions and/or
relationships with branch leaders, supervisor and/or colleagues. The concept also included the
sentiment that "people have my back". Respondents were asked to reflect on the level of support
they feel among branch colleagues and how well do they feel supported in terms of the
accomplishment of assignments and project goals. Respondents were also asked how they feel
supported in terms of work-life balance and workload, and how support creates a feeling of
engagement. Internal support was a pervasive concept and frequent code throughout the interviews; it
was one of the most grounded codes as all 24 respondents made some mention of feeling a level of
support from other branch members. Upon reflection, it was determined to be too broad a code to
be meaningful and was eliminated as a factor during data analysis. The concepts Relationships and
rapport, Social activities, Work-life balance, and Teamwork emerged as more relevant and meaningful, and
were demonstrated to be significant and more specific in terms of respondents’ experiences of
support within the branch as demonstrated below

**Relationships and Rapport**

*Relationships and rapport* was first introduced as an emergent factor under Research Question 1
in *Defining and Characterizing Employee Engagement*. Positive interactions and camaraderie with branch
colleagues was a significant factor in respondents’ conceptualization of employee engagement. All
24 respondents mentioned *Relationships and rapport*, and the concept reflected the importance of
socializing and connecting with others in the branch as contributing to a feeling of engagement.
Drive-by hellos [come to mind when I hear the term employee engagement]. A lot of people just walk around, leadership just walks around, so I see engagement as leadership-to-employee rather than employee-to-leadership. But they walk around a lot just checking in with people and seeing how they were, how their weekend was. So I see that more casual interaction as engagement, more so than actual job responsibilities. (Factors: Relationships and rapport, Defining employee engagement and Role of leadership)

I guess my first day [was one of my earliest positive experiences at CDC]. I just had a great experience meeting both team leads and then ended up going out to lunch with our branch chief and a couple of the other fellows who were on the team at the time, and I think that was just a great way to introduce everybody and get to know people and start feeling like part of a community. It was just nice to have that social time to like get to know people beyond just what projects they’re working on. (Factors: Relationships and rapport, Social activities, and Positive early experience in the branch)

[Working here] is so 180 from my other work experiences… It’s like while you still have fun, you still have stuff to do and meet those deadlines so there’s some level of strictness to it, of course. But the closeness between people, I don’t think I’ve…I sort of experienced it at a certain level, but there were so many grumblings in that old job that I didn’t have it. I didn’t feel like I was a person, a really integrated employee there. But this one, right from the get-go it was like let’s have some fun, let’s connect and hold that connection all the way through, hold it strong… yeah, that’s the biggest highlight that I have with this whole experience here. (Factors: Relationships and rapport, Work-life balance, Accountability, What do you value most, and Alternative explanation)

Respondents also explicitly linked the ideas of having positive relationships with colleagues being connected to a higher level of engagement and, thus, the outcome of higher quality work. It is important to also note that respondents often speak about the uniquely strong, positive relationships among branch colleagues in contrast to other work environments outside of the branch, whether at CDC or elsewhere, that were not as relationship-oriented.

I think I really appreciate all the colleagues I work with and I think our leadership, especially, has done a really good job making sure everyone is engaged in their work. There’s never really been a time that I can think of, even thinking back to my first few weeks, that I felt that I wasn’t engaged and I felt that other people weren’t engaged. I think it’s just kind of like the culture that our leadership has developed and I think that certainly comes back to all of my coworkers and colleagues and the staff who have ended up in our branch. I just think everyone wants to be collaborative and have that level of trust with people. And I think that in turn, relates back to the quality of the work if people are invested in their colleagues, they are more invested in their work as well. (Factors: Relationships and rapport, Organizational drivers- other, Role of leadership- org drivers other, Continued engagement, Branch identity, Internal collaboration, High quality work and Trust)

When I feel comfortable with people I work with, I think I can just excel a lot more. I think that one of the best things that I’ve seen in this branch is that they are a welcoming group of people, they want everyone to feel part of the team and no matter where you are level wise, if you’re a fellow or a FTE, if you’re on this team or that team or at the branch level…I remember that being one of the best memories I have was feeling that I was welcomed into this group and I was part of the team and people wanted me here and were excited that I was here. I think that that happens a lot and I think that sort of level of comfort really drives our engagement because I think that we, not only feel that we are a part of this, but also because we are a part of this we can do our work really well. I think that that
also really helps, having a good attitude, and we’re honest with each other and I think that sort of foundation right there of connectedness, really then does help to foster good work. I mean I’ve been lucky in the past, I have never worked with bad people, but I know that I’ve been in bad situations before, not here specifically, but being uncomfortable or being in a bad situation…I’m not as motivated to do the work. So I know for me just having that foundation of I’m welcomed, I’m here, people are happy to see me, this is a good place to me and right off the bat, I’m much more willing to do good work and much more engaged and enthusiastic to excel in my work, to put in that time and effort. (Factors: Relationship and rapport, Perceptions- branch, Branch as positive environment, Inclusive environment, Lack of position hierarchy, and Alternative explanation)

It’s a very supportive, familial environment. I’m not really sure when it kind of clicked, but I think there is a clear clicking that happened where we kind of started operating much more like a team in support of the work, in support of the division initiatives and in support of everybody doing their best and wanting to make sure everybody had an opportunity to feel like the work that was being done and what was being put out was their best work. And I think we have a vested interest in making sure that everybody feels like that. I’ve done details in other places and I don’t feel like that happens everywhere. (Factors: Relationships and rapport, Teamwork, Support of work-related priorities, Dedicated to work, Alternative explanation, Opportunity and What do you value most)

Branch leadership appears to set the tone for an environment that values people and relationships as evidenced by the comments from leaders below.

The first thing that comes to mind when I think about what I value most about working in this branch...it's the people and relationships that I have with the folks in the branch. I value that I can walk around and on an impromptu basis you know, invite people to have lunch or go to lunch and we find some folks typically on an ad hoc basis to have lunch together when those times come up. So I value those personal aspects and social aspects. I value the people in the branch. I value the relationships with people in the branch. It's important to me to have those relationships and that people feel like they have those relationships, that they're recognized and valued as people, that sort of thing. So the first and foremost to me like what I value...why I want to come in to work every day, it's because of the people I get to see and the people in the branch that I work with. (Factors: Relationships and rapport, Social activities, Staff feel valued, Informal recognition, and What do you value most)

Relationships and rapport strongly co-occurred with Social activities, Work-life balance and Teamwork; the code was also frequently mentioned when respondents were asked to identify any factors within the organization or work environment that they considered important to feel engaged in their work (Organizational drivers- other) (TABLE II).

**Social activities**

As previously noted while exploring Research Question 1, the emergent code Social activities strongly co-occurs with Relationships and rapport and 17 respondents mentioned the concept during their interviews. Social activities are defined as the occurrence of or participation in various social
activities or events organized or facilitated by the branch. These activities are not usually related to work projects; rather, they provide an opportunity to socialize with branch colleagues. Social activities include “icebreakers” during branch meetings, seasonal events (e.g. Fall Fling, Spring Fling), lunches, and other off-site outings attended by members of the branch. Social activities, whether planned or spontaneous, appear to be pivotal in fostering strong connection and engagement within the branch.

The activities serve as venues for strengthening relationships and creating community.

I worked with a few other of my colleagues in the branch to help plan an event for the fall where the branch could come together and sort of have a time where they can just sit and bring some food and talk to each other. And I remember that being a moment where it was really nice to not only get to know my coworkers, but also plan something that everybody was excited about. And we did something very similar in the spring, which was a much larger event, we went to a park, and we planned some activities, but that whole planning process was not only a bonding experience with the folks that I was working with, but it was something that everybody in the branch was really looking forward to and I felt really happy to be a part of that experience- to be a part of something that everybody could be excited about. Obviously not in a project sort of way, but it made me feel more a part of the team, which I think then for me, helps to drive any work I do with the team. (Factors: Social activities, Relationships and rapport, Characterizing employee engagement, and Teamwork)

There’s a lot of fun retreats that the branch does and so I’m probably sure that gets around the agency that we do a lot of retreats where we go out and do outings, like going to the park or [other off-site places]. So we just take time to also do fun things and I think creating an element of fun to the work has been pretty useful. The team that we had also just kind of clicked together so I think more organizationally… they have done things strategically to make folks click. I do think that individually there has been a level of folks just like each other or personally know each other and I think that’s helped to build or foster relationships because an organization can build certain structures, but at the end of the day, people have to like each other and get along. And so I think that has worked well. (Factors: Social activities, Relationships and rapport, Organizational drivers- other, Role of leadership- org drivers other and Work-life balance)

We schedule off-site lunch meetings so everyone can also feel that engagement of being involved with their colleagues just a little bit outside of work, and just making sure that everyone is having a good time, having time to have a break like that. I think in addition to that support, you know both team leaders and the branch chief come around and ask people if they want to go to lunch and stuff like that. So in addition to being really supportive, willing to do whatever is needed to get the work done, they also really care about having people be engaged with just everyone that works here. (Factors: Social activities, Relationships and rapport, Work-life balance, Organizational drivers-other, Role of leadership- org drivers other, and Role of leadership- support)

The incorporation of Social activities helps to solidify relationships by allowing employees to bring their whole selves into their work environment instead of just their work role, which is appreciated by staff.
During branch meetings, there's often an informal opening exercise or something where we talk about ourselves as real living humans and bring up like how many dogs we have or that we enjoy hiking or biking or whatever. There's also, for example, these little challenges and stuff. At Halloween, we have the costume parade and judging, and we have a Spring Fling where we get together and it's typically outside of campus and whether it's like a kickball game or whatever, it's I think definitely nurturing that you are a person more than just being here and doing your work. (Factors: Social activities, Relationships and rapport, Regular meetings, and Work-life balance)

Branch leaders are intentional in planning activities and making time for social interaction, as noted by the comments from leaders below.

We try to balance the work with some social, fun, light type activities. So traditionally at a branch meeting, it will not be uncommon for me to do an icebreaker. Which to me, just again, it keeps a little bit personal and social...it's not all work-related. There’s ad hoc lunches that happen. I think both of the teams do that- where as a team they go out to lunch regularly. I think creates a sort of social engagement aspect to it. (Factors: Social activities, Relationships and rapport, Work-life balance, Regular meetings, and Perceptions- branch)

We have our monthly off-site team meetings, we have retreats and outings just for team building and also just to try to keep things light and have some fun, too. We work hard and play hard, so it’s having people work really hard but also try to keep things fun and have a sense of humor about things and keep the team meetings light, and we laugh a lot. (Factors: Social activities, Relationships and rapport, Organizational drivers- other, Regular meetings, Work-life balance and Role of leadership- org drivers other)

In addition to Relationships and rapport, Social activities strongly co-occurs with Work-life balance, Role of leadership- community, Organizational drivers- other, and Regular meetings (TABLE XVIII).

**Work-life balance**

Work-life balance is another positive component of the branch environment that contributes to staff feeling supported and was found to be a significant factor. It was defined as support from branch leaders and/or the supervisor related to non-work priorities, i.e. the employee’s need to balance work and other responsibilities. A staff profile document included in the document review demonstrated embracing non-work priorities and showed a personal side of staff. Each staff member has a profile that includes their photograph, a brief description of their role and expertise within the branch and a listing of hobbies and interests. The concept of Work-life balance included the integration of "fun" into the workplace. Not surprisingly, there was great overlap with Relationships and rapport and Social activities; however, Flexibility- scheduling and telework was the strongest co-
occurring code (TABLE XIX). Respondents appreciated having flexibility in their work schedule, whether to take time off or take care of family or personal obligations, and commented on how that enhances their work engagement.

I value that there is flexibility to grow and to have some work-life balance. To me that’s important to how you’re able to do your day-to-day work... I think that impacts how I work on a day-to-day basis. I think it impacts my mental health as far as being able to have a flexible work environment where I can take vacations that I want to, I think it’s helpful that I can do my work at home or come into the office. I value that for the most part, I like my team members and that’s been helpful to have team members that I like. Yeah, so I do value that, it has fostered that environment of flexibility and work-life balance and growth. (Factors: Work-life balance, Flexibility- scheduling and telework, Relationships and rapport, Informal learning and development opportunities, and What do you value most)

I’ve had a couple of family emergencies... that sounds awful to say but [as a branch] we’ve had a lot of emergencies, and they’re just like well, they need to go, they’ve had health concerns or what have you and they need to do what they need to do. And they’ve been very supportive in saying we’ll cover you, whatever you need to do, you just let us know and when you can log in, we can chat about what needs to be done. They’re very aware of [people’s personal situations] and they make a point to show that they are aware of it and they’re not indifferent to it. (Factors: Work-life balance, Flexibility- scheduling and telework, Relationships and rapport, Leadership support, and Role of leadership- community)

I feel very supported [balancing work and non-work priorities]. That’s probably one of my favorite things about CDC is the flexibility and the telework. I feel like that actually really increases my engagement because it allows me to take care of the things I need to take care of, and then when I’m ready to focus on work, which may be at different times, like the flexible scheduling, I really get excited and I’m into work. So really having that, being able to make those decisions about how you spend your time most effectively, I think that has been really important. And also feeling valued and like they understand that you have other priorities and feeling supported in that way too. (Factors: Work-life balance, Flexibility- scheduling and telework, Autonomy, Staff feel valued, and Role of leadership- community)

While there is substantial support for work-life balance, staff still a have significant workloads and many responsibilities to juggle. Despite their heavy workloads, respondents appreciate the flexibility and a balanced approach to getting work done.

I think in general we have a pretty positive work culture. The expectations are really, really high. The expectation is that you carry a heavy load and do so with excellence is evident. At the same time, I think that the leaders are pretty reasonable when it comes to also understanding the constraints of some of those. Like if you’re carrying a lot of work, you need to be understanding how things get done in a timeline. So I appreciate the flexibility. That’s something I appreciate and it helps me feel engaged. I think that most people are really dedicated to the work that they do and feel strongly about the need to accomplish it with high quality. But being able to do so within kind of the constraints of your own life and other kind of extenuating circumstances is really, really helpful. (Factors: Work-life balance, Flexibility- scheduling and telework, Workload- heavy, Expectations, Accountability, Branch as positive environment, Organizational drivers- other, Role of leadership- org drivers other, Dedicated to work, and High quality work)
I feel like I have a mixed response to this question. So I feel really supported in [balancing work and non-work priorities]. I think the teleworking, for me, helps. That’s something that does help to reduce my stress and it allows me to be at home faster and more. I also feel like there’s a culture of you take the time that you need, it’s your annual leave and sick leave... I’ve been hearing stories from others [outside of the branch] where they put in a leave request and it will just get rejected for no reason, just because. And I don’t know that reality. My reality has always been it’s your annual leave, it’s your sick leave, take it. So there’s that, but then there’s always the expectation that your work will always get done. So there’s never [an instance] that you can’t take time off, but it also doesn’t mean that your responsibilities at work will change. So you have to make it happen, however you need to, you can take your personal time, but you have to make what needs to happen at work happen and in a timely manner. So maybe it’s delayed by a day or two because you took time, but ultimately, it has to get done. (Factors: Work-life balance, Flexibility- scheduling and telework, Workload, Expectations, Accountability and Alternate explanation)

Work-life balance is not discussed as a license to do less work or be less accountable. There is still an expectation of high quality work and meeting deadlines. Rather, a heavy workload and Work-life balance are able to co-exist in a way that enhances engagement.

**Teamwork**

The concept of Teamwork first arose in the analysis of Research Question 1 within the construct of Defining and Characterizing Employee Engagement and reflected a collaborative, synergistic energy between colleagues as they worked toward shared goals. In the context of community, Teamwork exemplifies how colleagues help each other in the completion of projects and other work-related priorities. Individuals lend their skills, time and effort in support of other branch members and the collective work.

I think we have a pretty engaged workforce from my perspective. My experience has been very collaborative. I think people are interested in supporting not just one another but the work task at hand. I personally try to focus my work on the shared goals between myself and whoever else I’m working with, and I think that’s something that our group does really well, is that we focus— I mean inevitably there are challenges with the process of getting the work accomplished but I think everybody has a pretty shared perspective about wanting our central goals to be met. (Factors: Teamwork, Internal collaboration, Perceptions- branch, Branch engagement- high, Clear mission, Dedicated to work, Navigate challenges and Support of work-related priorities)

Luckily, the program calendar year for each program varies a little bit, so it’s rarely like we have a ton of deadlines for every single program at the same time. And even if we do, different groups of people work on each program. Two of my programs had deadlines all about [the end of last month], so I really relied heavily on one of my other coworkers on the other program I worked on to kind of help take the lead on a lot of things that were going on over there, just because I didn’t quite have the capacity to worry about all that or to be as involved for those couple of weeks. And that coworker was certainly very willing since eventually they will have...I think it’s kind of like, this is
a really busy time for me so can you help me out and if it’s a really busy time for you, I certainly will as well. I think [the workload] increases [engagement]. I think because everyone works on quite a few different programs and projects and they’re working with so many people on our team, I think it just kind of builds a network and a support system. (Factors: Teamwork, Teamwork structure, Workload, Workload impact- increased engagement, Depend on co-workers, and Accountability)

**Role of leadership- community**

The a-priori code **Role of leadership- support** was originally applied to assess the organizational leaders’ attitudes and practices in providing support. However, as previously mentioned, the interview responses reflected an organizational dynamic that extended past the provision of support and more so reflected a sense of community. Therefore, the emergent code **Role of leadership- community** was created to measure the leaders’ attitudes and practices in creating a sense of community including encouraging positive work interactions and relationships; providing support of work-related and non-work priorities; and efforts to make workload manageable and/or sustainable. The code was mentioned by 16 respondents and co-occurrences included **Flexibility- scheduling and telework**, **Relationships and rapport** and **Social activities** (TABLE XX). Respondents speak to leaders’ role in nurturing a safe, supportive environment where staff feel comfortable and are encouraged to interact professionally and socially. Leaders make it a point to socially engage with staff and connect with them on a personal level; staff appreciate this practice and acknowledge that it contributes to their engagement.

One key thing is the branch chief; he comes in and kind of does walkthroughs, and not in an oversight kind of way but just kind of in a friendly way, like “how’s it going?” Oftentimes it’s not even work related so I think; it builds an environment of trust to have the branch chief leave his office and come chat with anyone from the interns to the longtime FTEs and the contractors. I think that is a good practice. It helps the employee know that the branch management knows who you are and is interested in what you’re doing, either work related or not. It’s just kind of building that...acknowledging that there’s more to the person than the work that they are producing, I think makes a big difference. So, check-in with different fitness goals or just random things like that. It’s not intrusive; it’s just kind of having a chat. I think that has been helpful for me to feel grounded in the branch. And that’s a difference [from] the organization I was in before, there was a lot of turmoil at the branch, in the division and center levels, and that definitely has an impact on morale. I feel like the positive impact in this branch is high, especially in comparison to where I came from, and I see little things like that. (Factors: Role of leadership- community, Trust, Relationships and...
Perceptions - branch, Relationships and rapport, Alternative explanation, Organizational drivers - other, Role of leadership - org drivers other and Inclusive environment)

[The branch chief] invites people to lunch, he rewards us... so one of the things that we do and I don’t know if you saw this at one of our branch meetings when you came, he rewards us, he gives us these little tokens and some of them say have lunch with the branch leadership, or you can leave 55 minutes early or you can sit in our supervisor’s office for a day. And I think just having that sort of mindset, that we can get rewarded in those ways for the work that we do, I think sort of shines a light on the energy and attitude within our branch and he supports that. If [the branch chief] is fostering that sort of environment, it makes me feel much more comfortable and knowing that there is a great balance between working hard and having breaks and fun and engaging with folks. He always comes around and stops by our cubes and asks us how we are, asks us how our day is going, asks us bow our weekend is; he always takes the time to ask us about what’s going on personally as well as professionally. He makes the time to not only mentor you for professional development or if you have questions on things, but also tell us about the great restaurants [nearby]. So I think that provides, again, it goes back to that level of comfort. So he has created, I think, that environment for us. And I think that is something that everybody in the branch sort of follows. And I’ve heard about other places at CDC that are not like that. Nobody goes out to lunch, nobody talks to each other, there’s no conversations in the hallways and there is here. People say hello to each other in the morning, people ask how our days are and I think that’s nice and I think that really does come back to our leadership... (Factors: Role of leadership-community, Relationships and rapport, Work-life balance, Feels safe, Leadership support, Leaders interested in developing staff, Organizational drivers - other, Role of leadership- org drivers other, Recognition- informal, Role of leadership- growth, Alternative explanation and Branch as positive environment)

Leaders also support flexible schedules and a sense of work-life balance which help staff feel supported and engaged.

Our team lead makes a huge effort to be very accommodating whether it’s with our teleworking schedule or taking time off and working overtime so that you can take the time off for something... very accommodating of families and even for single people who don’t have family here, just being accommodating of making sure that everyone has a work-life balance and that everyone is able to have the rest that they need and is not overly consumed with work. I feel very supported. I think definitely this branch does a really great job of insuring that they’re very careful with making time for people and what they have to do outside of work. (Factors: Work-life balance, Flexibility- scheduling and telework, and Role of leadership- community)

I know that when things, non-work priorities come up, a work-life balance is important to leadership and that’s communicated, so we’re encouraged if we need to take a day off or if we need a personal day for family-related things, I know that’s encouraged. I know that those who have kids within the branch are very supported with their scheduling to make sure it’s beneficial. I think there’s lots of flexibility with teleworking a few days a week if we need to. So I think the branch does very well in supporting, encouraging work-life balance. (Factors: Work-life balance, Flexibility- scheduling and telework, and Role of leadership- community)

[As branch leadership] we try to be very supportive of work-life balance type issues so pretty much everyone in the branch teleworks. Many of them also use the flexible schedules and those types of things. And then I think again in general people need time for personal issues or activities or they need to telework on a day because they’ve got people coming to their house to do service or they have childcare issues and stuff. I think in general we’re always sort of supportive and flexible about those things. So I think the people feel like they have a supportive work environment in that aspect. (Factors: Role of leadership- community, Work-life balance, Flexibility- scheduling and telework, and Perceptions- branch)
**External support**

The a-priori code *External support* was defined as the presence of positive work interactions with stakeholders external to CDC, including governmental partners, cross-sector partners, awardees, and others. This concept was included in order to determine whether positive interactions with external stakeholders meaningfully impacted employee engagement. Based on the re-classification of the *PROVIDES SUPPORT* construct, *External support* did not align with the driver *FOSTERS COMMUNITY*, as this driver is focused on relationships, behaviors and practices amongst branch members. While branch members valued external relationships and partnerships, *External support* did not supersede the primary role of internal organizational factors in contributing to the level of engagement. However, there was a significant acknowledgement throughout the interviews and document review that collaboration with external partners was an important component of branch work and this collaboration had an impact on engagement by way of branch programs having utility and benefit for external stakeholders. *External collaboration* emerged as a code to acknowledge significant collaboration on work projects with stakeholders outside the CDC. Similarly, there was significant emphasis on collaboration with CDC colleagues outside of the branch, primarily within the division. As such, *CDC collaboration* emerged as a key concept. *External collaboration* and *CDC collaboration* are factors related to a newly developed external driver of engagement, which will be explored later in Chapter 4.

**PROVIDES RECOGNITION**

The a-priori organizational driver *PROMOTES FAIRNESS* was defined as when the organization treats employees fairly and provides equitable opportunities and recognition. The a-priori codes used to measure this construct were *Fairness* (defined as when the respondent refers to the availability of equitable opportunities and distribution of resources, opportunities and rewards), *Recognition and rewards* (defined as how recognition and rewards are distributed in the branch; also,
any references to receiving or giving a message or token of acknowledgement, appreciation or other recognition based on their behavior or accomplishment of a specific task or goal) and Role of leadership- fairness (defined as organizational leaders’ attitudes and practices in promoting fairness and recognition). While Fairness was assessed by the interview questions, responses were primarily focused on the elaboration of recognition activities and practices rather than explanations of equity as it related to resources and other opportunities. Therefore, Fairness was not found to be a significant organizational driver. However, given the prominence of the concept of recognition, the driver was re-conceptualized as PROVIDES RECOGNITION. PROVIDES RECOGNITION was defined as when the organization recognizes employee performance in meaningful ways. As a result of this shift in concept, the factor Role of leadership- fairness was changed to Role of leadership- recognition.

It is also of note that the a-priori code Recognition and rewards, while one of the most grounded codes overall was also quite broad and respondents referenced the more specific concepts of Formal recognition and Informal recognition. As a result, the code Recognition and rewards was eliminated from the data analysis. A description of the emergent codes Intentional recognition, Informal recognition, Formal recognition and Role of leadership- recognition follow.

**Intentional recognition**

*Intentional recognition* was defined as when the respondent explicitly mentioned branch leadership's efforts regarding recognition and rewards being intentional and strategic; there were purposeful efforts to write up awards, submit nominations, and other efforts to recognize staff members and their work. This code co-occurred with Informal recognition and Formal recognition (TABLE XXI). Although this concept was only mentioned by 9 respondents, they emphasized the notion that recognition, especially writing formal nominations, requires planning, time and effort.

*Our management is really great about seeking out cash awards where they are earned. I think they are really creative about thinking like oh, well so and so did that, shouldn’t they get an award… At the [CDC] Honor Awards ceremony, before we went in we were just waiting and two members from one of the other branches came up...*
and I think one is a team lead and he saw my team and they were joking about oh, like you’re here? And so they made a comment, the team lead said you guys are always here, like every year you’re here and she was like yeah. And you know for different people, different awards. And then the guy who serves as a team lead, he was like you know you guys are really good about just paying attention to when there’s a call for awards, you always seem to be submitting, as management, he was talking to her like, he was like I just forget or I don’t know or I don’t remember and so I miss the opportunity. And she then went and described like they’re very detailed, she said it’s always on the agenda, every branch meeting, they are thinking about it throughout the year, they are making a list of what the awards might be, when the award categories come out; like even at this award they were like, you know, branch chief and team lead were like jotting down creative ideas they had about how they can apply for that category next year. I feel like you have to make it a priority, management has to make it a priority and a lot of managers around here are scientists and they’re trying to manage their work and other people’s work and not necessarily have the opportunity to kind of get ahead and think about how can I recompense individuals for their work. And it takes a lot to do a cash award, to do a lot of these things, my understanding is that it takes a lot of, it takes a commitment for management to write up something by the timeline, it has to be within a certain number of words, you know, it’s just like it’s hard. So you really have to be committed to it. I know different people on the team have received cash awards at various points. (Factors: Intentional recognition, Formal recognition, Role of leadership- recognition, Alternative explanation, Financial incentives, and Pay, benefits, bonuses- positive)

In the quote above, the team lead from another branch reinforces the idea of the amount of effort and planning required and also acknowledged that the ARE branch is regularly represented at the CDC Honor Awards. The respondent recounted how the branch leaders prioritize planning recognition as a part of their management activities. Other respondents also commented that regular recognition is not usually the norm elsewhere at the agency but is a part of the branch culture.

Just yesterday we heard from another branch that they see that our branch recognizes accomplishments a lot more than other branches in this division. And I can say that this branch definitely does it more than when I was in [a different division]. While I had a very close relationship with the management there and the other staff and my colleagues in terms of public recognition, there was not a lot of that. Even down to like in a team meeting, getting congratulated for something or being able...like you could announce, oh we have this new product that we just completed and she says oh okay. But coming from the team lead it just, you know, there was no direct recognition I guess. It was kind of everybody heard through the grapevine or one person might have been a favorite and so their work was really shared or they were recognized a lot more than others. But here, I feel like we all have the opportunity to share, we all have the opportunity to be recognized from our management and even, you know, [the branch chief and team leads] push for us to be recognized at the division and center level as well. Offentimes they are the ones who are thinking ahead about what honor awards we can be written up for or cash awards or any other awards, they’re always thinking about okay, so who hasn’t been recognized and how can we recognize them? What venue can we use to recognize them? (Factors: Intentional recognition, Formal recognition, Fairness, Alternative explanation, Role of leadership- recognition, Inclusive environment and Opportunity)
One of the respondents had a slightly different perspective of why recognition is pervasive in the branch. They interpret recognition as a reflection of the branch identity and as a means to promote the branch.

So I think management, over time, has put a lot of effort in, you know, the way you see the awards and you see the recognition around the branch, I think a lot of work has been put into like how do we one, build this culture of this is who we want to be in the organization whether that’s our division or CDC as a whole. But I think a lot has gone around of like we want to market ourselves as a productive and a good work environment place to be. So I think a lot has gone around positioning ourselves in that light. (Factors: Intentional recognition, Characterizing employee engagement, Branch identity, Role of leadership- recognition, and Promote branch and work)

Informal recognition

Informal recognition was defined as when respondent referred to informal opportunities for recognition, such as verbal acknowledgement and appreciation from leadership and receipt of recognition coupons at branch meetings. This type of recognition was mentioned by 22 of 24 respondents. Respondents were asked how opportunities, rewards and recognition are distributed in the branch. They were also asked to describe a situation where they received recognition, appreciation, or acknowledgement for their work in this branch. Very early on the interviews, respondents described a recognition ritual that regularly took place at monthly branch meetings. The branch chief will recognize individual achievements and efforts by having individuals pick a reward coupon from a small box. Whether a coupon or verbal expression of appreciation, this type of recognition is positively received by staff and contributes to them feeling valued.

[The branch chief] invites people to lunch, he rewards us and says...so one of the things that we do and I don’t know if you saw this at one of our branch meetings when you came, he rewards us, he gives us these little tokens and some of them say have lunch with the branch leadership, or you can leave 55 minutes early or you can sit in our supervisor’s office for a day. And I think just having that sort of mindset, that we can get rewarded in those ways for the work that we do, I think sort of shines a light on the energy and attitude within our branch and he supports that... if he is fostering that sort of environment, it makes me feel much more comfortable and knowing that there is a great balance between working hard and having breaks and fun and engaging with folks. (Factors: Informal recognition, Work-life balance, Organizational drivers- other, Role of leadership- org drivers other, and Role of leadership- fairness)

Well, I have to say, every branch meeting we do awards, maybe not every branch meeting, but it seems like there is always recognition whether it’s people presenting about a topic or [the branch chief] mentions that this is
Informal recognition is often mentioned in conjunction with Formal recognition, and the two strongly co-occurred as described below (TABLE XXII).

**Formal recognition**

Formal recognition was mentioned by 20 respondents and was defined as formal opportunities for recognition, such as cash awards, time-off awards, or submission of nominations for division-, center- or agency-level awards programs (e.g. CDC Honor Awards).

Rewards and recognition, I feel like that is more shared broadly. I know several people were nominated for CDC leadership awards and other awards and that was shared multiple times and just celebrated both within our team meetings and branch-wide, those nominations. So I feel like that recognition is there and the example I gave where [the branch chief] does that little recognition with the little cigar box rewards. I feel like that is a recognizing effort and commending them. (Factors: Formal recognition, Informal recognition, Rewards and recognition, Fairness and Role of leadership-fairness)

And then in terms of recognition and rewards, I know folks have gotten like cash awards for work above and beyond the call of duty or very time-consuming work that requires them to work a number of credit hours to get done or even that kind of thing. We’ve also been nominated for honor awards and won some in our branch and when we’re doing work that seems like it’s moving us beyond what other branches similar to us are doing, there’s always an opportunity where our branch chief will make sure that that’s highlighted and/or shown. (Factors: Formal recognition and Role of leadership-fairness)

Formal recognition strongly co-occurred with the concept of Fairness. Respondents acknowledged that efforts are made for recognition to be inclusive among federal employees and non-federal employees. CDC and other government agency policies prohibit non-FTEs from being
eligible for awards programs and some other opportunities. Despite this, both FTE and non-FTE employees acknowledge receiving informal recognition (TABLE XXIII).

I think as far as what I’ve seen, that there’s efforts to acknowledge everyone and then sometimes there’s only the ability to acknowledge certain individuals through certain mechanisms. Like the Director’s Award you can only have for FTEs, but then they find other ways to recognize those who are involved in that same work. So I think the branch is a great place where they make sure that everyone is getting credit that was involved in something. (Factors: Formal recognition, Informal recognition, Fairness, Inclusive environment, and FTE vs. non-FTE)

So I know CDC and the center I guess have their CDC awards or center-wide recognitions, I guess, but I know that really only FTEs can be honored. So I know like this year, my team lead wanted to submit an award, but [they] felt like it was something that our entire team had been working on, not just the FTEs so instead of putting individual FTE names down, [they] just kind of left it as a team, as a whole, award because I think [my team lead] wanted to make sure that everyone felt like it was their recognition. (Factors: Formal recognition, Fairness, Inclusive environment, and FTE vs. non-FTE)

Well, on the branch level, [the branch chief] has a little envelope of little, not like tickets but coupons... So if you volunteer for a branch-wide kind of opportunity or you’re being recognized for very exceptional work, then you get a small coupon or recognition from the branch chief and that can range from being able to leave work like half an hour early or...I think that’s the best one everyone tries to strive for. But there’s little things like you get to go to lunch with the branch chief, you know, something fun like that. And then also division-wide and center-wide, the awards. But unfortunately, I believe fellows aren’t recognized through that, but I know that my team lead really makes the emphasis that it was a collective work, even for non-employees. And even just like during team meetings and branch meetings, there’s a little opportunity to do shout-outs; they’re not called shout-outs, but you know, just saying recently there were a couple of people who presented a division meeting and then that’s kind of emphasized, and things like that. I think it’s part of our team agenda to just do like little recognition moments... (Factors: Formal recognition, Informal recognition, Fairness, FTE vs. non-FTE, Inclusive environment, Lack of position hierarchy, Work-life balance and Regular meetings)

**Role of leadership - recognition**

As described above, leaders play a significant role in establishing a culture of recognition in the branch. **Role of leadership - recognition** is defined as the organizational leaders’ attitudes and practices in promoting recognition. The code co-occurs with the aforementioned recognition codes (TABLE XXIV). As a part of the document review, the branch chief provided a summary of some of the branch activities related to recognition. He referenced the branch’s 2015 FEVS scores related to meaningful recognition in contrast to scores elsewhere at the agency.
- 83% of branch employees indicated that they are recognized for providing high quality products and services (vs. 62% across CDC)
- 75% of branch employee indicated that creativity and innovation are rewarded (vs. 51% across CDC)

Within the summary of recognition, the branch chief also provided information on the leaders’ approach to formal recognition, informal recognition and acknowledgement.

**Formal honor and performance awards** – We routinely prepare nominations to submit for honor awards and also recognize significant accomplishments through performance awards. For instance, in 2015 we submitted 4 honor award nominations, all of which were supported by the Center. So, about 1/3 of branch staff were recognized as nominees for CDC honor awards. We also submitted 5 performance awards (special act, on-the-spot, or time off) for branch staff. We also periodically submit nominations for other awards, such as Federal Employee, APHA, and Center awards. For the CDC Honor Awards, our branch management team makes this a priority and strives to always submit at least 1-2 nominations. For performance awards, our Branch management team periodically reviews (~2x per year) awards to branch staff and reflects on whether any additional awards are warranted.

**Informal Awards** – the Branch Chief periodically recognizes employee effort or results with Branch coupons for things like an expedited clearance review, lunch with the Branch Chief, or an educational book. We print up a variety of coupons on colored paper and put them in a container, then at a branch meeting recognize the employee (which could be someone who volunteered to be a representative on a Division workgroup, or gave an outstanding presentation, or pitched in to help out on a deadline, etc.) and let them draw a coupon from the container.

**Acknowledgement** – Our Branch management team routinely gives personal praise in-person and via email to recognize employee accomplishments. This can be as simple as a kudos or congratulatory email to staff and their supervisor/manager.

One of the team leads described the branch philosophy and activities regarding recognition during the interview; they reinforce that recognition is intentional, regular and inclusive.

We all just kind of keep it in mind and touching base at our branch management meetings on different types of awards that are coming up, like the CDC Honor Awards, the Center Director Awards, Cash Awards, Time Off Awards, Federal employee awards. Whatever awards are coming through, it’s always on our branch management agenda to kind of touch base and think about—and we do it so regularly that we usually are able to hit kind of big things that make sense to give an award for. So to me I feel like I’m always writing, I just wrote up an award for a time-off award yesterday. And it can be time consuming, so it’s no small feat either. I think I attribute a lot of that to [the branch chief]. He’s really good about making sure that we don’t let deadlines slip past us about things like that and that we’re keeping—that’s always more at the forefront of our mind to be thinking about, hey, this will make a good award write-up or something like that. And even we’ll think about it way ahead sometimes because last year the Directors Award, they had a category called creative communications and by this time next year ours are gonna be so good that I’m gonna put an award for us, and I did when this years came around. Unfortunately, for some of those you can only do FTEs which makes it unfortunate in terms of some of that. So that’s why we do other things, like [the branch chief] gives out his little coupons like at a branch meeting or sometimes we made our own certificates for
people or that type of thing. So we try to balance it out and have opportunities for different people but I would just say it’s always part of the discussion and always kind of at the forefront. I mean there’s never a cycle that goes by where we have not put in something for like the honor awards or the director’s awards or the cash awards or other awards. We always have something. (Factors: Role of leadership- recognition, Intentional recognition, Formal recognition, Informal recognition, Fairness, Inclusive environment, and FTE vs. non-FTE)

**ESTABLISHES COLLABORATIVE STRUCTURE**

A new organizational driver *ESTABLISHES COLLABORATIVE STRUCTURE* was created based on emergent data from throughout the interviews and document review. As mentioned earlier this chapter, an *Other Organizational Drivers* construct was created within the original conceptual framework to account for discovery of additional organizational drivers. *ESTABLISHES COLLABORATIVE STRUCTURE* is defined as when the organization values bringing individual strengths to collaborative work efforts in order to get work accomplished and enhance organizational outcomes. Prior to being asked about the a-priori drivers of engagement, respondents were asked what organizational factors in the branch helped to facilitate engagement. Organizational factors included the work environment, colleagues, policies and practices. In addition to emergent data from the *Organizational drivers- other* a-priori code, emergent data from throughout the interviews helped to inform the development of this new driver. Also, some data from the document reviews confirmed the new construct. The construct *ESTABLISHES COLLABORATIVE STRUCTURE* is a result of the prominence of collaboration and teamwork within the branch and their influence in the accomplishment of work. The collaborative structure that has been integrated into the branch positively impacts employee engagement.

**Teamwork**

The concept of *Teamwork* emerged as a part of Research Question 1 and as a significant factor within the *FOSTERS COMMUNITY* driver (TABLE III). Peak experiences of engagement were often characterized by collaborative efforts working with colleagues. Teamwork was
mentioned by all 24 respondents. Teamwork was defined by collaboration and coordination among colleagues, as well as a process of constructive dialogue and feedback. Respondents expressed the ability to seek advice and input from team members. There was also a level of comfort and safety in having open dialogue around projects.

Typically I feel like most people will drop what they’re doing. If I go up to somebody’s cube, they will—I can see people like disengage from maybe their screen or what they were looking on and give me the focus, give me their attention and provide thoughtful advice or maybe some insight they had, some historical knowledge I wasn’t aware of. I’ve seen that time and time again. Also in the team setting we have opportunities to take what we’re working on and bring it to the team and everybody kind of has a hands-on to offer perspectives and views how it can be improved. So if you’re stuck on a certain thing, you can bring it to the team and say what do you think, where can we go with this? So I’ve seen that many times as well. (Factors: Teamwork, Internal collaboration, Continuous improvement, and Feedback)

It’s a very supportive environment where you feel comfortable expressing your views and also being comfortable and safe enough to hear those views from others. I mean with any project and teams there will be disagreements, but the projects that I’ve been part of everyone provides their comments and input and then it feels like everyone’s voices are heard and then we just kind of have like a collective decision on it. And people aren’t afraid to clarify questions or comments just so people know that they are being clearly understood. So that’s been really helpful. I think it’s just really the team members; they’re very professional in terms of expressing their views and respecting individuals’ opinions. And I feel that we’re all kind of on that same level, on that same page, that’s why I feel like everyone’s comfortable to express their opinions. (Factors: Teamwork, Voice, Feels safe, Feedback, Relationships and rapport and Support of work related priorities)

Respondents also communicated the value of teamwork when encountering challenges and developing a team product.

I think with this team another thing that’s really interesting is that when you have a challenge, I think this team prides themselves on the ability to talk it out and to fix challenges as a team. I think there really is this cohesive team-ness, connectedness, the team building-ness of this entire team. I don’t think that we look at challenges as hindrances. I think we see them as obstacles that we can overcome and I think that’s kind of unique. I think we kind of know that there are ebbs and flows to projects and when there’s a time that there’s a coined term on our team “all hands on deck”, when there is a problem that someone is having, we know there’s a lot of work going on but if someone needs that help, everyone knows it’s all hands on deck; let’s meet, let’s talk this out and let’s give all our focus to it doesn’t matter [who needs help], we’re there. And that’s something that [our team leader] has built. I don’t think that’s natural [in my experience] working in other environments. I think that’s why coming to work here is so much easier because you know everyone’s kind of got your back in a way. They’re obviously not going do your work for you but they know if there’s a problem, they’re there for you and until you feel comfortable with the information or how to go about it, you know they’re going to be there for you. (Factors: Teamwork, Navigate challenges, Communication, Relationships and rapport, Feedback, Internal collaboration, Alternative explanation, and Role of leadership)

Yeah, we definitely work in teams and that’s where it’s like everybody just pulls through to get the work done. I feel like the level of competition, if it’s there, it’s healthy and it’s not a negative thing. Yeah, I think we
definitely...we pull through when there's a project with all hands on deck, which is nice. So, for example, we had a presentation for the new Division Director and everybody, we would take team meetings to talk about how to get this particular presentation done. And the presentation went out beautifully as a result. So everybody kind of stops what they're doing to help the task at hand. So that's reassuring to know that the team's input is valuable. So we have team meetings that are working meetings and we'll bring a particular project that we want feedback on or advice on and then the team provides their input and we take that into consideration. So that's a new model that I didn’t know, that I didn’t experience before [in previous work environment]. So we'll bring the tools and the products that we have, present it and then describe the challenge and then ask the question, kind of like this and you just brainstorm and make notes and then you go back to your respective desks and make the changes that the team recommended and then bring it back. So it's a nice feedback loop. And everyone participates in that. (Factors: Teamwork, Teamwork structure, Regular meetings, Voice, Feedback, Organizational drivers- other, and Alternative explanation)

**Teamwork structure**

The code Teamwork structure emerged and strongly co-occurred with Teamwork (TABLE XXV). Teamwork structure was defined by references to how teamwork is structured in terms of the number of people assigned to project teams, how work is divided, roles, and coverage regarding projects. Respondents noted the importance of smaller project teams and how those teams were composed to enhance the project.

One of the things that, at least our team does, and I think it’s very strategic having teams of researchers work together so you know, several researchers will work on a project together or several people even sometimes will work on a training or capacity building or providing technical assistance together. So I think that team environment has worked well for our team as far as having multiple people who you can bounce things off of, that you could learn from. I think they have tried to, at times, do a mixture of people who have maybe higher capacity in evaluation and lower capacity and so I think, thinking about how to build up the team in different ways has been a strength of our branch. (Factors: Teamwork structure, Teamwork, Diversity, Internal collaboration, Informal learning and development opportunities, and Organizational drivers- other)

The team and the way that the project is structured really allows for individual responsibility and taking ownership of different sections that you're assigned and then also collaboration so we're always working together and helping one another. So I think maybe that's why I see it as kind of a high point and a project that I really enjoyed. (Factors: Teamwork structure, Teamwork, Internal collaboration, Autonomy, and Ownership)

One of the team leads shares their strategy of teamwork below.

So for all our projects I put at least two people—so some projects have two people, some three. First of all just so that people have a shared responsibility and are able to learn from each other, build those relationships with each other. I think about people’s skills that kind of complement each other. So I would say for every project at least two. I try to be clear with roles, too, as much as possible, like these two people are co-leading, this person is supporting, but I try to make sure everybody has something they're leading or co-leading. I don't want somebody just always supporting. So somebody might be supporting this project but then they're leading this project, but every project has some interrelation so that also keeps this cross-fertilization so to speak of making sure that people are keeping the
bigger picture things in mind. Like this really worked well for this evaluation; I could probably use it for [this other evaluation]... so I think it’s better for the work products and that’s great but probably the main reason I do it is because I think it’s better for people, especially with an evaluation. I know people who are like “the” evaluator sitting somewhere alone and I think it’s very difficult for them because you do need to bounce around ideas or think through a methodology or come up with solutions or how to work with so many different people. (Factors: Teamwork structure, Teamwork, Informal learning and development, Leading an activity, Internal collaboration, Relationships and rapport, and Strengths-based focus.

**Strengths-based focus**

The concept of Strengths-based focus was strongly connected to Teamwork structure and Teamwork as project team are composed in part by bringing together complementary strengths (TABLE XXVI). Strengths-based focus was defined as discussion around identifying and utilizing strengths, skills, and experiences in order to work most effectively in the branch. The code also included references to the StrengthsFinder assessment tool and training. Respondents frequently referred to strengths when asked about other organizational factors in the branch that facilitated engagement. The branch held a StrengthsFinder training in 2015 in which all branch members completed the strengths assessment tool to identify their top five strengths. Respondents found this training to be very useful and valued having a strengths orientation in the branch.

There’s also a focus on our strengths. So the first thing you do...maybe I should have answered that when you asked me what’s the first example...but like the first thing you do on the first day you come when you barely have security clearance, so you can’t actually do real work...is you do a StrengthsFinder test. And then there are all these categories like analytic, wooing or the engagement...so you get all these strengths like positivity, compassion, analytic, or I can’t remember any other ones. But there’s a whole list and then you put it together for the branch so you can see everyone in the branch’s strengths. You can see in the strengths categories how our branch looks. So there is effort made to engage in that way like okay, I see that your strength here is in like input or learning or context. So you know, trying to engage in that way. (Factors: Strengths-based focus, Organizational drivers- other, and Role of leadership- org drivers other)

I think that everyone has been able to really be truthful and honest about what their strengths are and weaknesses. One of the things that our leadership did is they had the strengths assessment so that we could all identify our strengths and then it’s been a lot easier for the branch to pair people together to work together based on their strengths. And I think that everyone...it has made things a little bit easier for me because I know when I’m starting a project with somebody that we can utilize our strengths in order to really produce a good product in the end. And so you go into that working relationship confidently and you’re already starting out on a good foot, a good note, knowing that we can tackle this, we can do it, I’ll do this piece of it, you do that piece of it because those are where your strengths are. And we can bounce ideas off of each other to kind of make sure that we’re really headed in the right direction. So I think that was definitely a good organizationally providing trainings for us, such as that strengths
In the quote below, the respondent talked about how branch members’ strengths are used to allocate work and influence the teamwork structure.

Our team lead at the beginning of a year will look through all of the projects and kind of create a master project list and think through, you know, we’ve done things like strength assessment in the branch. So the spreadsheet will have things like all of our projects, all the staff on our team, all of our strengths and then she works to match people up with the projects, but then she always puts two co-leads on every project. So I’ll have like five projects and I almost always have a different co-lead on those five so in essence, I’m working very, very closely with at least five other colleagues in the sense of we’re co-leads or we’re both responsible for the success of our project. So that helps to, even with people that I don’t know very well, we really become bonded in that experience of you know, kind of taking care of that project and nurturing it and taking it from beginning to end. And then we also have other individuals who can assist us in ways that they have strengths, so like someone who is really good in database development will then also come onto our team. So there’s a lot of structure that is created that allows us to work together a lot. And my understanding before that kind of practice came in, was that everyone was very individualized in the branch, like everyone just kind of had their own thing that they were working on, there’s a policy person…and they just had their own project, their own product that they worked on. They would work on it for years and so it was very disjointed. So I think that process has helped, that kind of environment makes me feel connected to a lot of team members or other staff in the branch that I may not…otherwise, we may not have had as much of an opportunity to really get to know each other. And then because we have good relationships it just helps our work to get done. Often if one person is doing one thing and we see it’s working, we adopt it into our project and there’s a really great sense of hey, this is working like you use, it’s not like this is my way, like being very territorial over things. (Factors: Strengths-based focus, Teamwork, Teamwork structure, Internal collaboration, Relationships and rapport, Leading an activity, Alternative explanation, Organizational drivers- other, and Role of leadership- org drivers other)

Staff are matched to project teams based on strengths. Collaboration is enhanced by collective responsibility of the project and continuous developing of relationships. Documents related to the StrengthsFinder training were included as a part of the document review. One document summarized key points from the training regarding the approach, areas of strength represented in the branch, and ways that acknowledgement of strengths could be used in practice. There was an additional document that collated all branch members’ strengths as a whole and then by the branch level and both teams; as stated in an earlier quote, strengths were disseminated to everyone in the branch.
**SERVICE TO PARTNERS AND PUBLIC**

As previously described, respondents acknowledged throughout the interviews that collaboration with external partners was an important component of branch work and work with partners positively impacted engagement. Since Research Question 2 evaluated internal organizational drivers of engagement, the inclusion of any external factors did not align. However, a separate construct, **SERVICE TO PARTNERS AND PUBLIC**, was created to account for the impact of external factors of engagement. **SERVICE TO PARTNERS AND PUBLIC** is defined as when an organization values and prioritizes external collaboration and serving those external stakeholders through the accomplishment of work. The factors **Partners in the field**, **External collaboration**, **External support** and **CDC collaboration** were significant and are described below.

**Partners in the field**

**Partners in the field** was first described under the **ESTABLISHES AND ALIGNS PURPOSE** driver as a significant factor. As previously described, **Partners in the field** was defined as how the partners can use products and resources created by the branch and apply them to their work in a practical way. **Partners in the field** strongly co-occurred with **External collaboration** and **External support** (TABLE VIII), which reinforces the connection to factors external to the organization. Respondents communicated that it was important to gain insight from partners and other stakeholders and for their work to be useful and valuable in a real-world setting.

*I think it is very important not only for us to engage [external partners], but even for us to remain engaged with that work because they tend to be closer to the public or professionals that we’re trying to reach and so they provide a lot of insight that helps us to really align our work with the needs of the audience. (Factors: Partners in the field, External collaboration, and External support)*

*Well, I think a lot of the times, when I do interact with folks it’s always we’re talking about a lot of the great work that both they and we are doing, are collaborating on. And I think hearing some of the things that are happening makes me really excited to see…sometimes you can work on something forever and not really know what’s going to happen with it, but once it gets into the hands of people and people are using it and then we can see what actually the impact is, I think that’s really helpful. And I think that’s sometimes a lot of what our conversations are. We see our work at play and I think that helps to motivate me more. Even if it’s, you know, that we’re getting some*
feedback that it’s not working, well, I feel like I’m even more motivated then to make it work. So I think it does, it really helps to motivate me to see what we’re doing here, how it’s helping our partners or what they think about it. I think it is really helpful. Not to stay in this sort of like you know, within our branch, to see really how it’s connecting with folks outside. (Factors: Partners in the field, External support, External support impact-positive, Partner feedback, Feel motivated, Continuous improvement, and Outcomes oriented)

**External collaboration**

*External collaboration* was an emergent code and was defined as references to collaboration on work projects with colleagues and collaborators outside of CDC. Several of the branch documents emphasized collaboration with external partners as central to the mission. This emphasis is stated within the ARE branch mission statement: “To work collaboratively with partners and colleagues to conduct and translate applied research and evaluation”. As mentioned in the ESTABLISHES AND ALIGNS PURPOSE section of the results, the branch materials specifically reference projects geared toward external collaborators and stakeholders. *External collaboration* had a relatively strong co-occurrence with Mission clarity and alignment (TABLE XXVII); this connection is echoed in the branch philosophy and function of working collaboratively to be successful. Providing meaningful products to external stakeholder helped to reinforce the core purpose of branch activities.

In those [branch] materials, we do highlight and reinforce a collaborative working relationship and environment—both among folks within the branch and with folks external to the branch. Recognizing that we do need other partners and folks and expertise to successfully complete our projects, and collaboration and partnership is important to us so we do reinforce it in some of those materials. (Factors: External collaboration, Internal collaboration, CDC collaboration, Mission clarity and alignment, and Organizational drivers- other)

We’re working on a project for stroke and we’re engaging a lot of different subject-matter experts (SMEs) across the nation and so we had a very productive call this week. And the feedback that we’ve received from the SMEs indicated that we’re going in the right direction, and they even mentioned that it was one of their most productive calls that they’ve had; just like that positive feedback from the actual grantees and subject matter experts for a project felt that we’re striving for success and going in that right direction. The SMEs are a mix, yeah, so they were from [a professional organization] and the grantees as well as CDC individuals who have that knowledge around the topic. So just hearing from grantees was interesting. And they frequently mentioned that this seems like a very impactful piece of assessment that we’re working on, so that constant feedback has been helpful in terms of knowing that this is something that could really improve the system. (Factors: External collaboration, Mission clarity and alignment, CDC collaboration, Partners in the field, Partner feedback, High quality work, Branch products valued, Outcomes oriented, and Work makes a difference)
External support

External support was an a-priori code that referred to positive work interactions and/or relationships with external stakeholders outside of CDC, including organizations, governmental partners, community partners, grantees, and/or others. Respondents were asked to think about their rapport with external community partners and consider how their interactions and relationships with external community partners impacted their engagement. Some respondents indicated that working with external partners was an important part of their overall engagement and an aspect of their work that they enjoyed (TABLE XXVIII).

I think for the most part I’ve been able to build up a strong rapport with folks in the state and local levels and so I think having that relationship with people and building those bridges between CDC, to me it’s probably one of the most valuable things I think that we can do at CDC. And part of my work, I think, you know, they’re the ones who are actually doing the work or helping states help to transfer to the local level and so I think having those strong relationships and those partnerships are really valuable. You know, I think also just, this is my personal thinking, that any level of trying to eliminate some of the bureaucracy that happens from state and local levels to the federal to me is important because I think that oftentimes people can’t see what’s going on at CDC and what’s happening and I think as much as I could do to provide clarity around like this is our expectation and these are our goals and this is why our priorities are set in certain ways is important because people at the local level need to do the work. And I think that I’ve always supported by the branch to work with grantees and to support grantees so yeah, that has been a valuable experience. (Factors: External support, External support impact- positive, Mission clarity and alignment, Supporting work at state and local level, External collaboration, and Partners in the field)

Other respondents indicated that they valued partner relationships but that those external relationships did not outweigh the impact of the branch environment on their engagement. The two respondents below compare their experiences of the branch work environment to work with external partners, and their perceptions of how their engagement is impacted.

So with the grantees, I would say when I first started working, yeah, for most of time at CDC I would say it was that interaction with the grantees that really motivated me. I would say that was where my engagement was; my sense of feeling engaged, I would say that’s where it was. And now, in reflection, I think now that I’ve taken more of the leadership role, that sense of engagement has, like I’m feeling I’m getting more reward I think or feeling more engaged to those leadership roles and less...now my communications and my interactions with the grantees are just like part of the job, but for, probably until just maybe a year or so ago, that was my whole, that was what I loved about working at CDC. That is what motivated me, I got it from them more so than like my colleagues and other places. But I think that switched. (Factors: External support, External support impact- neutral, External collaboration, Feels motivated, Autonomy, and Leading an activity)
I think that I've always worked with grantees, since I've been here and so much of my engagement is about making their work easier. And a lot of what we do is about helping them to get the work done in a way that seems easier to them, but then also gives us the opportunity to report back to Congress. So I think they contribute a lot to my level of engagement, but probably not as much as my work environment. But I think that part is also individual in nature. Like for some people, that might contribute a lot to their engagement and if it does, we have a lot of outside stakeholder engagement so it's helpful. But for me, it's probably more of being more...more of the things in the branch that are around my ability to be responsible for work than how the branch functions around all of us and I think our kind of individual personal needs. (Factors: External support, External support impact- neutral, Branch as resource, Autonomy, Ownership and External collaboration)

**CDC collaboration**

Descriptions of collaboration often referenced collaboration with CDC colleagues, as much of the ARE branch’s evaluation and translation activities support other branches within the division. Therefore, *CDC collaboration* also was an emergent code. CDC collaboration was defined as references to collaboration with others at CDC outside of the branch; this type of collaboration usually refers to other branches within DHDSP but can also be collaboration with other organizational units within the agency. *CDC collaboration* strongly co-occurred with *Branch as resource*; this connection is in line with results from *ESTABLISHES AND ALIGNS PURPOSE* demonstrating the branch’s service orientation and emphasis on providing technical assistance, subject matter expertise and evaluation guidance to internal and external partners (TABLE XXIX). Respondents reflected that collaboration with CDC colleagues was important to ensure the appropriate expertise was brought to the project to the benefit of the external partners and projects.

I think [the leaders promote] the encouragement of collaborating with others so that we’re not just siloed and you know feeling like yay, we're doing a good job, but we're doing a good job on our own, but we like to ensure that the good job includes others. So if we're doing something, we want to involve [the program branch] to see how the grantees are going to, you know, to see the extent to which whatever we're doing resonates with grantees. Or if we need to do something that involves [the surveillance branch] then involve, you know, let's work with the surveillance people, the people that have that expertise. So, their recognition that we don't have to have the expertise, number one, like I said, surveillance might have expertise that we don't have and number two, just to ensure that whatever we do resonates with people outside of us. And in order for that to resonate, to ensure that their folks are part of the development so we don't just develop things or we shouldn't just be developing things on our own and then saying here, what do you think of this? But they should be part of the development process. (Factors: CDC collaboration, External collaboration, Mission clarity and alignment, and Role of leadership- purpose)
C. Research Question 3: Federal Government Context

Research Q3: How does working for the federal government affect perceptions of employee engagement?
Research Q3.1: How does the politicized environment affect perceptions of employee engagement?
Research Q3.2: How does the government bureaucracy affect perceptions of employee engagement?
Research Q3.3: How does funding affect perceptions of employee engagement?
Research Q3.4: How does job security affect perceptions of employee engagement?
Research Q3.5: How do financial incentives affect perceptions of employee engagement?
Research Q3.6: How does a public service ethic affect perceptions of employee engagement?

The construct of Federal Government Context was identified in the conceptual model to determine how working within the federal government may influence employee engagement at the organizational level. Respondents were asked to reflect on their perceptions regarding how certain features related to government service may affect their engagement. The following six factors characterizing this unique context were also identified in the original conceptual framework: Politicized Environment, Bureaucracy, Funding, Job Security, Financial Incentives and Public Service Ethic. These factors were explored by using a-priori codes; any additional factors were identified using emergent codes (Appendix D). An examination of the governmental context and related factors is presented below.

**Politicized Environment**

Politicized environment was defined as respondent references to various features of a politicized environment including turnover in agency leadership, the past government shutdown in 2013, furloughs, and any perceived anti-government rhetoric or negative attention based on working within the federal government. In the interview guide, respondents were asked about previous experiences with CDC director turnover, government shutdowns and reductions in funding due to
sequestration. The sub-factors *Turnover in leadership* and *Shutdown* were the most prominent codes mentioned by 22 and 16 respondents, respectively; 8 respondents did not experience the 2013 government shutdown (TABLE XXX).

**Turnover in leadership**

Turnover in leadership was defined as when the respondent speaks about perceptions of the CDC environment and engagement during the last turnover in agency leadership due to a change in the presidential administration. Respondents indicated mixed responses to whether previous turnover in CDC leadership impacted engagement. Several respondents noted that the change neither positively nor negatively affected their level of engagement.

> No, I mean, my level of engagement was probably high because I had just started and that change in leadership didn’t do anything to deter my level of engagement. (Factors: Politicized environment, Turnover in leadership, and Turnover in leadership- neutral effect on engagement)

> So in many ways I felt like it didn’t change my day-to-day work. Things just moved along. I think whenever changes happen it takes a while to trickle down. So I think it probably wasn’t until like the year after that transition, when we had new budgets and new contracts where things start to change. So I don’t remember much change to my day-to-day work at all. But there was also this layer of kind of anxiety and the unknown. At that time, I remember, there’s just a lot of talk and there’s a lot of uncertainty and there’s a lot of thinking about well, what will this mean for our work. But yet at the same time, we’re still just going on with our work. (Factors: Politicized environment, Turnover in leadership, Turnover in leadership- neutral effect on engagement and Uncertain times)

> I don’t think the turnover affected my engagement but I’m so used to the turnover that it’s expected. I always try to tell folks one way or the other we’re gonna have jobs that have to be done so if priorities change, then we might change some of what we do but there will be the need for work to continue. (Factors: Politicized environment, Turnover in leadership, and Turnover in leadership- neutral effect on engagement)

A few respondents who were in the branch during the last transition indicated that the tenure of previous CDC director Tom Frieden began with agency-wide priority initiatives related to heart disease and cardiovascular health; this shift in priorities increased their engagement due to focus on the branch’s topic area in addition to an influx of resources and attention.
I would say that my engagement definitely increased because then I had to understand how Frieden’s direction was then going to impact the work that I was doing in this division, especially because he had a great interest in heart disease and stroke prevention. (Factors: Politicized environment, Turnover in leadership, Turnover in leadership impact- positive effect on engagement and Turnover in leadership- heart disease as priority)

I think one of the major shifts I would say for me personally or for our division personally is that heart disease became a priority in the organization. So with the Million Hearts program that started in 2011 and with Winnable Battles starting, and so I think that heart disease just even becoming a priority to the division, it became a priority for all of us. So I think those shifts of being on the radar for a CDC Director isn’t something like chronic disease has always has bad, you know, we often aren’t necessarily touted even though we’re the leading cause of death in the world. So I think having that shift of your disease becoming a priority becomes a shift in how you do your work and just having higher recognition. (Factors: Politicized environment, Turnover in leadership, Turnover in leadership impact- positive effect on engagement and Turnover in leadership- heart disease as priority)

So I think maybe people were excited, like there seemed to be a lot of excitement around that change in leadership. There seemed to be a lot of us that change in both governmental leadership, but specifically CDC leadership would mean a higher focus on heart disease and chronic disease in general. Our most recent CDC Director had done a lot of chronic disease work before and had come from a chronic disease background and I think knowing that kind of gave people some real excitement around the fact that there would be a focus on the chronic disease work that would be done after that. (Factors: Politicized environment, Turnover in leadership, Turnover in leadership impact- positive effect on engagement and Turnover in leadership- heart disease as priority)

Overall, respondent reactions to the turnover in agency leadership were variable and it is unclear whether there is an effect on engagement.

**Shutdown**

The code Shutdown was defined as when the respondent referenced the 2013 government shutdown, its implications including furloughs, and how it affected their engagement. Most respondents remarked that the shutdown had a negative impact on their engagement. Some respondents felt anxious and frustrated, and questioned whether or not their work was valued.

There’s a sense of, again, the uncertainty and kind of feeling scared. If I recall, I think there was quite a bit of communication beforehand where [ARE] branch management calmly told us what the expectations were of us, like that we were not supposed to log on or not supposed to be doing any work during that shutdown. They tried to kind of ease any of our fears as much as they could. And so I think that helped during those days of the shutdown. But then also, just kind of tuning in to the news each day and just like figure out well, am I go to work tomorrow or not? And also like a sense of are we valued? Is the work that we do important? (Factors: Shutdown, Politicized environment, Shutdown- negative effect on engagement, and Uncertain times)
I guess I felt really insulted… It was like a big deal to me that even though I know it’s not personal at all, it felt personal because it felt that half the country didn’t appreciate the importance of public health, CDC, and the work I did specifically. So it was really—it just felt like kind of a punch in the gut I guess. (Factors: Shutdown, Politicized environment, Shutdown- negative effect on engagement, and Uncertain times)

Honestly, I felt like it was a little demoralizing because I felt like at that point in time, Congress didn’t see the value of [our work]… [Only] essential staff were mission critical [and exempted from furloughs] and it was like whoa, I’m not considered mission critical. So it was really an eye-opener for me and I think an actual turning point on how I view my career. Because I’m like if that’s how easy it can go down... And at that point in time I was like well, I thought I was a good employee and I thought I was doing good work. I had plenty of PMAP awards and all of that but at the end of the day, I wasn’t considered essential [staff]. So it was really disheartening and it caused a ripple effect for my family because I’m the main provider, and to not have my paycheck [on time] was like whoa. (Factors: Shutdown, Politicized environment, and Shutdown- negative effect on engagement)

Well, I mean I think it is a bit of a demoralizing type feeling for people to be—for you to sense from the public that they don’t think your work is valuable enough and they don’t care whether your work is being done or not. That was my personal feeling. (Factors: Shutdown, Politicized environment, and Shutdown- negative effect on engagement)

Respondents also noted that the shutdown and interruption of operations had a negative impact on programs.

I think at that time I think I was...if I remember correctly, I was supposed to travel and present at a conference… it was frustrating to feel you were kind of stuck. You couldn't work and then there were things that I wanted to set up in contingencies but I knew I couldn’t… So I think that was frustrating. I felt forced to disengage and that was a little bit hard to do initially. For the first couple days, it was tough and that transition was hard and then also in that...the only other people not working are federal employees, right? So we were all sharing our stories...kind of commiserating...it was a low and a lot of anxiety. So I think collectively, it felt a little bit darker…it was challenging and then some of the uncertainty around pay and all those things too, were added. (Factors: Shutdown, Politicized environment, Shutdown- negative effect on engagement and Shutdown- programs negatively affected)

I think people were just frustrated, you know, because everything just kind of came to a screeching halt so all the meetings that we had had to come to a screeching halt. I think in fact, I was supposed to have conducted a site visit right around that time and so we had to cancel that…I do remember that. So, those kinds of things that you know, it impacted the work and delayed the work. (Factors: Shutdown, Politicized environment, Shutdown- negative effect on engagement and Shutdown- programs negatively affected)

Obviously [there is] some level of disappointment and frustration because work had to stop and then once we came back to work, work had to be sort of reinitiated and there’s a lot of extra effort involved in the close down and then the restart and it was probably like three months or whatever until you sort of fully recovered from that period of shutdown. So there’s certainly some challenges and frustration with it and disappointment with it, but also there’s a sense of helplessness about it, too. In that what could you do? Not much that could be done. (Factors: Shutdown, Politicized environment, Shutdown- negative effect on engagement and Shutdown- programs negatively affected)
Bureaucracy

Bureaucracy was defined as respondent references to the administrative system governing the federal government including rules, regulations and policies. Respondents were asked to describe how CDC being subject to these administrative, governmental processes affected their experience of engagement. Bureaucracy was discussed by all 24 respondents. Respondents most frequently described the burdens associated with Bureaucracy and how they negatively impacted engagement; there was a strong co-occurrence with the code Bureaucracy- burden (TABLE XXXIII). Certain governmental rules and processes are perceived to interfere with the accomplishment of scientific and programmatic work. These processes also seem to be ever-changing and time consuming, which cause employee engagement to deteriorate.

I mean, [those government processes] affect my day-to-day work tasks. I understand they’re necessary in a lot of cases but sometimes with the work we do, which isn’t particularly high risk…like I’m thinking about things like going through OMB is a real pain. And then I get that it accomplishes an important government objective, but sometimes it feels like they are not as essential and end up taking a substantial amount of time. It’s harder to feel engaged when you’re sort of pushing an uphill battle like that. Or even like just trying to get work awarded, going through a contract process, by the time you’ve sent the award out it’s like objectives are changed, things are shifted. And even the way we do our cooperative agreements and stuff. It’s inflexible, maybe that’s a way to put it. It is inflexible. That’s always a difficult challenge when pragmatically speaking it seems like there might be a more practical and efficient way to accomplish that work. So those things, I think, sometimes are a little bit of a downer and probably don’t make me feel quite as engaged. (Factors: Bureaucracy, Bureaucracy- burden, and Bureaucracy impact on engagement- negative)

So I guess I think that there’s for sure [some] regulations and internal processes and protocol that I think can make it challenging… I think things can move slower than you wanted to at times, which I think can be frustrating and challenging. I don’t know, I guess sometimes things just move at a really slow pace and then you just kind of move on to something else and then you kind of forget about whatever you’re waiting for and then, you know, when you have to revisit it your priorities have shifted… [as far as how it affects my engagement], I think in some ways it’s negative. (Factors: Bureaucracy, Bureaucracy- burden, Bureaucracy impact on engagement- negative and Adaptability)

Yeah, every time there’s some new [rule] put in place, it kind of feels like a punishment or a greater barrier, it definitely takes a blow to the engagement because, again, I’m motivated by that intrinsic motivation of kind of trying to do like a job, help people, and it sort of strips that away and just says like, no, all I care about is that you’re filling out this paperwork and sitting at your desk during these hours and, you know, kind of makes it smaller. (Factors: Bureaucracy, Bureaucracy- burden, Bureaucracy impact on engagement- negative and Public service ethic)
There's a lot of red tape I think…and those rules and the policies are always changing so it makes it difficult to stay engaged at times. And by engaged I really mean enthusiasm because I feel like I always have to check the regulations, especially for contracts… Also, like things as simple as [rules around] travel, it's changed a million times. And so when I used to travel frequently it was [one way], but now the system has completely changed… So yeah, it definitely has an impact on my level of engagement and frustration is the result of that because it's like trying to…it’s a moving target oftentimes. (Factors: Bureaucracy, Bureaucracy- burden, Bureaucracy impact on engagement- negative and Public service ethic)

Respondents also reference the toll of the political context and how that affects governmental processes. Shifting priorities within presidential and agency administrations can pose constraints on how employees execute their work.

**Funding**

Funding was mentioned by 23 of 24 respondents and was defined as when the respondent referenced the stability of congressional and/or program funding (or often the lack of stability of funding); respondents may also have referenced how funding affects the sustainability of programs, or whether funding amounts are sufficient to carry out work. The interview guide asked how the branch’s funding or the stability of funding affected the respondent’s experience of engagement. Uncertain funding was mentioned by respondents as a challenge to engagement because employees are not able to plan programs and projects effectively, and sometimes planned projects are not able to be supported financially.

I think it's difficult to plan a project and then have it be cut, or just be planning a project and then not know whether it’s going to be funded, what amount. I think that uncertainty makes it really difficult to do effective planning. So we have to be very adaptive, which is a good skill, but we could definitely be more, maybe efficient in the long run if we had more certainty about things. (Factors: Funding, Uncertain funding, Funding- negative effect on engagement, and Adaptability)

So we've had times where we thought we were going to have funding for certain things and then we didn’t. And we've done work to prepare and then not been able to fund them, that has definitely affected my level of engagement. So trying to manage preparation for funds and having funds is I think a difficult task. And the more I've been promoted, the more I've been to privy to those discussions and so those things do take their toll on your level of engagement, when you spend a good bit of your time preparing for things that don’t happen. (Factors: Funding, Uncertain funding, and Funding- negative effect on engagement)
It has [affected my engagement]. I know this year especially as we’ve been on continuing resolutions and there’s been a lot of uncertainty with what the budget is going to be. I think it does definitely [negatively] affect engagement in not knowing—I feel like now that we’ve come to a resolution for the remainder of the fiscal year it’s alleviated some but there’s still I think some uncertainty for the next year of what are level of funding is going to be. (Factors: Funding, Uncertain funding, Funding- negative effect on engagement, and Uncertain times)

Despite uncertainty around funding, some respondents reported that they are motivated to work harder when there are limited resources and can feel more engaged in trying to execute important work.

When our funding is decreased or taken away or changed or our funding is directed in some way from higher leadership, I certainly feel a decrease in engagement because you feel somewhat helpless and out of control of the situation and those things, I think, influence you feeling less engaged. But that said, the converse of it is that when we’ve bad budgetary resources taken away from us, we’ve had to look for other intramural ways to get the work done and we’ve had to step in and band together to be more active and proactive in our planning...in discussions about okay, so if they are going to cut our budget by X-amount what are we going to not do? You know, so our planning about what the impact is going to be and then our discussions about well, okay, so if we can’t do the work or accomplish the work through funding extramural things, how can we do it intramurally? How can we band together...how can we take more responsibility for this work intramurally...those sorts of things I think actually increase our engagement. So I think it plays out both ways. (Factors: Funding, Funding- negative effect on engagement, Funding- positive effect on engagement, Building internal workforce capacity, Innovation, Teamwork, and Voice)

I guess [engagement is affected] in two ways. Like right now, when there’s a lot of funding up in the air, you’re not really sure what’s going to happen. I guess it really just depends on the leadership. And so on the one hand, you feel this kind of up-in-the air funding and the funding is really political, it’s more external to CDC… it’s not really paying attention to the value or what the point is. But then at the same time because of that, maybe I’ll feel a little extra engaged to work hard and know that the work is important whether the funding comes or not. And if there is less funding, I think a lot of people are engaged and want to put in extra work if that’s what’s needed because of less funding. So I guess it kind of goes two ways. (Factors: Funding, Funding- positive effect on engagement, Uncertain funding as a challenge, Politicized environment, and Work makes a difference)

Several respondents noted that even though branch funding had recently been reduced, branch leadership made a commitment to staff to retain all personnel positions so that no one would lose their job. Fellows and contractor staff would usually be vulnerable to having their positions eliminated; however, all staff positions were maintained and more work was developed intramurally rather than extramurally.

I feel like [the branch chief and team lead] have prepared us...they have said throughout the years there’s going to be differing levels of funding. One of the things that they always say is that they want to maintain staff. So if
our funding is cut, staff will be maintained. But they encourage us to think about how we can actually continue the work that we're doing internally and doing it ourselves and not necessarily putting out a ton of contracts to do it, but figuring out different ways to accomplish the same work. And so empowering us to do that I think keeps us engaged. (Factors: Funding, Funding- positive effect on engagement, Retention of staff despite budget, Innovation, Building internal workforce capacity, Role of leadership and Voice)

I know with [the branch chief and team lead], we talk about some budget cuts. They do reassure us that their priority is the staffing salaries first. So while you can be disappointed that we missed a project, it's more reassuring to know that everyone still has a position whether that's the ORISE fellow, the administrative professional, name it, it doesn't matter. I think for us as a team, while it's disappointing to lose certain things, I think we understand what's most important and look at the big picture for us as a team. So it's nice to have leadership that has that as a priority. (Factors: Funding, Funding- neutral effect on engagement, Retention of staff despite budget, Inclusive environment, and Role of leadership)

I think that our branch probably has the smallest budget of all the branches in the division and so I feel like we get a lot done for the limited resources we have and then when we face additional cuts, I think the team and the staff in the branch are always creative about how to keep the work moving and keep getting the work done... I will say, though, in our branch one of the things that we've always maintained, [the branch chief] has reiterated this with our staff and the branch management and teams always prioritize positions so this year when we had a reduced budget ceiling, we cut everything but our staff positions. So in that sense, I did feel more engaged and team members felt more engaged to know that they were seeing projects get cut around them, but their positions staying in place and the funding staying in place for their positions. So I think that is a framing of an experience within this branch that has helped increase my engagement and then the team members' engagement. And then I think in that sense, too, it's helped the team think about different ways they can do the work themselves as opposed to having a contract to fund it. (Factors: Funding, Funding- positive effect on engagement, Retention of staff despite budget, Uncertain funding as a challenge, Innovation, Building internal workforce capacity and Role of leadership)

**Job Security**

Job security was defined as when the respondent mentioned the perceived presence or absence of job security working within the federal government environment. Respondents were specifically asked how does having job security as a federal employee affect their experience of engagement. This question was one of two questions only asked of only full-time federal employees; there were 16 respondents. Overall, respondents conveyed that a sense of job security was a benefit of federal employment and had a positive effect on their engagement (TABLE XXXV).

Not having to worry about whether I'll be at work tomorrow really allows me to just have a free mind and just do, help me do the work and do my best. It minimizes other stresses that I might have in the other parts of my life.
that would also kind of take away my focus and the energy for work. So I think it has a, for me and just kind of my values, that to me is maybe more important than the amount of compensation. It also makes me feel like the investment that I'm putting in, I feel like the agency is investing in me long term, I want to invest long term and so I feel like I can be here for a longer time and kind of see the fruits of my work by sticking around. So yeah, it really, really, really helps. (Factors: Job security, Job security- positive effect on engagement, and Staff feel valued)

I see stability of employment. You're not gonna walk in and they've laid off your whole team for reorganization. That's really nice. [Job security] just takes away that distraction of struggling. So you have that kind of security to work off of and then you can really focus on the work for that engagement. (Factors: Job security, Job security- positive effect on engagement, and Staff feel valued)

I think [job security] affects [my engagement] greatly. Because I feel secure in my position I feel that I'm able to be more engaging and engaged with others in the work that we do. I feel that if I were not secure in my position, I'd be looking for something different and I would probably withdraw from the current work that I'm responsible for doing and would be trying to find something elsewhere. So I think if a person feels secure in the work that they do, they feel appreciated and that, of course, does affect their level of engagement. (Factors: Job security, Job security- positive effect on engagement, and Staff feel valued)

Several respondents expressed doubt about expectations of job security in the current government climate. While job security has historically been a feature of federal employment, employees seemed uncertain if that stability would remain.

I'm glad I have a job, but I also have anxiety about what my job's going to look like. So in the sense of it is nice to be secure in having a job, but at the same time, the political influences on what you do in your job at times makes me feel a little less engaged. Like maybe I want to leave the federal sector because I don't know if I want to keep having to do this, you know, reprioritizing or focusing on something that I'm not necessarily sure that that's the highest value or having to look for just ways to operate on as little as possible. So I think it's both positive and then also challenging, especially in transition times like we're in right now. (Factors: Job security, Job security- positive effect on engagement, and Uncertain times)

I think I like the job security, but I'm not 100% sure how secure those jobs are these days, but I think initially job security was one of those kinds of things. (Factors: Job security, Job security- positive effect on engagement, Opportunities working in government and Uncertain times)

I will say it's disappointing to hear in the news that [this administration] is trying to get rid of [job security]. So I can see how that negatively affects my engagement. There's even been talks with my [spouse] about, well, I mean if there's not that chance to get that nice security blanket, as you can call it, I'm actually considering do I end up staying? Because that plays a big role in it. It's not that I would slack off, but it's nice to have that [security], and now that the talks are—and they're pushing forwarding with it—to try to get rid of that, it is something that I keep an eye on in the news and it could actually play a role in whether I end up staying here or not. (Factors: Job security, Job security- positive effect on engagement, and Uncertain times)
Financial Incentives

Respondents were asked about how Financial incentives of government employment, including pay, benefits, and/or bonuses, may impact engagement. The interview guide specifically asked about how government compensation, federal benefits, awards and bonuses and promotion opportunities affected experiences of engagement. Because these issues relate to full time federal employment, this line of inquiry was limited to federal employees only (n=16). Compensation and benefits were viewed positively and supported feelings of engagement, as seen through the strong co-occurrence with Financial incentives- positive effect on engagement and Pay, benefit, bonuses- positive (TABLE XXXVI).

The benefits are pretty comprehensive and I think, obviously, a lot of this is thinking forward and having financial stability is really critical and important. And also a lot of people come here…you have to have an advanced degree, you know, you need to go through school and it’s an investment, either both monetarily and time or time alone, and being able to come out on the other side more skilled and able to serve, being able to use that knowledge for the better is important, but also being able to pay it off is good too. But I think the benefits are good. I always wish we had more time off. (Factors: Financial incentives, Financial incentives- positive effect on engagement, and Pay, benefit, bonuses- positive)

So I don’t have a lot of other experiences to compare to, in general, I feel, again, very blessed to have a federal employee position. I perceive that it’s quite stable compared to some other jobs out there. I appreciate the compensation that I receive, both in a salary and also insurance and benefits. I know that there could be maybe some arguments made to increase that compensation and I know at times when I feel frustrated, I’m like I’m not paid enough to do this, but in general, I feel grateful and blessed for…and I feel like there’s a standardized payment and compensation scale for all government and so I feel like you know…there’s something that I like about that too. I feel like if I was maybe in another organization that I might not know what others are making and I might not know what goes into the decisions of you know, what they are making. (Factors: Financial incentives, Financial incentives- positive effect on engagement, and Pay, benefit, bonuses- positive)

Several respondents mentioned the Performance Management Appraisal Plan (PMAP) in relation to Financial incentives (TABLE XXXVI). The PMAP is the annual performance rating process for FTEs; those employees with high ratings are able to receive end-of-year bonuses such as a cash award, time-off award and/or a salary step increase in certain situations. While the PMAP cash awards are relatively modest, several respondents appreciated the bonus and acknowledged that it enhanced their engagement.

So you know, getting the awards for the specific work that you do and then like your PMAP awards, that keeps me engaged. It makes me want to continue to do good work so that I continue to get recognized. The PMAP in
particular, I think when I first started, the percent that we would get for our ratings was much higher and it causes…you know, it encouraged people to remain engaged and to do really good work. So that definitely keeps me more engaged. The security of working in the federal government, yes, that does keep me coming to work every day. I think this year has probably been the first year where I’ve been a little like, kind of thought about like, huh, I could potentially lose my job. But prior to that I was like I have an extremely secure job. (Factors: Financial incentives, Financial incentives - positive effect on engagement, PMAP, Job security, Job security - positive effect on engagement, Formal recognition, and Uncertain times)

So I didn’t really know that that was a thing here until I went through my first FTE PMAP process so I didn’t actually know that there was an opportunity for incentives based on performance. So I guess I was pleasantly surprised but it also felt like, yeah, I could use that. I think to have such high expectations, and I know that this is across the agency that those are available so it’s not just our branch, but especially working in a place where there are high expectations and I do enjoy working hard. But it’s also really nice to have that—like I said, I love gold stars, I also like cash. I also like days off. It carries a different kind of weight and lasts a little bit longer than a high five. (Factors: Financial incentives, Financial incentives - positive effect on engagement, PMAP, Pay, benefits, bonuses - positive, Formal recognition, and Expectations)

**Public Service Ethic**

Public service ethic was defined as when respondents shared an experience related to their passion for serving the public and making a difference through their work. Respondents were asked to describe a situation when they most felt like their work as a public servant had a positive impact and how it made them feel engaged. Most respondents expressed that work with Partners in the field made them feel most like a public servant (TABLE XXXVII). As has been discussed in previous sections, respondents are able to see a strong connection between their work products and how those products and services have an impact on communities.

I really appreciate the opportunities when I get to go and be with our grantees who are doing the actual day-to-day work. I mean we’re providing a technical assistance and guidance and asking them to report on performance measures; we’re setting up a lot of this infrastructure where we want to demonstrate how the nation is moving the needle on some of these disease outcomes, but I always really value and appreciate being able to be with our grantees and learn from them in person. It’s all well and good for us at CDC to be like here’s a cool program, like we should be implementing it, here’s how we’d like for you to measure it. And then you get to go onto the site and you’re like oh, I see how this is working. It’s so meaningful to be able to learn from what’s working and also to have that insight that you don’t get from sitting here in these offices. You know, we think that things are working really well and then when you get out in the field, you can see like oh, this is a different kind of challenge than we’re able to understand. These programs happen within a context. So I guess that the nature of that role is that I’m working for the federal government and I’m a public servant and stuff, but I think that the time when I feel most like a public servant is when I’m getting to actually be with other people who are doing public health work. (Factors: Public service ethic, Partners in
I value the fact that I truly believe my work makes a difference. Bottom line. If you stripped everything else away, knowing that my work makes a difference. [I think about] going [on a site visit] and seeing the work actually be applied, seeing that impact really—and seeing the difference that it makes to your partners like when we go [to the west coast], you see the work they’re doing and how it makes a difference at these senior centers or these early childhood education centers and you see the passion behind the work that the partners are doing, it’s hard for you not to get excited about that. Like that really means the most to me. It’s a driving force behind public health. Like really. You don’t get into public health because you’re going to get rich. You’re doing it because you actually care about the public. (Factors: Public service ethic, Partners in the field, Partners- in person interaction, Outcomes oriented, Work makes a difference, Opportunities in government- CDC as an expert agency, and What do you value most)
V. CHAPTER 5: DISCUSSION

The public health landscape continues to evolve and expand in terms of scope and responsibilities. The governmental public health workforce must evolve beyond specific technical disciplines to be effective within this new and changing context. Public health professionals are critical resources and engaging these employees is an imperative and strategic advantage to navigate challenges within the field and ultimately improve public health outcomes. While there has been little work in this area within the governmental public health sector, the benefits of employee engagement have been demonstrated in both the private and public sectors. Governmental public health agencies should create and sustain work environments where employees can be optimally engaged to the benefit of employees, the agencies, and the public who is served.

The focus of this DrPH research is to explore and understand the organizational drivers of employee engagement so that governmental public health agencies, other public health organizations and the leaders of these organizations can create conditions for employees to be engaged. The current focus on an exemplar case of high engagement at a governmental public health agency is instructive and provides a real-world model from which to learn about promising practices. Assessing the individual employees’ perceptions of engagement offers insight into how employees value and experience engagement within the current state of optimal conditions. Through the exploratory nature of this study, more of the contextual depth of how individuals interact with their work environment was discovered. While engagement occurs at an individual level, there is evidence that certain drivers and practices at the organizational level can enhance individual engagement, which could positively impact individual and organizational performance.

The robust results from this DrPH research demonstrate that employee engagement is not accidental, rather it requires intentional values and practices by organizational leadership to establish
and reinforce drivers for engagement. The role of organizational leadership in valuing and integrating practices that support engagement is critical and foundational. A systems approach tailored to the unique context of the organization is important to integrate engagement-supportive practices that allow employees to flourish to lead public health activities.

A. Conclusions and Recommendations for Change

Semi-structured interviews with 24 respondents from the ARE branch, both staff and leaders, produced rich data to explore engagement within the organization. A-priori codes were developed based on the original conceptual framework and research questions and helped to frame and define broad areas of exploration. Emergent codes were central to eliciting employee definitions and experiences of engagement, as well as reinforcing the importance of several of the organizational drivers and uncovering additional drivers. The revised conceptual model reflects the findings and represents an updated understanding of the constructs and factors (FIGURE 2).
As discussed in Chapter 3, the ARE branch was identified as an exemplar case of an engaged organization within CDC. The interview data from respondents confirms that assessment as employees perceive engagement to be high within the branch. The majority of respondents provided a numerical rating of engagement and on average rated engagement at 96.5 out of 100. Respondents spoke about their and their colleagues’ work ethic, skills and dedication to the work in their descriptions of engagement in the branch. Individual efforts were not significant unto themselves, rather respondents noted that individual skills and strengths were directed toward the collective efforts of the branch. A cooperative culture was emphasized and reinforced by employees, which seems to frame their experience of engagement. In speaking about colleagues’ efforts and energy, respondents seem to suggest a “contagious” effect of engagement, wherein a colleague’s high level of engagement can have a positive effect on the respondent’s level of engagement:

…working with people who are motivated and determined and excited about the work makes me want to do better. And I think that sort of effect happens throughout our branch. I think that we do better each other because of that, we better our work, we better the work for our grantees, but we also better the work for each other.

Respondents also spoke to the how the high level of cooperation and engagement was reinforced by branch leaders and staff. While branch leaders may have initiated the culture, it has become a shared venture by everyone in the branch. The strong collaborative work and structure will be discussed more later in this chapter.

In evaluating employee engagement within this organizational unit at CDC, it was important to consider engagement within the larger context of the agency. As mentioned in Chapter 1, past FEVS EEI scores have ranged from 44% to 97% representing a broad range of employee experiences. Respondents’ knowledge and perceptions about the state of engagement elsewhere at CDC reflected a similar range of positive and negative experiences of engagement. Most of the comments around the positive experiences were in reference to employees being committed to the
mission of their work in public health and wanting to make a difference. The majority of negative comments were not about individual employees at CDC, rather perceptions of sub-par supervision and leadership as well as unsafe, “miserable” environments. These responses allude to perceptions of defects at the organizational level versus the individual level. Perceptions of high engagement in the ARE branch were confirmed by some respondents’ assessment of engagement in their current branch being superior to most other places at CDC. The assessments of engagement at other organizations at CDC is based on either previous personal experience or observations of others’ experiences; in either case, there appears to be room for improved employee engagement in other organizational units around the agency.

Respondents’ personal experiences of engagement within the ARE branch were very enlightening in understanding how they defined and described employee engagement. Their responses also revealed what aspects of engagement employees valued in the organization and how employees are valued within the branch. The concept of *Voice* emerged as respondents spoke about how they valued the ability to have input and involvement in projects. *Voice* reflects the notion of employees having a high level of participation and influence, and “the desire of workers to be involved in the things that relate most directly to them” (Markey & Townsend, 2013). Respondents conveyed that “having a voice” also meant that they also felt heard and their opinions and contributions were valued. Another dimension of *Voice* is the ability to have influence, which is the employee belief that their input or activity has the potential to create or affect some change or add value to the activity (Shuck and Rose, 2013). *Voice*, as well as other factors within the *EMPOWERS THE WORKFORCE* driver, relates back to one of the psychological conditions necessary for engagement - psychological meaningfulness (Kahn, 1990). People want their contributions to be useful and valued, and “having a voice” in work and related decisions enables a sense of meaning and value. The respondents also emphasized that not only were they able to give input, they were
Relationships and rapport was a concept integral to how employees defined and characterized engagement. Within this context, respondents mentioned the duality of being professionally engaged and socially engaged. This is a key point to note because employee engagement may be thought to be a strictly professional concept. However, the literature and evidence from this case clearly demonstrate that cultivating personal relationships in the workplace is important for engagement. It creates a sense of safety and belonging that is fundamental to the human experience. Interpersonal relationships enhance feelings of social support and naturally induce a collaborative working environment. Organizational leaders should encourage interpersonal relationships and interactions because increased engagement in this area creates a more respectful and supportive environment.

Teamwork was another significant concept that emerged from how respondents perceived employee engagement. As previously mentioned, relationships with colleagues are valued and strong teamwork is a direct byproduct of those strong relationships. Colleagues and team members frequently recounted teamwork being a defining characteristic of a peak engagement experience. Respondents spoke about working collaboratively toward shared goals and also sharing workload in order to accomplish key activities. Teamwork creates synergy within an organization that can lead to more productivity.

Voice, Relationships and rapport, and Teamwork arose as significant concepts as to how individual employees perceived engagement and how the organization reflected engagement back to the employees. As a highly engaged organization, the ARE branch created an environment that encouraged employee input, involvement and influence; interpersonal relationships; and teamwork based on shared goals. These emergent factors from Research Question 1 are also mirrored in the
analysis of Research Question 2 and are represented within the organizational drivers for
engagement and will be discussed further. Within the revised conceptual framework, the findings
from Research Question 1 represent the exploration of the individual’s experience of engagement in
terms of their values and perceptions of engagement. As with the socioecological model, the
individual sphere is one level, but there are multiple factors that influence the individual, including
interaction with the organization level and the government context level.

**Organizational Drivers for Engagement**

The data analysis and results supported most of the a-priori organizational drivers and added
more facets to understanding those constructs. There were also new constructs that emerged from
the data that may have significance within CDC and in the public health sector more broadly.
Respondents’ perceptions of organizational drivers for engagement identify what factors within the
organization facilitate employee engagement. The drivers act as leverage points for leaders to
develop and integrate organizational practices for creating an engaged environment.

Leadership was not identified as a stand-alone driver in this research; rather, leadership is
foundational and influences all of the drivers as represented in the revised conceptual framework.
Leadership emphasis on and prioritization of these drivers is indicative of what is valued within the
organization. The role of leadership was critical to creating a culture where people are valued and
engaged. The following discussion will describe the influence of leaders within the case organization
and suggest opportunities for leaders within other public health organizations to facilitate an
engaged environment. The following discussion also demonstrates the interconnected relationships
between the organizational drivers, such that changing one driver may have a positive impact on
more than one of the other drivers; these relationships can also be seen through an analytic matrix
developed to better understand these data (Appendix H).
ESTABLISHES AND ALIGNS PURPOSE

The construct ESTABLISHES AND ALIGNS PURPOSE was a significant organizational driver. Respondents communicated a clear understanding of their organization’s purpose and functions, as well as how branch and individual activities were aligned to the purpose. Having a clear understanding of purpose guided respondents’ work and activities. Mission clarity and alignment strongly co-occurred with Outcomes oriented, which was a strong indicator that they were focused on tangible outcomes aligned with the mission. The outcomes and related work products helped employees feel engaged. In Patrick Lencioni’s book The Advantage, creating and reinforcing organizational clarity is the foundation of building a healthy organization because it requires leaders and staff to have alignment on the core of the organization’s purpose, functions, values and roles and responsibilities (Lencioni, 2012). Essentially, all organizational systems, structures, culture and practices flow from the establishment of organizational clarity and aligned values. Respondents were knowledgeable about components of purpose and echoed each other’s descriptions of the mission. However, no one recited the vision or mission statements. Rather, they discussed the essence of the organization and how their work contributed to the fulfillment of the mission. Staff described a sense of living the mission through their daily work. The organizational purpose was integrated into how projects are developed and executed. The branch chief indicated that he did not have frequent formal communication around the branch mission; however, it is reflected through what he values and gives attention:

So I probably don’t communicate it as explicitly and formally as I could or should. I mean, we have a branch mission and the branch mission does I think reflect our approach to be leaders in these areas of research translation and evaluation so it is formally reflected in our branch mission. But how much we turn to our branch mission or how much I reinforce our branch mission or how much anyone in the branch knows even what our branch mission is, probably varies. I like to think again that sort of implicitly or indirectly I support and reinforce it by going back to something I said earlier in my interest, attention, value, promotion of the work that people do in those areas.

Leaders also had ongoing conversations with staff to reinforce alignment. This process was described by a team leader:
And when there are questions on whether it’s aligning or priority, it’s on my one-on-one agenda for meeting with [the branch chief] and then sharing that feedback back with team members to try to help folks better understand . . . what we need to be thinking about in terms of alignment of those goals and alignment of the division priorities and the branch priorities.

There were organizational documents reviewed that spoke to the organizational purpose reinforcing the role of the branch, its functions and projects. The wording in the documents helped to communicate clarity around the organization’s identity by using headings such as “Who We Are”, “What We Do” and “How Can We Help You?” Respondents emphasized the branch role as a resource that provided services to internal and external stakeholders. A service orientation was a significant part of the organization’s purpose and identity that was communicated prominently. As a public health organization, the service function, particularly related to the *Partners in the field* code, was very important to employees’ engagement.

Respondents’ explanations of the mission usually focused on how the work connected to external partners or the public who were using the products they created. Respondent mentions of mission frequently focused on the branch’s role of translating the science and methodology to the appropriate target audiences in order to increase understanding and implementation. The nature of the ARE branch’s direct work in translation may lend itself to stronger engagement because of a more direct connection to partners and the public. Specific missions and functions vary and other organizational units at CDC may not have as explicit connection to the population served. However, leaders and staff discussions around organizational clarity can help to make those connections to the broader public health mission. One of the respondents with primarily administrative responsibilities spoke about how their work was connected to the mission:

> I would say every time I put a packet together to put a person on a plane to go and represent, I think that’s effective because what we’re doing is getting out there and it’s being presented and it’s displaying what people have worked hard on inside, and it opens probably the eyes of viewers. Those who see it, you know, it gives them a different perspective or it gives them a piece maybe to what they’ve worked on that may be missing. But it opens up conversation, it opens up more evaluation, or it may tie a solution into what someone else has, or it may tie into what someone else has and bring it to solution when they come together for meetings. So yeah, I think that every time I push a time card, I’m affecting what we do for public health because we have these bodies here that are working together and
they’re producing. So I just feel like every piece that I do behind the scenes helps for what they’re doing on the forefront. Every copy, every call, I think it all contributes to solutions to public health and awareness.

Establishing clarity around organizational purpose is important to engagement and relates to other drivers of engagement. As CDC and other public health organizations are mission-driven, it is especially important to have a clear connection between the broad mission and daily activities. People in public health and public service are also mission-driven, and strengthening this connection appeals to the emotional side of why they are in this field. As stated, the purpose sets the direction for values, activities, and other organizational processes. Organizations and leaders must clarify direction and align work and other processes accordingly. At CDC, organizational units may engage in organizational development and/or strategic planning activities to elucidate the components of purpose. While Strategic planning/retreats was an emergent code mentioned by respondents, it was not determined to be a significant factor in facilitating engagement. However, this research would suggest that it is critical that employees are involved in the process setting direction so that they can be further invested in the contributions towards outcomes. Performance management is an organizational approach to integrating and aligning purpose. The process performs dual functions in goal setting and assessing individual performance. A well-written performance management plan can establish clear expectations for employee work and help the employee to see how their work is aligned with the organization, which has been shown to improve engagement by increasing meaning and challenging work (Mone & London, 2010). As mentioned earlier, CDC FTEs undergo an annual PMAP to assess individual performance. There are options for performance elements based on job series and grade; an employee and supervisor may also develop their own sub-elements which allow for some flexibility. The PMAP may offer the opportunity for supervisors to better align employee activities to it organization’s purpose and functions. Supervisors and employees should work together to develop performance management plans that clarify alignment with organizational goals.
and use the document throughout the year to guide discussions around performance and development. An ARE branch leader explained how the PMAP is tailored to the branch:

You know at a division level and an agency level, we have the cascading elements within the PMAP which reflect sort of center and agency mission and those types of things. But thinking about the elements within the PMAP, we have standard PMAPs across the branch. Everyone across the branch has a comparable and standardized PMAP- on the evaluation team whether talking about technical expertise or competence; their elements relate to evaluation and people on the applied research and translation team whether they're talking about technical components and elements they relate to research and translation. But other than that, we have a standardized PMAP and those reflect, you know, people having technical skills and competence in their area, being able to communicate and present information in their area, being able to lead projects and engage and collaboratively work with folks across different areas in the division...

A branch member describes the utility of the PMAP in aligning the work to the mission:

I think that [the PMAP] helps to make sure that we’re living our mission…to do the work so that we can improve programs and improve the evidence base. But you know, you have to figure out what work to do and so the PMAP helps to structure that.

A clear mission and purpose also serve to guide appropriate and meaningful recognition of employee contributions. As work is aligned with the mission and values of the organization, excellent work that contributes to the fulfillment of mission should be recognized and rewarded. The PMAP itself is a mechanism for an end-of-year performance bonus based on performance that exceeds expectations. Also, employees can be nominated for formal awards at the agency, center and division levels in order to recognize aligned projects and activities. Hiring practices should support alignment with the purpose of the organization. While there are many regulations related to hiring federal and non-federal employees, a behavioral interviewing process can guide leaders to assess candidates’ alignment in organizational values and functions. The ARE branch shared a vacancy selection template which served as an interview guide for hiring. The interview questions focused on the expectations and skills of the specific position as related to mission and functions; however, candidates are also asked to describe situations related to branch values of problem solving, collaboration, and use of interpersonal skills.
EMPOWERS THE WORKFORCE

EMPOWERS THE WORKFORCE was a significant organizational driver of engagement in this DrPH research. Respondents valued being involved in the design of work and exercising initiative in terms of executing the work; the prominence of the codes Autonomy, Ownership and Voice reflected these values. They desired and expected ownership over their work, meaning that they were responsible for the development and execution of the work. Clear organizational purpose and direction are needed to have a high level of autonomy. Once the mission and goals are clear, employees can use their own discretion working toward those outcomes. As stated by a respondent:

I know what the general goals of the division are and then I’m allowed the room to come up with ideas and craft those ideas and rally my team around the support of that. And that to me is employee engagement.

Autonomy with clear direction can create a feeling of safety in the work environment, which is essential for engagement. The branch is a model of autonomy as no one is micromanaged and everyone is expected to lead activities. Leading an activity was an important concept emphasized by leaders and employees across the branch. There was an expectation from leadership and employees that everyone will lead an activity or project. When given the responsibility to lead, employees feel trusted to use their expertise and make intellectual contributions. Within the branch, there is an inherent sense and explicit acknowledgement that the employee is the expert and has the knowledge and abilities to do the work. Respondents commented that they felt their expertise and contributions were valued. Once again, feeling valued is important for psychological meaningfulness and being engaged. The leadership had confidence in the individual and trusted them to accomplish the tasks. The leaders value the input of branch members and give them freedom in how work gets done.

I feel like the leaders and the supervisors in the branch are very interested in the staff of the branch, shaping the branch. And I think that’s their management style, they are very focused on being responsive to leadership through the ideas of their staff. So they are very transparent with what is needed, it’s not just a kind of do whatever you want to do, they are very transparent with what is needed, what we need to put together and then they kind of leave the creative process to the rest of us to figure out how to meet that need. And they guide us in that process, but really allow us to have ownership.
As detailed in Chapter 1, the changing public health landscape requires professionals to be nimble to navigate new challenges. Autonomy is critical to give public health professionals flexibility and creative control to solve problems. As in the case of the branch, autonomy and ownership are not in isolation; rather, branch leaders meet regularly with employees to discuss project direction, updates and troubleshooting. Organizational leaders should serve in a supportive and consultative role to help employees navigate situations and accomplish work. As will be discussed later, colleagues also serve to support and provide feedback. At CDC, the PMAP could be used as a tool to guide project conversations. The measures could also reflect the employee’s ability to take on a high level of responsibility. Leaders need to be intentional in delegating responsibility and autonomy; the PMAP may be helpful in codifying that intention. In giving employees greater control and autonomy, individual initiative to take on more responsibility should not be underestimated. Behavioral interviewing can be used in hiring to set the expectation of autonomy in work and ask candidates about their level of agency on past projects.

A strengths-based orientation is a useful approach for organizations to identify projects and activities that are best suited to individuals based on their strengths. The recognition and utilization of strengths helps to empower and engage employees. ARE branch leaders and staff embraced StrengthsFinder as a tool to value and utilize everyone’s strengths. An organizational appreciation for a diversity of strengths and ideas helps to build depth of strengths and skills within the organizational unit.

ENCOURAGES GROWTH

Growth was an important concept in this research and significantly valued by respondents. Learning and development opportunities were frequently mentioned as available within the branch and as mechanisms that created engagement. The results demonstrated that respondents
appreciated *Formal learning and development opportunities* in a variety of forms offered by the branch and by CDC. CDC University (CDCU) is the formal training system within the agency and offers a variety of in-person and online courses to enhance the skillsets of public health professionals. Branch leaders encouraged employees to take training based on interests and relevance to their work. The branch leadership also coordinated branch-wide trainings on meeting facilitation, *The Speed of Trust*, and *StrengthsFinder*, in which branch members were the only participants of the sessions facilitated by external instructors. Respondents valued opportunities to strengthen skillsets and indicated that the learnings increased their engagement by enhancing their mastery of work. Organizational leaders at CDC should support employee training aligned with role and interests – most CDCU courses require supervisor approval. Branch-wide trainings or other non-CDCU courses usually require additional financial support by the organization; however, an investment in employees and their engagement is likely to add value to the organization and its public health initiatives.

The value of *Informal learning and development opportunities* was a subtler concept that emerged from this research. Respondents mentioned learning from experiences within their time at the branch. This type of learning could be through special work assignments outside of the branch such as emergency response rotations and details, or temporarily backfilling an internal branch position or job shadowing to learn more about a different role, such as an administrative position. Respondents also reported experiences learning from colleagues and leaders. They recognized their growth and evolution through experiences. The respondent below acknowledged the role of colleagues and leaders in creating a safe environment that supported their growth.

*I look at where I am now from where I was, and I’m the product of the team [that my team lead] created, that environment that [my team lead] nurtured me, the team nurtured me. I was allowed to develop, I was allowed to grow, I was allowed to stumble and learn from my own mistakes.*
The most pervasive experiential learning opportunity was through *Leading an activity*, which was also a significant factor for the *EMPOWERS THE WORKFORCE* driver. Increased ownership and autonomy provide meaningful professional and personal development experiences. When employees led an activity, they were able to learn about a project comprehensively. There was a strong co-occurrence with *Challenging work* which fuels engagement by meeting peoples’ desire to experience mastery and meaning. The learning typically went beyond the evaluation and translation functions and also included valuable skills in project management, oral and written communication, problem solving and collaborating with stakeholders. These and other diverse skills are desired in the public health workforce and have been identified as critical to address current public health challenges (Kaufman et al., 2014). Typically, formal training is the focus of public health workforce development; however, learning by doing has significant value and can be integrated into the work environment. More specifically, this research highlights the concept of “learning by leading” whereby the dynamic experience of leading activities can enrich a public health discipline and leadership skillset. Employee development must flourish outside of the classroom and be integrated into daily work. Within the private sector, the concept of a learning organization that systematically integrates learning and work has expanded in importance in driving results (Bersin by Deloitte, 2017). Similarly, creating learning organizations within CDC and other public health organizations in the public sector will promote continuous learning and create more engagement.

From an organizational perspective at CDC, there are a few strategies that could be used to integrate learning. As previously mentioned, the PMAP can be used to establish more leadership responsibilities for an employee. The PMAP could also be used to codify other learning practices for employees and supervisors. Development of leadership and other cross-cutting skills could be articulated in PMAPs. CDC requires that all FTEs have an annual individual development plan (IDP), which is a document for employees to share their short- and long-term career objectives,
learning and development interests, as well as interest in specific trainings and conferences for the year. The IDP could serve as a tool for employees and supervisors to discuss development plans and areas for development growth. While IDPs are technically a requirement, there is inconsistent monitoring of updates and they may be viewed more as a requirement than a useful tool. However, leaders could more clearly communicate its value to individual and organizational growth and engagement. IDPs could also be used by leaders and employees more strategically as it relates to conversations about career advancement.

FOSTERS COMMUNITY

The importance of connection and community was a persistent finding from this DrPH research. FOSTERS COMMUNITY represents a new conceptualization of the original PROVIDES SUPPORT organizational driver. Social support amongst branch members was certainly present and widespread; however, the expression of deeper connections by respondents more so reflected the notion of community. As mentioned earlier in this chapter, Relationships and rapport was identified by respondents as a concept critical to the experience of engagement. Respondents reported positive, interpersonal relationships and social interactions with branch members. These relationships were characterized by trust that had been built over time through interactions and common experiences, which creates a sense of safety. Psychological safety is necessary for engagement because when work environments are deemed to be trustworthy, secure and predictable, employees are more able to invest their energy into their work role and performance (Kahn, 1990). Safety is also important in a work context from the perspective of being comfortable to try different things and potentially fail without negative consequences. A respondent commented on the branch culture from this perspective:

I think that a big part of the high level of trust in our branch is that we’re generally not afraid to fail. We hope that it works well, we do the best we can to make it work well, but we’re not afraid to say it’s not working.
We’re not afraid to ask for help. I think by focusing primarily on the fact that we all have different strengths has created an atmosphere or a culture of there’s likely somebody else around here who’s better at this part than you, you should ask them for help. You don’t have to pretend that you’re the best at every part. And I think having that culture gives people room to not have to, I mean especially to not have to suffer in silence, but to not have to feel like they need to know everything or be able to do everything.

This quote reinforces the idea of a learning organization and reciprocal learning that occurs between colleagues. The importance of a strengths-based focus was previously mentioned as a strategy for empowering employees and was also discovered to enhance collaborations; Teamwork was a significant factor and co-occurred with Relationships and rapport. Strong, positive relationships between colleagues promote a collaborative working environment; this will be discussed further under the new organizational driver ESTABLISHES COLLABORATIVE STRUCTURE.

Organizational leaders should play a role in nurturing relationships to create a supportive and productive work environment. Within the ARE branch, various social activities were scheduled periodically and served as catalysts for developing and strengthening relationships as demonstrated with the code Social activities. Some activities were branch-wide and other activities were associated with team meetings and activities. Regardless, these activities served as venues to bond as well as integrate some fun. The concept of Work-life balance strongly co-occurred with Relationships and rapport and Social activities, and was identified as contributing to engagement. Respondents valued that leaders viewed them as people who had priorities, responsibilities and interests outside of work; they were not just employees hired to do a job. Respondents commented that branch leaders were interested in their well-being, not just their work role. In the quote below, a respondent shares their perspective of work-life balance in the branch:

I think if I needed to take off, I’ve always felt supported. I think even just the flexibility of being able to work from home and being able to take vacation time. I’ve never felt like that was an issue. I’ve never felt overburdened where people expect for you to work extended hours or on the weekends. I did have that kind of modeled honestly, like I think that [the branch leaders], for the most part, probably leave work whenever their time is up and not to say there aren’t times when they are in the office late, but I think they also model a pretty healthy work-life balance where I don’t feel like all they do is work. I think that is useful. I mean people still can get stressed out… people work, people take stuff home, people probably spend less time with their families than they want to, but I think for the most part people have stayed in our branch because we have a good work-life balance.
In order for employees to be psychologically available, they need to have the physical, emotional and psychological resources necessary to invest in their work role (Kahn, 1990). The ability to have work-life balance is a resource that can aid in that investment and positively affect engagement.

Organizational strategies in the area of community could serve to support engagement at CDC. Leaders could integrate social activities to give employees time to have fellowship and connect on a personal level. Involving staff in the planning would also create a sense of empowerment and collaboration. As with the ARE branch, effort could be made to integrate social interaction into regular meetings. It is important that leaders understand that they are part of the community and that they also take part in these interactions. Connections built in these venues can carry over to work-related projects and create sustained collaborations. Several respondents noted that colleagues elsewhere at CDC did not experience a high level of camaraderie within their organizations. There may need to be a shift in some organizational cultures to value and prioritize community as a dimension of the work environment that can improve engagement and other outcomes. Organizational support of work-life balance could be reinforced through increased flexibility regarding telework agreements and alternative work schedules. CDC has an agency-wide policy supporting telework and alternative schedules; however, individual organizational units may have informal practices that are not as supportive or that limit the number of days for telework. The data from this case demonstrated that incorporating flexibility around work-life balance did not diminish the workload or productivity of respondents, rather, the ability to balance work and personal demands allowed them to be more psychologically available for their work.
**PROVIDES RECOGNITION**

Similar to *Fosters Community*, *PROVIDES RECOGNITION* is a revised conceptualization of an original organizational driver. The driver *Promotes Fairness* sought to explore recognition as an aspect of fairness; however, responses reflected an emphasis on a culture of recognition. As previously reported in Chapter 3, the ARE branch itself has been recognized with a *CDC Honor Award* for excellence in workforce recognition. Respondents provided many examples of recognition in the branch. They spoke about instances when they had been recognized for their work individually and as a part of a team. Respondents noted that being recognized made them feel valued; when employees feel they are valued, they are more engaged because their work has more meaning and they feel like they are making a difference.

*I think [recognition is] good, I mean I think it contributes to the valuing of the workforce and of the people on the team. I think it helps boost morale in the sense of folks do feel like they are contributing to the team and to the division work and I think monetary and time off always helps as far as feeling like you are being appreciated, I think especially working for government. It’s not like you always get year-end bonuses or other huge appreciations, tokens of appreciation or monetary appreciation so I think even the small things are helpful as far as the work is valued.*

The majority of respondents commented that there were both informal and formal mechanisms for recognition. While the specific expressions of recognition are interesting in their own right, it is also important to note that the acknowledgement of these two types of recognition demonstrated that there was a structure for recognition. The structure was integrated into the branch and identified by most respondents. When describing *Informal recognition*, many respondents referred to a ritual during branch meetings where selected branch members are verbally acknowledged by the branch chief and get to choose a coupon. This ritual served a dual purpose of offering recognition and promoting social interaction within the branch meeting. The branch coupons also promote inclusive recognition, as non-FTEs are not eligible to be nominated for more formal awards according to CDC policy. *Formal recognition* was also used by branch leadership to acknowledge exceptional work. Some respondents noted that branch leaders were very intentional...
in submitting award nominations and noted that they always put forward at least one nomination from the branch. Branch leaders incorporated planning for recognition and awards nominations into their management meetings. *Formal recognition* served a dual purpose as well in recognizing excellent performance and achievement and promoting the branch’s achievements. The second aspect of promotion brings attention and visibility to employees’ work within the larger CIO and agency.

A structure of recognition should be implemented by organizational leaders. As noted under *ESTABLISHES AND ALIGNS PURPOSE* and elsewhere, recognition should be aligned with organizational purpose to reinforce the accomplishment of organizational goals; recognition can reinforce an employee’s connection to their public health and public service mission. Employees whose work is moving the mission forward should be recognized. Employee performance in support of core organizational values, such as teamwork, leadership, innovation or building partnerships, could also be candidates for recognition. The purpose of the PMAP is to evaluate performance annually and it is a tool for supervisors to give recognition; high performance ratings can yield end-of-year cash awards, time-off awards and/or a step increase in salary. Given the connection between performance management and recognition, the PMAP can be better utilized by supervisors and employees to discuss project progress and performance throughout the year.

Organizational leaders should plan for recognition throughout the year. At CDC, *CDC Honor Awards* are held annually but there are other formal awards available that vary by CIO, division and branch. In terms of already existing formal awards, leaders should become familiar with the timing of available awards so that they can plan time for selecting nominees and writing up nominations. At the branch and team levels, leaders could create their own recognition programs and involve employees in the process to determine what non-cash rewards are meaningful to them. Individuals and teams can be recognized for their efforts. Organizational units are often a diverse
combination of staff – there can be FTEs, contractors, fellows, and students. There are also combinations of administrative, programmatic and scientific staff. Amongst FTEs, there are a variety of General Scale (GS) grade levels dependent on the type of position. There should be efforts to be inclusive in recognizing employee efforts no matter the employee designation. While contractors cannot receive a cash award or *CDC Honor Awards*, a letter of recognition can be submitted to the contracting company which would reflect positively for that person’s employment with the company. Regular verbal or written acknowledgement is appreciated by all employees and helps them feel valued.

**ESTABLISHES COLLABORATIVE STRUCTURE**

A new organizational driver *ESTABLISHES COLLABORATIVE STRUCTURE* was created based on emergent data from this research that highlighted the importance of internal collaboration. Respondents consistently mentioned teamwork and collaboration when asked about practices within the branch that enhanced their engagement as primarily evidenced by the code *Teamwork*. *Teamwork* was also identified in Research Question 1 as a factor that was illustrative of employee engagement. Respondents felt supported by their colleagues in the accomplishment of work-related priorities. When respondents needed help with a deadline or had questions outside of their expertise, they reported being able to depend on colleagues and jumping in to help colleagues. The term “all hands on deck” was used by a few respondents to describe situations where team members would come together to meet a milestone or solve a problem. While branch members had individual responsibilities, they often strategized, worked through challenges and conducted work as teams. *Teamwork* as practiced in the branch somewhat resembles action learning, a group problem-solving process used to tackle complex problems within organizations (Marquardt, 2011). The teamwork process in the branch did not appear to be as formal as action learning teams in terms of
the selection of a learning coach, team members or problems; however, there did seem to be a shared commitment to solving problems in a focused, cooperative manner (Marquardt, 2011). A teamwork, action learning process is well-suited to navigating adaptive challenges in the field of public health. Similar to action learning, this type of teamwork demonstrated in the branch had the qualities of a learning organization, wherein the process of team problem-solving helps to expand the organizational knowledge and capacity, primarily due to the process itself; in other words, the learning process is more important than the solution (Marquardt, 2011). This capacity for organizational learning intersects with the ENcouraGes GROWTH driver, as previously described.

The code Teamwork structure strongly co-occurred with Teamwork and referenced that in most cases, projects were specifically assigned to smaller teams of 2 to 3 people. This model of work served several purposes. First, it provided an automatic opportunity for collaboration and each member contributed their unique strengths to enhance the project. Second, it allows employees to share the workload and reduce isolation, as each employee may be working on a few different project teams. Last, having shared responsibility ensures that the content of the project is not siloed and if one team member is unavailable, the other team members are well informed and can cover that knowledge.

As stated above, employee strengths were utilized and integrated into the composition of smaller working teams. Employees are configured on teams by interests but also based on strengths that are complementary to the project and teammate. Respondents valued the use of strengths within the branch and acknowledged that the diversity of individual strengths enhanced the collective efforts of the branch. Respondents mentioned a document that catalogues every branch members strengths, and that document is used when putting together project teams and is referenced when people need help from someone with a particular strength. Research from Gallup
Inc. has demonstrated that organizations the focus of developing strengths are more engaged, particularly when employees have opportunities to use their strengths and are supported within the organization (Asplund & Blacksmith, 2011).

The establishment of collaborative project teams is instructive in terms of organizational structure. In terms of the formal organizational chart, there are leaders and staff at the branch level and within the 2 teams. However, the utilization of project teams effectively flattens the functional organizational hierarchy. The branch chief and team leaders are empowering employees to lead projects and conduct themselves in mini teams within the formal team structure. Leadership of work is diffused across the organization and not singularly defined by one’s position or title. This “network of teams” structure is an organizational shift that has occurred in some private sector companies (Bersin, 2016). As described for the private sector, the formal, positional leaders still need to align the teams to the overall mission and connect and coordinate teams’ activities (Bersin, 2016). The “network of teams” structure can positively affect engagement, as autonomy and collaboration are increased.

How can organizations at CDC at other public health organizations leverage and integrate a collaborative structure? The formal organizational unit of the team is a good place to start. Team leaders should encourage the development of collaborative teams organized around projects. The teamwork group and dynamic could be utilized to strategize and problem-solve. Depending on the size and functions of the team, smaller project teams similar to those in the ARE branch may also be appropriate to fuel collaboration and execute work. This collaborative process would be most effective after the foundation has been laid for a supportive environment with trust built among colleagues. The use of StrengthsFinder to identify individual strengths has been a very successful strategy for the ARE branch and has practical applications to how work is accomplished. Leaders could provide StrengthsFinder training and additional coaching in developing individual strengths.
There may be other strengths-based assessments and programs that could be incorporated into organizations. Effective collaboration and teamwork can be integrated into PMAP performance elements and can be reinforced through recognition.

SERVICE TO PARTNERS AND PUBLIC

The SERVICE TO PARTNERS AND PUBLIC construct was developed as a result of the ESTABLISHES AND ALIGNS PURPOSE findings and the exclusion of the PROVIDES SUPPORT construct which contained findings on External support. It is not an organizational driver of engagement but a potential external driver for engagement due to the close connection of organizational outcomes to the populations and audiences served. In terms of the revised conceptual framework, this construct is exterior to the overall model because it is an external driver; however, the arrows represent the connection back to the organization. Respondents overall were very outcomes driven, and most of their activities and products were developed for use among grantees and other partners working in the field. For some respondents, the collaborative work done with partners helped increase their engagement. Through partner feedback and interaction, respondents were able to see how their products could positively impact their target audience or they could see what improvements might need to be made given the partner context. As stated in Chapter 2, 91% of state health agency workers reported that they joined public health to “make a difference” (Jarris & Sellers, 2015). It is clear from this case that a connection to external partners and the public is key for engagement because it ties to the passion of entering the field of public health and the desire to improve the health of populations. Public health professionals at CDC and elsewhere need to see how their efforts can make a difference to those groups they are serving. External collaboration is also critical because of the expanded scope and complexity of public
health. Non-traditional and cross-sector collaborations are needed to tackle public health issues and maximize limited resources through synergistic activities.

When creating organizational clarity, leaders should build a connection to the communities being served by the mission. While working on projects and activities, the population served should be kept prominent in conversations about the work. There may be some organizations or public health disciplines where the connection to the population is not as direct; in these cases, it is even more important for there to be clear messages of how the work aligns with the mission and target populations. Organizational leaders should support opportunities to interact with partners in person in order to develop a deeper understanding of how the public health problem affects the population and how the work is applied in the field. At CDC, some organizations may have limited travel dollars and funding can sometimes be a barrier. However, in person interactions with partners and the public should be prioritized to enhance service to the mission and engagement.

**Federal government context**

The federal government is a unique context within which employees must navigate many issues. Public health professionals within the government are public servants and are motivated, for the most part, by being able to affect positive change to improve the public’s health. Working within a government environment can directly conflict with that desire and ability to act because of various challenges. This DrPH research demonstrated mixed findings as to how employees interpret some of these governmental challenges and how they can impact engagement. The government shutdown and perceptions of burdensome bureaucracy were two of the most negatively viewed challenges and, therefore, posed a challenge to engagement. Turnover in leadership is a staple of federal employment and can be disruptive when priorities shift or change altogether. However, when speaking about the last change in agency leadership in 2009, respondents had a
mostly positive perspective. For those working in the ARE branch at the time, the change in leadership had a positive impact and increased focus and funding for heart disease and stroke prevention. Some respondents expressed uncertainty about the current turnover in leadership. The effect of turnover in leadership appeared to be situational based on where organizations sit in the agency and whether or not new priorities are aligned with the organization’s programs. The shutdown made respondents feel anxious, frustrated and question whether their work was of value; this last sentiment may be especially damaging for a public servant trying to create public value. In this situation, the organization is helpless in preventing a shutdown; however, leaders can be transparent with information they receive from the agency level to help reduce anxiety and help employees prepare as best they can. Bureaucracy is a necessary fixture of the federal government, and was also shown to be a topic of some frustration. Changing rules and regulations can be moving targets that reduce employees’ ability to move work forward and potentially reduce engagement. Leaders can communicate with employees about changes in policies and be cognizant about how engagement and individual agency may be impacted. Funding had a mixed impact on engagement in this research. It is well known that government funding at the federal, state and local levels are long-standing challenges of working in public health. In this case, respondents expressed frustration with funding as it related to executing programs. However, when faced with direct funding challenges, leaders within the ARE branch prioritized funding personnel positions so that no one would lose their job; as a result, employees seemed optimistic despite funding. Job security and financial incentives primarily had positive impacts on FTE respondents’ levels of engagement. There was uncertainty about whether job security would continue to be a standard feature of government employment.

Factors within the government context impacted employees’ engagement differently. It is unclear from the data if definitive conclusions can be drawn about how these factors improve or
reduce engagement. However, there is evidence to suggest that working within a highly engaged organization can serve as a buffer to some of the typically negative government factors. Although all of the negative government factors were outside of the branch’s direct control, respondents acknowledged actions or practices of branch leaders in trying to mitigate the negative impact. Also, the organizational drivers identified by this research may act as resources for employees to invest in their work performance, which is aligned with Kahn’s conceptualization of psychological availability. The Job-Demands Resources model conceptualizes the work engagement and burnout process as an interaction between job resources and job demands, which can include conflicts and being overworked (Schaufeli, 2017). According to Schaufeli, an abundance of resources can contribute to engagement and trigger positive work outcomes. When organizational units within CDC and other public health organizations build the organizational drivers of engagement, they may be creating a reservoir of resources for employees to draw on when there are disruptions within the federal context or conflicts external to the organization.

B. Leadership Implications for Public Health

This research and its findings have several implications for facilitating engagement within the governmental public health workforce. The national landscape of employee engagement is bleak with almost 70% of the U.S. workforce not engaged. This is a significant challenge that must be addressed across sectors; the government and public health sectors are not immune. The benefits of an engaged workforce are well-supported in terms of organizational outcomes. However, past work in employee engagement has been predominantly focused on the individual employee and their capacity to increase their engagement. As described, worker engagement does not exist in isolation as the worker interacts with the work itself and the work environment. An organizational, systemic approach to employee engagement is informative in order to create conditions for employees and
organizations to thrive. The case study organization serves as a model for high engagement and high organizational performance. The organizational drivers identified in this research are important individually but also interact synergistically to create an engaged organization. The organizational drivers serve as leverage points and are instructive in developing organizational interventions to improve engagement.

Over the last several years, there have been efforts within the government to prioritize measuring and improving employee engagement in order to improve mission performance. This DrPH research directly responds to the GAO’s call to action to better understand the drivers of engagement within an organizational unit and identify promising practices to improve engagement. Identifying organizational drivers through this research provides additional insights on engagement within a specific government agency and organizational unit; this approach may be used to explore engagement within other organizational units within and outside of CDC in order to tailor promising practices. The increased emphasis on strengthening employee engagement was identified as a workforce priority during the Obama administration. Since the recent presidential administration change, the federal government landscape and priorities are in flux. While employee engagement has not been specifically identified as a workforce priority area within the Trump administration, there is still an emphasis on optimizing employee and organizational performance; efforts to increase engagement can still offer a strategic advantage to maximizing organizational productivity. Recently published federal workforce priorities of the current administration identify expanding employee development opportunities and increasing employee recognition programs in order to increase productivity and performance (OPM, 2018). These two priorities are reflective of the ENCOURAGES GROWTH and PROVIDES RECOGNITION organizational drivers that facilitate engagement and may serve as a means to continue to promote an engaged, effective workforce within the government. As suggested by GAO (2015), future interventions should more
explicitly focus on linking increased engagement to improved organizational performance within the public sector. While the link between engagement and enhanced individual and organizational performance was illustrated in the original conceptual framework (Figure 1), the measurement of those outputs was beyond the scope of this research.

The findings from this research are very relevant to the public health governmental workforce at the federal, state and local levels. The public health governmental workforce is facing challenges from the increased breadth of responsibilities, increased complexities of solving wicked problems, and decreased funding to support the rising workloads. The Public Health Workforce Interests and Needs Survey (PH WINS) was implemented to assess the complex landscape of public health challenges within state health agencies from the perspective of the workforce (Sellers et al., 2015). PH WINS collected information from respondents on a range of issues regarding the navigation of national public health trends and their perceptions of the workplace environment and job satisfaction (Sellers et al., 2015). In exploring job satisfaction, respondents who communicated high levels of supervisory support and organizational support had higher levels of job satisfaction; conversely, lower levels of support in these areas indicated lower levels of job satisfaction (Harper et al., 2015). While job satisfaction and employee engagement are distinct constructs, high levels of job satisfaction are positively related to high levels of employee engagement. Amongst respondents that poorly rated supervisory support, the challenges included perceptions that there were fewer opportunities to demonstrate leadership skills and there were fewer opportunities for employee development (Harper et al., 2015). Other results from PH WINS demonstrates that various workplace characteristics are determinants of job satisfaction and voluntary turnover, including improved communication and relationship between employees and supervisors; ability of employees to apply skills in their work; and the emphasis of employee work contributing to organizational goals (Pourshaban et al., 2015). The findings from this DrPH research identified the organizational levers
related to these workplace characteristics, which can provide the opportunity to intervene in different settings, whether at CDC or a state health agency. The DrPH findings also speak to some of the perceptions and challenges identified by PH WINS, and provide a framework and practices around the organizational drivers that are important to engage public health professionals.

Building leadership capacity among public health professionals is critical to effectively implementing interventions to improve engagement. As stated earlier, an engaged public health workforce is the strategic advantage needed to navigate an evolving public health landscape. Individuals work within environments wherein the organizational culture, practices and leadership behaviors can influence engagement positively and negatively. Public health leaders have a significant role in creating a culture of engagement and intentionally integrating engagement-supportive practices into an organization. While it is often necessary for public health leaders to possess scientific and technical skills, it is not sufficient. Indeed, within the landscape of Public Health 3.0, crosscutting leadership and management skills are required to strategically navigate current and future challenges (Fraser et al., 2017). Robust leadership and management skills and competencies are also needed to create and sustain engagement amongst the workforce. Leadership training and development should include content related to engagement and the drivers presented here. The case study presented in this research demonstrated the fundamental role of leadership in developing and promoting conditions that facilitated engagement. While the framework of organizational drivers of employee engagement is instructive, public health leaders need concrete strategies and tools to enhance engagement within their organizations. Potential strategies for each organizational driver within the context of the CDC environment were presented earlier in this chapter; Appendix I presents pairs of related organizational drivers along with strategies for leaders and employees to consider. The organizational drivers identified in this research are not likely unique to only CDC, and represent fundamental values of employees from a variety of sectors.
Other governmental public health agencies, as well as private and non-profit public health organizations can further assess their own engagement and apply insights and recommendations from this work to their own settings.

C. Limitations

There were a few potential limitations to the proposed study. While it is appropriate to utilize a single, exemplar case study design as previously described, the engagement experience of one branch at CDC is not necessarily generalizable to the entire agency or other public health agencies. Certainly, even within one division with multiple branches, there is likely great diversity in experiences among those branches based on the work, people, processes and culture. Organizations and their members are inherently unique, which creates variability in which drivers may be significant given the context (Wollard & Shuck, 2011). However, the evidence from the literature and the results of this research suggests that the organizational drivers are pervasive across different sectors, industries, and occupations.

AI was used as a strengths-based approach to conduct qualitative research. AI was informative in gathering and highlighting the optimal conditions of engagement within the ARE branch. The strengths-based approach may have inhibited the emergence of discrepant evidence, as respondents were asked to reflect on their positive experiences of engagement within the organization. However, it should be noted that respondents provided alternative perceptions and experiences of engagement when comparing conditions to other work experiences inside and outside of CDC; these comparisons confirmed the presence of the drivers for high engagement within the branch. Also, the document review provided additional objective data sources that were compared to the interview data and deemed as confirmatory. There are other organizational units at
CDC with low levels of engagement; additional research in this arena could study lower engagement settings to identify challenges and solutions to engagement.

This DrPH research sought to explore organizational drivers of engagement through the collective perspectives of the employees. Many concepts and codes emerged from the interview data in terms of how employees conceptualized their own engagement and how they perceived factors within the organization that supported engagement. While codes were defined and distinct from one another, there were not separate codes and concepts for the individual level of engagement versus the organizational level of engagement. This study was intended to be exploratory in identifying drivers through qualitative data collection and analysis. However, future work in this area may build off of these findings and develop scales to measure the identified constructs and concepts at both the individual and organizational levels.
Appendices
Appendix A: UIC IRB letter of exemption

UNIVERSITY OF ILLINOIS
AT CHICAGO

Office for the Protection of Research Subjects (OPRS)
Office of the Vice Chancellor for Research (MC 672)
203 Administrative Office Building
1737 West Folk Street
Chicago, Illinois 60612-7227

Exemption Granted
February 24, 2017

Vanessa Byams, MPH
Community Health Sciences
4770 Buford Highway
Atlanta, GA 30341
Phone: (404) 498-6615

RE: Research Protocol # 2017-0203

“Exploring Organizational Driver that Facilitate Employee Engagement within a Governmental Public Health Agency”

Sponsors: None

Dear Ms. Byams:

Your Claim of Exemption was reviewed on February 24, 2017 and it was determined that your research protocol meets the criteria for exemption as defined in the U. S. Department of Health and Human Services Regulations for the Protection of Human Subjects [(45 CFR 46.101(b)]. You may now begin your research.
UIC Exemption Period: February 24, 2017 – February 24, 2020

Engaged Performance Site: UIC

Non-Engaged Site(s): CDC

Subject Population: Adult (18+ years) subjects only

Number of Subjects: 40

The specific exemption category under 45 CFR 46.101(b) is:

(2) Research involving the use of educational tests (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures or observation of public behavior, unless: (i) information obtained is recorded in such a manner that human subjects can be identified, directly or through identifiers linked to the subjects; and (ii) any disclosure of the human subjects' responses outside the research could reasonably place the subjects at risk of criminal or civil liability or be damaging to the subjects' financial standing, employability, or reputation.

You are reminded that investigators whose research involving human subjects is determined to be exempt from the federal regulations for the protection of human subjects still have responsibilities for the ethical conduct of the research under state law and UIC policy. Please be aware of the following UIC policies and responsibilities for investigators:

Amendments You are responsible for reporting any amendments to your research protocol that may affect the determination of the exemption and may result in your research no longer being eligible for the exemption that has been granted.

Record Keeping You are responsible for maintaining a copy all research related records in a secure location in the event future verification is necessary, at a minimum these documents include: the research protocol, the claim of exemption application, all questionnaires, survey instruments, interview questions and/or data collection instruments associated with this research protocol, recruiting or advertising materials, any consent forms or information sheets given to subjects, or any other pertinent documents.

Final Report When you have completed work on your research protocol, you should submit a final report to the Office for Protection of Research Subjects (OPRS).

Information for Human Subjects UIC Policy requires investigators to provide information about the research to subjects and to obtain their permission prior to their participating in the research. The
information about the research should be presented to subjects as detailed in the research protocol and application utilizing the approved recruitment and consent process and document(s).

Please be sure to use your research protocol number (listed above) on any documents or correspondence with the IRB concerning your research protocol.

We wish you the best as you conduct your research. If you have any questions or need further help, please contact me at (312) 355-2908 or the OPRS office at (312) 996-1711.

Sincerely,

Charles W. Hoehne, B.S., C.I.P.

Assistant Director, IRB #7

Office for the Protection of Research Subjects

cc: Jesus Ramirez-Valles, Community Health Sciences, M/C 923

Kristina Risley, Community Health Sciences, M/C 923
Appendix B: Interview guide- staff

Interview Guide

Introduction

Hello, [respondent name]. Thank you so much for taking the time to speak with me today. I am a student in the Doctor of Public Health program at the University of Illinois, Chicago and I am a health scientist here at CDC in the National Center for Birth Defects and Developmental Disabilities. This interview is part of my doctoral research project. I am interested in speaking with you and your colleagues in the Applied Research and Evaluation Branch about your experience of employee engagement within the branch and how certain factors have affected your experience of engagement. I am also interested in learning about how your branch helps to support and facilitate your engagement.

I am interested to hear about your personal experiences and opinions. I will ask you to take a few moments to reflect on a question before answering. Please take your time to think. The questions I’m about to ask you are called appreciative questions. I’m going to ask you about times you have seen things working at their best in this branch. Many times we ask about things that aren’t working well so that we can fix them. In this case, we try to find out about the things that are working so that we do more of them. This is a different approach and may feel somewhat strange at first. There may be moments of silence while you think about a response and that is ok. It may also feel unusual to talk about strengths but that is the nature of an appreciative inquiry. So, for the next hour and a half, I’d like you to speak honestly and openly about the strengths and successes in this branch.

I want to let you know that your participation is voluntary, so if you want to stop at any time or don’t feel comfortable answering a question please let me know. Your responses will be compiled with other participants and no personal identifiers will be used. I would like to record our discussion so that I can represent your views exactly and not miss anything during our conversation. The recording will be professionally transcribed and the information you give will only be used for this project. Is it OK to record the discussion?

This interview will last approximately 90 minutes. Do you have any questions for me before we begin?
A. Opening Questions (Warm-up)

I will begin by asking you a few general questions just to get to know you better.

1. How long have you been at CDC?

2. Describe one of your earliest positive experiences at CDC.

B. Defining and characterizing employee engagement

As I mentioned earlier, the focus of our discussion is employee engagement. I’d like to hear from you how you describe employee engagement.

3. When you think of employee engagement, what comes to mind?

Take one or two minutes to think about a peak experience or high point since working in this branch where you felt the most engaged.

4. Tell me about that experience. What was it about you, the situation, the organization, and the leadership that allowed that peak experience to emerge?
   
   a. Probe: What was the work environment like at that time?
   
   b. Probe: What about that experience made you feel engaged?
   
   c. Probe: From these experiences you just shared, what would you say are the elements of engagement?

For the purposes of my research, I am defining employee engagement as an individual’s investment of cognitive, emotional and behavioral energies directed toward organizational outcomes. This means that a person determines the work is meaningful and feels valuable in their work role. They feel a sense of safety and trust in work situations. These factors allow a person to bring a high level of focus and enthusiasm to their work. This investment of positive energy leads to increased effort towards work and the accomplishment of specific work goals.

Take a few moments to think about this definition of employee engagement.

5. How would you describe the level of employee engagement among the staff in your branch? Among the leaders and supervisors?
   
   a. Probe: From the description you just shared, what would you say are the elements of engagement?
b. Probe: If you were to rate engagement in this branch a scale from 0 to 100, what would you rate it?
c. Probe: How have different branch members (i.e. leaders, supervisors, staff, etc.) contributed to these positive examples/impressions?

For a few moments, I want you to shift your focus outside of your branch and towards CDC as an agency.

6. How would you describe the level of employee engagement at the agency level?
   a. Probe: What is a positive example of employee engagement at the agency level? What about this example was engaging?

C. Organizational Drivers Contributing to Employee Engagement

There are several different elements that may contribute to an employee’s level of engagement in an organization including individual characteristics and organizational factors. Individual characteristics can be a person’s personality or attitude. Organizational factors include the work environment, colleagues, policies and practices.

For this next set of questions, we will focus on organizational factors that may influence your level of engagement as I previously defined it. Again, these factors could include anything within the organization or work environment that you consider important for you to feel engaged in your work. I would like your opinion about how your organization, the branch, helps to facilitate engagement. Please take a few moments to think about your day-to-day experience in the branch.

7. Please describe how the Applied Research and Evaluation Branch has helped you feel engaged in your work. What factors within this branch contribute to your being engaged?
   a. Probe: Tell me more about that. How does that create a feeling of engagement?

   b. Probe: How do your supervisor and branch leaders contribute to that feeling of engagement associated with _________________? What are their attitudes and practices?

[If respondent mentions one of the five a-priori organizational drivers, shift to those follow-up questions.]
A-Priori Organizational Drivers

"If relevant, say…”you have already mentioned xx as playing an important role in employee engagement.”"

[The sequence and timing of the following questions will be based on respondent’s previous comments.]

Establishes and aligns purpose

Please take a few moments to think about the mission of the Applied Research and Evaluation Branch.

8. In your mind, what is the common mission or purpose that unites everyone in the branch? How is the common purpose nurtured by the branch?

Take a few moments to think about a time you felt your work contributed to the branch’s success and fulfillment of its mission.

9. What was it about the situation that brought out the best in you? How did that situation create a feeling of engagement?
   a. Probe: How did your supervisor and branch leaders support your connecting to the mission and the branch’s goals? What are their attitudes and practices?

Empowers the workforce

Think about a time you experienced a sense of ownership and autonomy within this branch.

10. What was it about the situation and the organization that supported you in feeling that way? How did that situation create a feeling of engagement?
   a. Probe: Did you feel involved in decisions that affect your work? How did that make you feel?
   b. Probe: How did your supervisor and/or branch leaders provide clear direction and boundaries to support these endeavors? What were their attitudes and practices?

Encourages growth

Think about the most challenging and exciting career development opportunity you have experienced in this branch. This experience could also be a work assignment that stretched and challenged you in a positive way.
11. What made the opportunity challenging? What made the opportunity exciting? How did that opportunity create a feeling of engagement?

   a. Probe: If have not experienced in branch, what about elsewhere at CDC? A different organization?

   b. Probe: How did your supervisor and/or branch leaders provide support for your growth and development? What are their attitudes and practices?

*Provides support*

Take a moment to think about and reflect on the level of support you feel among your branch colleagues and external partners.

12. How well do you feel supported in terms of the accomplishment of your assignments and project goals? By leaders, supervisor, co-workers? How does this support create a feeling of engagement?

   a. Probe: Are you able to depend on co-workers if you need help with a project deadline? How well do you feel your contributions are valued by your supervisor and leaders?

13. Tell me about your workload. How well are you supported in terms of the reasonableness of your workload and the completion of your responsibilities? How does your workload impact your engagement?

14. How well do you feel supported in your need to balance work and your family or other non-work priorities? What is it about your organization that best supports you in creating work/family balance?

   a. Probe: Do you have an example that you would feel comfortable sharing with me?

15. Take a moment to think about your rapport with external community partners. How do your interactions and relationships with external community partners impact your engagement?

   a. Probe: External community partners- can be any external stakeholders outside of CDC, including governmental partners, cross-sector partners/awardees, others
Promotes fairness

16. How are opportunities, rewards and recognition distributed in the branch?
   a. Probe: Are they equitably distributed? How?
   b. Probe: Can you think of a recent example of a training or other opportunity and how it was determined who would receive that opportunity?
   c. Probe: How are policies used to create fairness in terms of equitable distribution? How do policies create clarity about the equitable distribution of opportunities and resources?
   d. Probe: How do your supervisor and branch leaders reinforce an environment of trust and fairness? What are their attitudes and practices?

17. Talk about a time you received recognition, appreciation, or acknowledgement for your work in this branch. Describe the situation. What did you do? How were you recognized? How did it make you feel?

D. Government Context Factors that Influence Employee Engagement

Now, we will shift gears a little and I will ask you several questions about working for the federal government. It can be a unique experience to work in the federal government because of particular features of government or even based on certain circumstances. The next few questions are going to ask about your perceptions regarding how certain features related to government service may affect your engagement.

18. What do you see as some of the opportunities of working within a federal government environment?
   a. Probe: Describe what you like best about working in a governmental environment.
   b. Probe: In an ideal world, how might working within a federal government environment contribute to your being engaged?

**If relevant, “you have already mentioned xx”.

[The sequence and timing of the following questions will be based on respondent’s previous comments.]
Politicized environment

CDC is currently in the midst of transition planning to prepare for a new CDC director. There will be new leaders at different levels of the agency and potentially different priorities.

19. Have you previously experienced leadership transitions at CDC (with the change of presidential administrations)? This would include the appointment of a new CDC director and the appointment of new senior staff at the OD level.

20. If yes - Please take a moment to think about the last major leadership transition. Describe the environment of CDC at that time and the tone, if you will. How did the transition and turnover in leadership affect your engagement? Do you have a sense of how it may have affected others’ engagement at CDC? (Point of clarification: I am asking about the transition process, not about political party affiliation or your opinions on the incoming president.)

21. If no – How might the current leadership transition improve employee engagement? What are the opportunities?

   a. Probe: (If negative response) – What could be done to make you feel more engaged? What would be an ideal transition process?

There have been many high visibility events in recent years including the 2013 government shutdown, furloughs, and sequestration cuts.

22. Did you work here, either in this branch or elsewhere at CDC, during the 2013 shutdown?

23. If yes - Tell me about that experience in the days following the government shutdown. How would you describe your feelings of engagement? How did you feel about the state of your work and programs?

24. During the time of the shutdown, did you perceive increase attention on the federal workforce from the media and the public? How would you characterize the attention from the media and the public?

   a. Probe: Did you notice increased anti-government rhetoric?

25. Was your branch affected by sequestration? How did sequestration affect your programs? What effect did it have on your experience of engagement?

Bureaucracy/Funding

As a federal agency, CDC is subject to certain governmental rules, regulations and policies that shape how we are funded, conduct business, and administer public health programs.
26. Describe how these types of governmental processes affect your experience of engagement.
   a. Probe: (If negative response) – What could be done to make you feel more engaged? In an ideal world, how could the process be changed to make you feel more engaged?

27. Does the branch’s funding or the stability of funding affect your experience of engagement? How? Why?

*Job security/Financial incentives (For FTEs only)*

Now, I would like to ask you a few questions about compensation, financial incentives and job security associated with being a federal employee.

28. How do government compensation and financial incentives affect your experience of engagement?
   a. Probe: How would you characterize the federal benefits you receive? What do you appreciate most about your benefits? How fair is your compensation as a federal employee?

29. How does the availability and distribution of awards and bonuses affect your experience of engagement?
   a. Probe: Awards and bonuses – End of year performance awards, cash awards, time-off awards, other

30. How does the availability of promotion opportunities affect your experience of engagement?

31. How does having job security as a federal employee affect your experience of engagement?

*Public service ethic*

Next I will ask you about your role working within the federal government and public service.

32. Since working in this branch, when have you most felt like your work as a public servant had a positive impact? Tell a story about what you were doing. What about that situation made you feel engaged?

**E. Closing**

33. What do you value most about working in this branch?
We have reached the end of our discussion today. Before we formally close our conversation, is there any other information that you would like to share?

Thank you so much for your time today! I appreciate your sharing your work experiences and your perceptions of engagement with me. I hope this discussion provided an interesting opportunity to think about what makes you feel engaged and how the branch supports your engagement. I have enjoyed hearing your perspective and I look forward to sharing the aggregate findings with the branch in a few months. Thank you again!
Appendix C: Interview guide- leaders

Introduction

Hello, [respondent name]. Thank you so much for taking the time to speak with me today. I am a student in the Doctor of Public Health program at the University of Illinois, Chicago and I am a health scientist here at CDC in the National Center for Birth Defects and Developmental Disabilities. This interview is part of my doctoral research project. I am interested in speaking with you and your colleagues in the Applied Research and Evaluation Branch about your experience of employee engagement within the branch and how certain factors have affected how your staff experience engagement. I am also interested in learning about how your branch helps to support and facilitate your engagement.

I am interested to hear about your personal experiences and opinions. I will ask you to take a few moments to reflect on a question before answering. Please take your time to think. The questions I’m about to ask you are called appreciative questions. I’m going to ask you about times you have seen things working at their best in this branch. Many times we ask about things that aren’t working well so that we can fix them. In this case, we try to find out about the things that are working so that we do more of them. This is a different approach and may feel somewhat strange at first. There may be moments of silence while you think about a response and that is ok. It may also feel unusual to talk about strengths but that is the nature of an appreciative inquiry. So, for the next hour and a half, I’d like you to speak honestly and openly about the strengths and successes in this branch.

I want to let you know that your participation is voluntary, so if you want to stop at any time or don’t feel comfortable answering a question please let me know. Your responses will be compiled with other participants and no personal identifiers will be used. I would like to record our discussion so that I can represent your views exactly and not miss anything during our conversation. The recording will be professionally transcribed and the information you give will only be used for this project. Is it OK to record the discussion?

This interview will last approximately 90 minutes. Do you have any questions for me before we begin?
F. Opening Questions (Warm-up)

I will begin by asking you a few general questions just to get to know you better.

13. How long have you been at CDC?

14. Describe one of your earliest positive experiences at CDC.

G. Defining and characterizing employee engagement

As I mentioned earlier, the focus of our discussion is employee engagement. I’d like to hear from you how you describe employee engagement.

15. When you think of employee engagement, what comes to mind?

Take one or two minutes to think about a peak experience or high point since working in this branch where you felt the most engaged.

16. Tell me about that experience. What was it about you, the situation, the organization, and the leadership that allowed that peak experience to emerge?

   a. Probe: What was the work environment like at that time?

   b. Probe: What about that experience made you feel engaged?

   c. Probe: From these experiences you just shared, what would you say are the elements of engagement?

For the purposes of my research, I am defining employee engagement as an individual’s investment of cognitive, emotional and behavioral energies directed toward organizational outcomes. This means that a person determines the work is meaningful and feels valuable in their work role. They feel a sense of safety and trust in work situations. These factors allow a person to bring a high level of focus and enthusiasm to their work. This investment of positive energy leads to increased effort towards work and the accomplishment of specific work goals.

Take a few moments to think about this definition of employee engagement.

17. How would you describe the level of employee engagement among the staff in your branch? Among the leaders and supervisors?

   a. Probe: From the description you just shared, what would you say are the elements of engagement?
b. Probe: If you were to rate engagement in this branch a scale from 0 to 100, what would you rate it?
c. Probe: How have different branch members (i.e. leaders, supervisors, staff, etc.) contributed to these positive examples/impressions?

For a few moments, I want you to shift your focus outside of your branch and towards CDC as an agency.

18. How would you describe the level of employee engagement at the agency level?
   a. Probe: What is a positive example of employee engagement at the agency level? What about this example was engaging?

H. Organizational Drivers Contributing to Employee Engagement

There are several different elements that may contribute to an employee’s level of engagement in an organization including individual characteristics and organizational factors. Individual characteristics can be a person’s personality or attitude. Organizational factors include the work environment, colleagues, policies and practices.

For this next set of questions, we will focus on organizational factors that may influence the level of engagement in the branch as I previously defined it. Again, these factors could include anything within the organization or work environment that you consider important to keep employees engaged in their work. I would like your opinion about how your organization, the branch, helps to facilitate engagement. Please take a few moments to think about the day-to-day experience in the branch.

19. Please describe how you and the other leaders create an environment that help employees to feel engaged in their work. What factors within this branch contribute to employees being engaged?
   a. Probe: If teamwork/collaboration mentioned – How is teamwork structured? Why is it structured this way?
   
   b. Probe: How do your hiring practices impact the branch environment/team dynamics? How does this affect engagement?
   
   c. Probe: How do other branch leaders contribute to that feeling of engagement associated with __________________________? What are their attitudes and practices?
[If respondent mentions one of the five a-priori organizational drivers, shift to those follow-up questions.]

A-Priori Organizational Drivers

**If relevant, say…”you have already mentioned xx as playing an important role in employee engagement.”**

[The sequence and timing of the following questions will be based on respondent’s previous comments.]

Establishes and aligns purpose

Please take a few moments to think about the mission of the Applied Research and Evaluation Branch.

20. In your mind, what is the common mission or purpose that unites everyone in the branch? How do you nurture/encourage the common purpose as a leader?

Take a few moments to think about how the work of branch members has contributed to the branch’s success and fulfillment of its mission.

21. How do you support employees in connecting to the branch mission and goals? Why is that important?
   a. Probe: What are your attitudes and practices?
   b. Probe: Are there certain strategies implemented? How does the PMAP (Performance Management Appraisal Plan) support alignment with the mission?
   c. Probe: How do you provide clear expectations for the work and goals? How are expectations communicated?

Empowers the workforce

Think about the branch philosophy regarding employee ownership of work and autonomy.

22. How do you support employees in experiencing a sense of ownership and autonomy? Why is that important?
   a. Probe: How do you and other branch leaders provide clear direction and boundaries to support these endeavors?
Encourages growth

Next, we will discuss learning and development opportunities in this branch.

23. What learning and development opportunities are available in this branch?
   
   c. Probe: How are employees able to improve knowledge, skills and competencies?
   
   d. Probe: How are employees able to take on different and/or more difficult work assignments that stimulate their interests?
   
   e. Probe: How do you and other branch leaders provide support for growth and development?
   
24. What are the opportunities for career advancement within this branch? What about outside the branch?

Provides support

Take a moment to think about and reflect on the level of support among branch members and external partners.

25. How would you characterize the work interactions and relationships amongst staff? Amongst staff and leaders?

26. How do you support employees in terms of the accomplishment of their work? How does this support create a feeling of engagement?

15. How would you characterize employees’ workloads? How well are employees able to complete their responsibilities in light of their workload? How do you support this balance?

16. How do you support employees need to balance work and family or other non-work priorities? Why is that important?

17. Take a moment to think about branch rapport and relationships with external community partners. How would you characterize those relationships? How do those interactions and relationships with external community partners impact employee engagement? Your engagement?
b. Probe: External community partners- can be any external stakeholders outside of CDC, including governmental partners, cross-sector partners/awardees, others

Promotes fairness

18. How are opportunities, rewards and recognition distributed in the branch?

e. Probe: Are they equitably distributed? How?

f. Probe: Can you think of a recent example of a training or other opportunity and how it was determined who would receive that opportunity?

g. Probe: How are policies used to create fairness in terms of equitable distribution? How do policies create clarity about the equitable distribution of opportunities and resources?

h. Probe: How do you and other branch leaders reinforce an environment of trust and fairness?

19. Talk about the branch leadership’s philosophy on giving recognition, appreciation, or acknowledgement to employees for their work in this branch. Why is this important? How do you and other leaders reinforce?

I. Government Context Factors that Influence Employee Engagement

Now, we will shift gears a little and I will ask you several questions about working for the federal government. It can be a unique experience to work in the federal government because of particular features of government or even based on certain circumstances. The next few questions are going to ask about your perceptions regarding how certain features related to government service may affect your engagement and the engagement of your staff.

20. What do you see as some of the opportunities of working within a federal government environment?

c. Probe: Describe what you like best about working in a governmental environment.

d. Probe: In an ideal world, how might working within a federal government environment contribute to your being engaged?

**If relevant, “you have already mentioned xx”.”
[The sequence and timing of the following questions will be based on respondent’s previous comments.]

Politicized environment

CDC is currently in the midst of transition planning to prepare for a new CDC director. There will be new leaders at different levels of the agency and potentially different priorities.

21. Have you previously experienced leadership transitions at CDC (with the change of presidential administrations)? This would include the appointment of a new CDC director and the appointment of new senior staff at the OD level.

22. If yes - Please take a moment to think about the last major leadership transition. Describe the environment of CDC at that time and the tone, if you will. How did the transition and turnover in leadership affect your engagement? Do you have a sense of how it may have affected others’ engagement at CDC (your staff? colleagues?)? (Point of clarification: I am asking about the transition process, not about political party affiliation or your opinions on the incoming president.)

23. If no – How might the current leadership transition improve employee engagement? What are the opportunities?

   b. Probe: (If negative response) – What could be done to make you feel more engaged? What would be an ideal transition process?

There have been many high visibility events in recent years including the 2013 government shutdown, furloughs, and sequestration cuts.

24. Did you work here, either in this branch or elsewhere at CDC, during the 2013 shutdown?

25. If yes - Tell me about that experience in the days following the government shutdown. How would you describe your feelings of engagement? How did you feel about the state of your work and programs? What about your colleagues/staff at the time?

26. During the time of the shutdown, did you perceive increase attention on the federal workforce from the media and the public? How would you characterize the attention from the media and the public?

   b. Probe: Did you notice increased anti-government rhetoric?

27. Was your branch affected by sequestration? How did sequestration affect your programs? What effect did it have on your experience of engagement?
**Bureaucracy/Funding**

As a federal agency, CDC is subject to certain governmental rules, regulations and policies that shape how we are funded, conduct business, and administer public health programs.

28. Describe how these types of governmental processes affect your experience of engagement. How do they affect your staff’s engagement?

   b. Probe: (If negative response) – What could be done to make you feel more engaged? In an ideal world, how could the process be changed to make you feel more engaged?

29. Does the branch’s funding or the stability of funding affect your experience of engagement? How? Why? How does it affect your staff’s engagement?

**Job security/Financial incentives (For FTEs only)**

Now, I would like to ask you a few questions about compensation, financial incentives and job security associated with being a federal employee.

30. How do government compensation and financial incentives affect your experience of engagement?

   b. Probe: How would you characterize the federal benefits you receive? What do you appreciate most about your benefits? How fair is your compensation as a federal employee?

31. How does the availability and distribution of awards and bonuses affect your experience of engagement?

   b. Probe: Awards and bonuses – End of year performance awards, cash awards, time-off awards, other

32. How does the availability of promotion opportunities affect your experience of engagement?

33. How does having job security as a federal employee affect your experience of engagement?

**Public service ethic**

Next I will ask you about your role working within the federal government and public service.

34. Since working in this branch, when have you most felt like your work as a public servant had a positive impact? Tell a story about what you were doing. What about that situation made you feel engaged?
J. Closing

35. What do you value most about working in this branch?

We have reached the end of our discussion today. Before we formally close our conversation, is there any other information that you would like to share?

Thank you so much for your time today! I appreciate your sharing your work experiences and your perceptions of engagement with me. I hope this discussion provided an interesting opportunity to think about what makes you feel engaged and how the branch supports your engagement. I have enjoyed hearing your perspective and I look forward to sharing the aggregate findings with the branch in a few months. Thank you again!
## Appendix D: Measurement table

### Research Question 1: What is the current state of employee engagement in a federal government public health agency?

Sub-question 1: How do employees define engagement at the organizational unit level?

Sub-question 2: How do employees characterize engagement within their organization?

<table>
<thead>
<tr>
<th>Construct</th>
<th>Factors</th>
<th>Measures and Analysis Plan</th>
<th>Data Sources</th>
</tr>
</thead>
<tbody>
<tr>
<td>Employee engagement: an individual’s investment of cognitive, emotional and behavioral energies directed toward organizational outcomes</td>
<td>Definition: how the employee describes employee engagement among leaders, supervisors and staff</td>
<td>Thematic analysis of qualitative data – use of preset and emergent codes; data reduction and analysis; identification of patterns and themes; interpretation of findings</td>
<td>• Semi-structured interviews</td>
</tr>
<tr>
<td></td>
<td>Perceptions: how the employee perceives employee engagement at branch and agency levels among leaders, supervisors and staff</td>
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</tbody>
</table>
**Research Question 2:** How have certain organizational drivers contributed to employee engagement in a federal government public health agency?

**Sub-question 1:** How does the establishment of purpose support employee engagement?

**Sub-question 2:** How does the empowerment of the workforce support employee engagement?

**Sub-question 3:** How does the encouragement of growth support employee engagement?

**Sub-question 4:** How does the provision of support by an organization support employee engagement?

**Sub-question 5:** How does the promotion of fairness support employee engagement?

**Sub-question 6:** What other organizational drivers support employee engagement?

<table>
<thead>
<tr>
<th>Construct</th>
<th>Factors</th>
<th>Measures and Analysis Plan</th>
<th>Data Sources</th>
</tr>
</thead>
</table>
| Establishes and aligns purpose: organization and its members have a clear purpose, and goals and activities are aligned to that purpose | Clear mission: clarifies an organization's purpose and reason for its existence; provides guiding direction for fulfilling purpose and organizational goals. | Thematic analysis of qualitative data – use of preset and emergent codes; data reduction and analysis; identification of patterns and themes; interpretation of findings | • Document review  
• Semi-structured interviews |
<p>| | Strategic alignment: relates to employee’s line of sight between their work and the strategic priorities of the organization; they are aware of organizational priorities and their importance, and understand how their daily work contributes to the achievement of organizational mission. | | |
| | Leadership: The organizational leaders’ attitudes and practices in establishing and aligning purpose | | |
| Empowers the workforce: an organization encourages employees to exercise their initiative in how they get their work done; allows employees to have ownership of work and outcomes | Autonomy: the employee has the power to shape their work and environment in ways that allow them to perform at their best; includes clear direction and understanding of expectations; employee involved in decisions that affect their work | | |
| | Leadership: The organizational leaders’ attitudes and practices in empowering the workforce. | | |</p>
<table>
<thead>
<tr>
<th>Encourages growth: learning and development, career advancement and challenging work opportunities are available and valued by the organization (formal and informal)</th>
<th>Learning and development opportunities: employee is able to improve knowledge, skills and competencies related to personal development and work</th>
</tr>
</thead>
<tbody>
<tr>
<td>Challenging work: employee able to take on different and/or more difficult work assignments that stimulate their interests; may include increased responsibility</td>
<td>Leadership: The organizational leaders’ attitudes and practices in encouraging growth</td>
</tr>
<tr>
<td>Provides support: the organization values employee’s contributions and cares about their well-being; also includes social support from supervisors, colleagues and external collaborators</td>
<td>Internal support: There are positive work interactions with supervisors and colleagues. Includes support of work-related priorities (i.e. program/project goals, assignments, tasks and other responsibilities related to employee’s work) and support of non-work priorities (i.e. employee’s need to balance work and other responsibilities including family, health, etc.). As it relates to supervisor, workload is reasonable and sustainable. Also, positive interactions with other CDC programs and colleagues.</td>
</tr>
<tr>
<td>External support: There are positive work interactions with external stakeholders, including governmental partners, cross-sector partners/awardees, others</td>
<td>Leadership: The organizational leaders’ attitudes and practices in providing support.</td>
</tr>
<tr>
<td>Promotes fairness: the organization treats employees fairly and provides</td>
<td>Fairness: availability of equitable opportunities and equitable distribution of resources, opportunities and rewards</td>
</tr>
</tbody>
</table>
equitable opportunities and recognition. | Recognition and rewards: a message of appreciation or positive reinforcement tied to an employee’s behavior or accomplishment of a specific task or goal (formal and informal)  
Leadership: The organizational leaders’ attitudes and practices in promoting fairness and transparency. |  |
| Other organizational drivers | Organizational drivers- other: Any other organizational drivers that may emerge from data collection  
Leadership: The organizational leaders’ attitudes and practices in supporting additional drivers. |  |

**Research Question 3:** How does working for the federal government affect perceptions of employee engagement?

Sub-question 1: How does the politicized environment affect perceptions of employee engagement?

Sub-question 2: How does funding affect perceptions of employee engagement?

Sub-question 3: How does job security affect perceptions of employee engagement?

Sub-question 4: How do financial incentives affect perceptions of employee engagement?

Sub-question 5: How does the government bureaucracy affect perceptions of employee engagement?

Sub-question 6: How does a public service ethic affect perceptions of employee engagement?

<table>
<thead>
<tr>
<th>Construct</th>
<th>Factors</th>
<th>Measures and Analysis Plan</th>
<th>Data Sources</th>
</tr>
</thead>
</table>
| Federal government context: how working within the federal government may influence employee engagement at the organizational level | Politicized environment: anti-government rhetoric; high visibility in media and public; turnover in leadership due to changes in presidential administrations; shutdown, furlough, sequestration events  
Funding: Stability of congressional budget; sustainability of programs; | Thematic analysis of qualitative data – use of preset and emergent codes; data reduction and analysis; identification of patterns and themes; interpretation of findings | • Semi-structured interviews |
<table>
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<tr>
<th>level- facilitators and barriers</th>
<th>whether amounts are sufficient to carry out work</th>
</tr>
</thead>
<tbody>
<tr>
<td>Job security: FTEs cannot be fired after 1 year probation period; non FTE security depends on position funding source</td>
<td></td>
</tr>
<tr>
<td>Financial incentives: Pay, benefits, promotion potential and bonuses</td>
<td></td>
</tr>
<tr>
<td>Bureaucracy: the administrative system governing the federal government including rules and policies</td>
<td></td>
</tr>
<tr>
<td>Public service ethic: desire for federal employees to serve and make a difference</td>
<td></td>
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</tbody>
</table>
## Appendix E: Document review summary table

<table>
<thead>
<tr>
<th>Document (n=12)</th>
<th>Synopsis</th>
<th>Relevant Codes</th>
</tr>
</thead>
</table>
| Branch overview 5-pager | This document gives an overview of the branch and its work. The branch vision, mission, function and roles and responsibilities are outlined. There are summaries of “who we are” (two teams and their functions) and “what we do” (informational bullets describing portfolio of projects). The remainder of the document further describes the projects and activities conducted within both teams and at the branch level. | Mission clarity and alignment  
Function focus  
Build/expand evidence base  
Branch as a resource  
High quality work  
Work products  
CDC collaboration  
External collaboration |
| Branch 2-pager + Staff profile | This document gives a brief overview of the branch, including short summaries of the teams and work done at the branch level. A section entitled “How can we help you?” highlights branch functions and work with collaborators. A staff profile for every member of the branch includes a picture, branch/team affiliation, brief description of role and expertise and a listing of hobbies and interests. The document also includes a list of work products and resources. | Mission clarity and alignment  
Function focus  
Build/expand evidence base  
Branch as a resource  
High quality work  
Work products  
CDC collaboration  
External collaboration  
Strengths-focus  
Work-life balance |
| Heart to Heart newsletter/Summer 2015 | A newsletter for dissemination external to branch; provides a list of upcoming conferences. The newsletter also provides summaries of ARE branch products including a Million Hearts® Clinical Quality Measures Dashboard and Community Guide products. This issue contains a feature highlighted the resources of the Evaluation and Program Effectiveness Team in the branch. A section called “New Staff Spotlight” provides brief biosketches for new staff. | Promote branch and work  
Branch as a resource  
Function focus  
High quality work  
Work products  
CDC collaboration  
External collaboration  
Work-life balance |
| Heart to Heart newsletter/Summer 2016 | A newsletter for dissemination external to branch; provides a list of upcoming conferences. The newsletter also provides summaries of ARE branch products including the Surveillance and Evaluation Data Resource Guide for Heart Disease and Stroke Prevention Programs and an Enhanced Evaluability Assessment learning collaborative. This issue contains a list of selected resources and tools developed by the branch and recent publications. | Promote branch and work  
Branch as a resource  
Function focus  
High quality work  
Work products  
CDC collaboration  
External collaboration |
| Spring Fling reminder-2016 | This document is an email from a member of the Spring Fling planning committee which serves as a reminder for the upcoming event. Members of the | Social activities  
Relationships and rapport |
| **ARE branch and another branch in the division are invited.** The social event will take place at a park and will include kickball, trivia, and a scavenger hunt. Participants were assigned to Star Wars themed teams for the various activities. Participants were asked to bring donations for a canned food drive. | **Internal collaboration**  
**CDC collaboration**  
**Work-life balance** |
|---------------------------------------------------------------|---------------------------------------------------------------|
| **Speed of Trust training outline** | **Formal learning and development opportunities**  
**Communication**  
**Relationships and rapport**  
**Trust** |
| The document is a one-page flyer from FranklinCovey giving an overview of expectations for the Speed of Trust training. Learning objectives include: learn the 3 dimensions of creating trust; model trust through character and competence and be responsible for increasing own personal credibility; and communicate transparently, respectfully and directly. | |
| **StrengthsFinder retreat agenda** | **Formal learning and development opportunities**  
**Communication**  
**Relationships and rapport**  
**Strengths-based focus**  
**Diversity** |
| The goals for the training were: to become familiar with Strengths profiling as a tool to support team development; to understand the specific strengths of individuals and the best means to play to those strengths; and to select methods for application that will benefit the branch, teams and individuals. The agenda also included dialogue and discussion. | |
| **StrengthsFinder retreat summary and reflections** | **Formal learning and development opportunities**  
**Informal learning and development opportunities**  
**Strengths-based focus**  
**Diversity**  
**Voice** |
| A compiled summary of the StrengthsFinder training. Included a bulleted summary from training, take away messages, and action items for how to use strengths in practice. Also included bullets of branch members’ assessment of the utility of the training. | |
| **Branch composite strengths profiles** | **Strengths-based focus**  
**Diversity**  
**Relationships and rapport**  
**Formal learning and development opportunities**  
**Informal learning and development opportunities** |
| A compilation of branch members’ strength profiles organized by the 4 main categories of StrengthsFinder (Executing, Influencing, Relationship Building, and Strategic Thinking); also organized by branch level and teams. | |
| **Branch approach to recognition** | **Intentional recognition**  
**Formal recognition**  
**Informal recognition** |
| An email from the branch chief summarizing the branch’s approach to recognition, which includes formal recognition, informal recognition, and acknowledgement. The document also highlights branch 2015 EVS scores related to recognition and | |
| Brief discussion of training and development opportunities | Formal learning and development opportunities  
Informal learning and development opportunities  
Leaders interested in developing staff  
Role of leadership-recognition  
Role of leadership-growth  
Strengths-based focus |
|---|---|
Includes: select items with 100% positive; notable improvements since 2016; areas of attention; and areas to be proud of.  
Mission clarity and alignment  
Branch as positive environment  
Continuous improvement  
Role of leadership  
Formal learning and development opportunities  
Formal recognition |
| Vacancy selection example/template | The branch chief shared a template that he created for use when interviewing potential candidates.  
Includes approach, timeline, agenda for interview, several example panel interview questions and panelist rating form  
Hiring practices  
Branch identity  
Mission clarity and alignment  
Function focus  
Strengths-based focus |
Appendix F: A-priori code list

<table>
<thead>
<tr>
<th>CODES</th>
<th>DEFINITIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>STATE OF EMPLOYEE ENGAGEMENT</strong></td>
<td>The STATE OF EMPLOYEE ENGAGEMENT category contains codes related to the current state of employee engagement as perceived by members of the organizational unit within a federal public health agency (Research Question #1).</td>
</tr>
<tr>
<td>Primary codes:</td>
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<tr>
<td>• Defining employee engagement</td>
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<tr>
<td>• Characterizing employee engagement</td>
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<tr>
<td>• Perceptions – branch</td>
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<tr>
<td>• Perceptions – agency</td>
<td></td>
</tr>
<tr>
<td>• Emergent codes</td>
<td></td>
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</tbody>
</table>

Primary codes: |
Defining employee engagement: how the respondent defines and describes the term “employee engagement”.
Characterizing employee engagement: responses related to the respondents’ peak experiences of engagement while working in this branch and the characteristics that made them feel engaged.
Perception – branch: how the respondent perceives the level of employee engagement within the branch unit.
Perception – agency: how the respondent perceives the level of employee engagement at the agency level.

Emergent codes will arise based on the qualitative inquiry process.

<table>
<thead>
<tr>
<th>ORGANIZATIONAL DRIVERS</th>
<th>The ORGANIZATIONAL DRIVERS category contains codes related to the organizational drivers that contribute to employee engagement in a federal government public health agency (Research Question #2). A-priori organizational drivers are: establishes and aligns purpose; empowers the workforce; encourages growth; provides support; promotes fairness; and other organizational drivers.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Primary codes:</td>
<td></td>
</tr>
<tr>
<td>[Establishes and aligns purpose]</td>
<td></td>
</tr>
<tr>
<td>• Clear mission</td>
<td></td>
</tr>
<tr>
<td>• Strategic alignment</td>
<td></td>
</tr>
<tr>
<td>• Role of leadership- purpose</td>
<td></td>
</tr>
</tbody>
</table>

[Empowers the workforce] |
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>• Autonomy</td>
<td></td>
</tr>
<tr>
<td>• Role of leadership- autonomy</td>
<td></td>
</tr>
</tbody>
</table>

Primary codes: |
Clear mission: respondent speaks to the organization's purpose and reason for its existence.
Strategic alignment: respondent speaks to how their daily work contributes to the achievement of the organizational mission.
Role of leadership- purpose: the organizational leaders’ attitudes and practices in establishing and aligning purpose.

Autonomy: the respondent speaks to the power to shape their work and environment and how they are involved in decisions that affect their work.
Role of leadership- autonomy: the organizational leaders’ attitudes and practices regarding employee autonomy and ownership.
| Encourages growth | Learning and development opportunities: the respondent discusses opportunities to improve knowledge, skills and competencies related to work and/or personal development; may also include career advancement opportunities.  
Challenging work: the respondent speaks about taking on different and/or more difficult work assignments that stimulate their interests; also includes increased responsibility.  
Role of leadership- growth: the organizational leaders’ attitudes and practices in offering and/or encouraging learning and development opportunities and challenging work. |
|---|---|
| Provides support | Internal support: the respondent refers to positive work interactions and/or relationships with branch leaders, supervisor and/or colleagues. Includes support of work-related priorities (i.e. program/project goals, assignments, tasks and other responsibilities related to employee’s work). Also, includes positive interactions and/or relationships with other CDC programs and colleagues.  
External support: the respondent refers to positive work interactions and/or relationships with external stakeholders, including governmental partners, community partners, grantees, and/or others.  
Role of leadership- support: the organizational leaders’ attitudes and practices in providing support of work-related and non-work priorities; efforts to make workload manageable and/or sustainable; and/or encouraging positive work interactions. |
| Promotes fairness | Fairness: the respondent refers to the availability of equitable opportunities and equitable distribution of resources, opportunities and rewards.  
Recognition and rewards: the respondent refers to how recognition and rewards are distributed in the branch; also, any references to receiving or giving a message or token of acknowledgement, appreciation or other recognition based on their behavior or accomplishment of a specific task or goal.  
Role of Leadership- fairness: the organizational leaders’ attitudes and practices in promoting fairness and recognition. |
| Other Organizational Drivers | Org drivers- other: the respondent refers to any other organizational drivers outside of a-priori organizational drivers. The organizational drivers may include other factors in the work environment, colleagues, policies and/or practices that respondent considers important to feel engaged. |
- Emergent codes

Role of leadership- org drivers other: the organizational leaders’ attitudes and practices in supporting additional drivers mentioned by respondent.

Emergent codes will arise based on the qualitative inquiry process.

| FEDERAL GOVERNMENT CONTEXT | The FEDERAL GOVERNMENT CONTEXT category contains codes related to how working for the federal government may influence employee engagement at the organizational level (Research Question #3).

Politicized environment: the respondent refers to anti-government rhetoric; high visibility in media and public; turnover in leadership due to changes in presidential administrations; and/or shutdown, furlough, sequestration events.

Funding: the respondent refers to the stability of congressional and/or program funding; sustainability of programs; and/or whether amounts are sufficient to carry out work.

Job Security: the respondent speaks about the perceived presence or absence of job security working within federal government environment.

Financial Incentives: the respondent speaks to perceptions of how pay, benefits, promotion opportunities and/or bonuses may impact engagement.

Bureaucracy: the respondent refers to the administrative system governing the federal government including rules, regulations and policies.

Public Service Ethic: the respondent expresses a desire and/or shares an experience related to serving the public and making a difference through their work.

- Emergent codes

Emergent codes will arise based on the qualitative inquiry process.

Primary codes:
- Politicized environment
- Funding
- Job Security
- Financial Incentives
- Bureaucracy
- Public Service Ethic
Appendix G: C-coefficient tables

**TABLE I: C-COEFFICIENTS FOR VOICE AND SELECT CO-OCCURRING FACTORS**

<table>
<thead>
<tr>
<th>Voice</th>
<th>C-coefficient</th>
</tr>
</thead>
<tbody>
<tr>
<td>Autonomy</td>
<td>0.09</td>
</tr>
<tr>
<td>Characterizing employee engagement</td>
<td>0.11</td>
</tr>
<tr>
<td>Defining employee engagement</td>
<td>0.15</td>
</tr>
<tr>
<td>Inclusive environment</td>
<td>0.09</td>
</tr>
<tr>
<td>Lack of positional hierarchy</td>
<td>0.10</td>
</tr>
<tr>
<td>Leading an activity</td>
<td>0.08</td>
</tr>
<tr>
<td>Organizational drivers- other</td>
<td>0.10</td>
</tr>
<tr>
<td>Regular meetings</td>
<td>0.08</td>
</tr>
<tr>
<td>Relationships and rapport</td>
<td>0.08</td>
</tr>
<tr>
<td>Role of leadership</td>
<td>0.13</td>
</tr>
<tr>
<td>Role of leadership- org drivers other</td>
<td>0.08</td>
</tr>
<tr>
<td>Teamwork</td>
<td>0.08</td>
</tr>
<tr>
<td>Work based on interests</td>
<td>0.09</td>
</tr>
</tbody>
</table>

**TABLE II: C-COEFFICIENTS FOR RELATIONSHIPS AND RAPPORT AND SELECT CO-OCCURRING FACTORS**

<table>
<thead>
<tr>
<th>Relationships and Rapport</th>
<th>C-coefficient</th>
</tr>
</thead>
<tbody>
<tr>
<td>Branch as positive environment</td>
<td>0.09</td>
</tr>
<tr>
<td>Defining employee engagement</td>
<td>0.11</td>
</tr>
<tr>
<td>Internal collaboration</td>
<td>0.09</td>
</tr>
<tr>
<td>Organizational drivers- other</td>
<td>0.09</td>
</tr>
<tr>
<td>Regular meetings</td>
<td>0.09</td>
</tr>
<tr>
<td>Role of leadership</td>
<td>0.12</td>
</tr>
<tr>
<td>Role of leadership- org drivers other</td>
<td>0.09</td>
</tr>
<tr>
<td>Social activities</td>
<td>0.17</td>
</tr>
<tr>
<td>Teamwork</td>
<td>0.13</td>
</tr>
<tr>
<td>Trust</td>
<td>0.12</td>
</tr>
<tr>
<td>What do you value most in the branch?</td>
<td>0.14</td>
</tr>
<tr>
<td>Work-life balance</td>
<td>0.15</td>
</tr>
</tbody>
</table>

**TABLE III: C-COEFFICIENTS FOR TEAMWORK AND SELECT CO-OCCURRING FACTORS**

<table>
<thead>
<tr>
<th>Teamwork</th>
<th>C-coefficient</th>
</tr>
</thead>
<tbody>
<tr>
<td>Autonomy</td>
<td>0.08</td>
</tr>
<tr>
<td>Characterizing employee engagement</td>
<td>0.12</td>
</tr>
<tr>
<td>Communication</td>
<td>0.10</td>
</tr>
<tr>
<td>Consultation with supervisor/leader</td>
<td>0.09</td>
</tr>
<tr>
<td>Continuous improvement</td>
<td>0.08</td>
</tr>
<tr>
<td>Feedback</td>
<td>0.14</td>
</tr>
<tr>
<td>----------------------------------</td>
<td>------</td>
</tr>
<tr>
<td>Internal collaboration</td>
<td>0.21</td>
</tr>
<tr>
<td>Leading an activity</td>
<td>0.09</td>
</tr>
<tr>
<td>Navigate challenges</td>
<td>0.09</td>
</tr>
<tr>
<td>Organizational drivers- other</td>
<td>0.08</td>
</tr>
<tr>
<td>Regular meetings</td>
<td>0.14</td>
</tr>
<tr>
<td>Relationships and rapport</td>
<td>0.13</td>
</tr>
<tr>
<td>Strengths-based focus</td>
<td>0.09</td>
</tr>
<tr>
<td>Social activities</td>
<td>0.17</td>
</tr>
<tr>
<td>Teamwork structure</td>
<td>0.20</td>
</tr>
<tr>
<td>Voice</td>
<td>0.08</td>
</tr>
</tbody>
</table>

**TABLE IV: C-COEFFICIENTS FOR BRANCH ENGAGEMENT- HIGH AND SELECT CO-OCCURRING FACTORS**

<table>
<thead>
<tr>
<th>Branch engagement- high</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Committed and dedicated colleagues</td>
<td>0.09</td>
</tr>
<tr>
<td>Dedicated to work</td>
<td>0.12</td>
</tr>
<tr>
<td>Feel safe</td>
<td>0.08</td>
</tr>
<tr>
<td>Perceptions- branch</td>
<td>0.54</td>
</tr>
<tr>
<td>Trust</td>
<td>0.06</td>
</tr>
</tbody>
</table>

**TABLE V: C-COEFFICIENTS FOR PERCEPTIONS- AGENCY AND SELECT CO-OCCURRING FACTORS**

<table>
<thead>
<tr>
<th>Perceptions- agency</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Agency- branch engagement &gt; than agency</td>
<td>0.20</td>
</tr>
<tr>
<td>Agency- engagement varies</td>
<td>0.25</td>
</tr>
<tr>
<td>Agency- negative perceptions</td>
<td>0.46</td>
</tr>
<tr>
<td>Agency- positive perceptions</td>
<td>0.43</td>
</tr>
<tr>
<td>Perceptions- branch</td>
<td>0.10</td>
</tr>
</tbody>
</table>

**TABLE VI: C-COEFFICIENTS FOR MISSION CLARITY AND ALIGNMENT AND SELECT CO-OCCURRING FACTORS**

<table>
<thead>
<tr>
<th>Mission clarity and alignment</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Branch as resource</td>
<td>0.14</td>
</tr>
<tr>
<td>Build/expand evidence base</td>
<td>0.13</td>
</tr>
<tr>
<td>CDC collaboration</td>
<td>0.13</td>
</tr>
<tr>
<td>Communication</td>
<td>0.10</td>
</tr>
<tr>
<td>Continuous improvement</td>
<td>0.10</td>
</tr>
<tr>
<td>External collaboration</td>
<td>0.12</td>
</tr>
<tr>
<td>Function focus</td>
<td>0.27</td>
</tr>
<tr>
<td>High quality work</td>
<td>0.12</td>
</tr>
<tr>
<td>Outcomes oriented</td>
<td>0.13</td>
</tr>
<tr>
<td>Partners in the field</td>
<td>0.16</td>
</tr>
<tr>
<td>Role of leadership- purpose</td>
<td>0.23</td>
</tr>
<tr>
<td>----------------------------</td>
<td>------</td>
</tr>
<tr>
<td>Topic focus</td>
<td>0.11</td>
</tr>
<tr>
<td>Work products</td>
<td>0.20</td>
</tr>
</tbody>
</table>

**TABLE VII: C-COEFFICIENTS FOR **BRANCH AS RESOURCE** AND SELECT CO-OCCURRING FACTORS**

<table>
<thead>
<tr>
<th>Branch as resource</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Build/expand evidence base</td>
<td>0.23</td>
</tr>
<tr>
<td>CDC collaboration</td>
<td>0.18</td>
</tr>
<tr>
<td>External collaboration</td>
<td>0.14</td>
</tr>
<tr>
<td>Function focus</td>
<td>0.32</td>
</tr>
<tr>
<td>Mission clarity and alignment</td>
<td>0.14</td>
</tr>
<tr>
<td>Partners in the field</td>
<td>0.25</td>
</tr>
<tr>
<td>Work products</td>
<td>0.18</td>
</tr>
</tbody>
</table>

**TABLE VIII: C-COEFFICIENTS FOR **PARTNERS IN THE FIELD** AND SELECT CO-OCCURRING FACTORS**

<table>
<thead>
<tr>
<th>Partners in the field</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Branch as resource</td>
<td>0.25</td>
</tr>
<tr>
<td>Build/expand evidence base</td>
<td>0.15</td>
</tr>
<tr>
<td>External collaboration</td>
<td>0.19</td>
</tr>
<tr>
<td>External support</td>
<td>0.14</td>
</tr>
<tr>
<td>Function focus</td>
<td>0.24</td>
</tr>
<tr>
<td>Mission clarity and alignment</td>
<td>0.16</td>
</tr>
<tr>
<td>Outcomes oriented</td>
<td>0.17</td>
</tr>
<tr>
<td>Partner feedback</td>
<td>0.16</td>
</tr>
<tr>
<td>Partners- in person interaction</td>
<td>0.12</td>
</tr>
<tr>
<td>Public service ethic</td>
<td>0.24</td>
</tr>
<tr>
<td>Work makes a difference</td>
<td>0.10</td>
</tr>
<tr>
<td>Work products</td>
<td>0.14</td>
</tr>
</tbody>
</table>

**TABLE IX: C-COEFFICIENTS FOR **ROLE OF LEADERSHIP- PURPOSE** AND SELECT CO-OCCURRING FACTORS**

<table>
<thead>
<tr>
<th>Role of leadership- purpose</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Build/expand evidence base</td>
<td>0.13</td>
</tr>
<tr>
<td>Communication</td>
<td>0.10</td>
</tr>
<tr>
<td>Continuous improvement</td>
<td>0.10</td>
</tr>
<tr>
<td>Expectations</td>
<td>0.13</td>
</tr>
<tr>
<td>Function focus</td>
<td>0.10</td>
</tr>
<tr>
<td>Mission clarity and alignment</td>
<td>0.23</td>
</tr>
<tr>
<td>Outcomes oriented</td>
<td>0.09</td>
</tr>
</tbody>
</table>
### TABLE X: C-COEFFICIENTS FOR AUTONOMY AND SELECT CO-OCCURRING FACTORS

<table>
<thead>
<tr>
<th>Autonomy</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Clear direction</td>
<td>0.18</td>
</tr>
<tr>
<td>Consultation with supervisor/leader</td>
<td>0.21</td>
</tr>
<tr>
<td>Decision making</td>
<td>0.22</td>
</tr>
<tr>
<td>Designing/developing work</td>
<td>0.11</td>
</tr>
<tr>
<td>Innovation</td>
<td>0.10</td>
</tr>
<tr>
<td>Leadership support</td>
<td>0.10</td>
</tr>
<tr>
<td>Leading an activity</td>
<td>0.24</td>
</tr>
<tr>
<td>Ownership</td>
<td>0.29</td>
</tr>
<tr>
<td>Role of leadership- autonomy</td>
<td>0.22</td>
</tr>
<tr>
<td>Trust</td>
<td>0.10</td>
</tr>
<tr>
<td>Voice</td>
<td>0.09</td>
</tr>
</tbody>
</table>

### TABLE XI: C-COEFFICIENTS FOR OWNERSHIP AND SELECT CO-OCCURRING FACTORS

<table>
<thead>
<tr>
<th>Ownership</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Autonomy</td>
<td>0.29</td>
</tr>
<tr>
<td>Clear direction</td>
<td>0.07</td>
</tr>
<tr>
<td>Consultation with supervisor/leader</td>
<td>0.11</td>
</tr>
<tr>
<td>Decision making</td>
<td>0.07</td>
</tr>
<tr>
<td>Designing/developing work</td>
<td>0.08</td>
</tr>
<tr>
<td>Leading an activity</td>
<td>0.23</td>
</tr>
<tr>
<td>Role of leadership- autonomy</td>
<td>0.15</td>
</tr>
<tr>
<td>Teamwork</td>
<td>0.07</td>
</tr>
<tr>
<td>Voice</td>
<td>0.07</td>
</tr>
</tbody>
</table>

### TABLE XII: C-COEFFICIENTS FOR LEADING AN ACTIVITY AND SELECT CO-OCCURRING FACTORS

<table>
<thead>
<tr>
<th>Leading an activity</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Autonomy</td>
<td>0.24</td>
</tr>
<tr>
<td>Challenging work</td>
<td>0.19</td>
</tr>
<tr>
<td>Consultation with supervisor/leader</td>
<td>0.11</td>
</tr>
<tr>
<td>Designing/developing work</td>
<td>0.10</td>
</tr>
<tr>
<td>Informal learning and development opportunities</td>
<td>0.14</td>
</tr>
<tr>
<td>Internal collaboration</td>
<td>0.10</td>
</tr>
<tr>
<td>Opportunity</td>
<td>0.13</td>
</tr>
<tr>
<td>Ownership</td>
<td>0.23</td>
</tr>
<tr>
<td>Role of leadership- autonomy</td>
<td>0.10</td>
</tr>
<tr>
<td>Teamwork</td>
<td>0.10</td>
</tr>
<tr>
<td>Voice</td>
<td>0.08</td>
</tr>
</tbody>
</table>
### TABLE XIII: C-COEFFICIENTS FOR ROLE OF LEADERSHIP- AUTONOMY AND SELECT CO-OCCURRING FACTORS

<table>
<thead>
<tr>
<th>Role of leadership- autonomy</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Autonomy</td>
<td>0.22</td>
</tr>
<tr>
<td>Clear direction</td>
<td>0.32</td>
</tr>
<tr>
<td>Consultation with supervisor/leader</td>
<td>0.25</td>
</tr>
<tr>
<td>Leaders- need to delegate</td>
<td>0.10</td>
</tr>
<tr>
<td>Leading an activity</td>
<td>0.10</td>
</tr>
<tr>
<td>Ownership</td>
<td>0.15</td>
</tr>
<tr>
<td>Opportunity</td>
<td>0.13</td>
</tr>
<tr>
<td>Ownership</td>
<td>0.23</td>
</tr>
</tbody>
</table>

### TABLE XIV: C-COEFFICIENTS FOR FORMAL LEARNING AND DEVELOPMENT OPPORTUNITIES AND SELECT CO-OCCURRING FACTORS

<table>
<thead>
<tr>
<th>Formal learning and development opportunities</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Informal learning and development opportunities</td>
<td>0.08</td>
</tr>
<tr>
<td>Leaders interested in development</td>
<td>0.21</td>
</tr>
<tr>
<td>Opportunity</td>
<td>0.09</td>
</tr>
<tr>
<td>Organizational drivers- other</td>
<td>0.11</td>
</tr>
<tr>
<td>Role of leadership- growth</td>
<td>0.19</td>
</tr>
<tr>
<td>Role of leadership- organizational drivers other</td>
<td>0.10</td>
</tr>
<tr>
<td>Social activities</td>
<td>0.08</td>
</tr>
<tr>
<td>Strategic planning/retreats</td>
<td>0.09</td>
</tr>
<tr>
<td>Strengths-based focus</td>
<td>0.08</td>
</tr>
</tbody>
</table>

### TABLE XV: C-COEFFICIENTS FOR INFORMAL LEARNING AND DEVELOPMENT OPPORTUNITIES AND SELECT CO-OCCURRING FACTORS

<table>
<thead>
<tr>
<th>Informal learning and development opportunities</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Challenging work</td>
<td>0.22</td>
</tr>
<tr>
<td>Consultation with supervisor/leader</td>
<td>0.10</td>
</tr>
<tr>
<td>Formal learning and development opportunities</td>
<td>0.08</td>
</tr>
<tr>
<td>Leaders interested in development</td>
<td>0.11</td>
</tr>
<tr>
<td>Leadership support</td>
<td>0.10</td>
</tr>
<tr>
<td>Leading an activity</td>
<td>0.14</td>
</tr>
<tr>
<td>Opportunity</td>
<td>0.10</td>
</tr>
<tr>
<td>Role of leadership- growth</td>
<td>0.09</td>
</tr>
</tbody>
</table>

### TABLE XVI: C-COEFFICIENTS FOR CHALLENGING WORK AND SELECT CO-OCCURRING FACTORS

<table>
<thead>
<tr>
<th>Challenging work</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Designing/developing work</td>
<td>0.09</td>
</tr>
<tr>
<td>Informal learning and development opportunities</td>
<td>0.22</td>
</tr>
<tr>
<td>Role of leadership- growth</td>
<td></td>
</tr>
<tr>
<td>------------------------------------</td>
<td>---------</td>
</tr>
<tr>
<td>Career advancement</td>
<td>0.13</td>
</tr>
<tr>
<td>Challenging work</td>
<td>0.10</td>
</tr>
<tr>
<td>Formal learning and development opportunities</td>
<td>0.31</td>
</tr>
<tr>
<td>Informal learning and development opportunities</td>
<td>0.10</td>
</tr>
<tr>
<td>Leaders interested in development of staff</td>
<td>0.32</td>
</tr>
<tr>
<td>Leadership support</td>
<td>0.11</td>
</tr>
<tr>
<td>Organizational drivers- other</td>
<td>0.10</td>
</tr>
<tr>
<td>Role of leadership- org drivers other</td>
<td>0.11</td>
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</tbody>
</table>

**TABLE XVIII: C-COEFFICIENTS FOR SOCIAL ACTIVITIES AND SELECT CO-OCCURRING FACTORS**

<table>
<thead>
<tr>
<th>Social activities</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Organizational drivers- other</td>
<td>0.09</td>
</tr>
<tr>
<td>Regular meetings</td>
<td>0.09</td>
</tr>
<tr>
<td>Relationships and rapport</td>
<td>0.17</td>
</tr>
<tr>
<td>Role of leadership- org drivers other</td>
<td>0.11</td>
</tr>
<tr>
<td>Work-life balance</td>
<td>0.16</td>
</tr>
</tbody>
</table>

**TABLE XIX: C-COEFFICIENTS FOR WORK-LIFE BALANCE AND SELECT CO-OCCURRING FACTORS**

<table>
<thead>
<tr>
<th>Work-life balance</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Organizational drivers- other</td>
<td>0.09</td>
</tr>
<tr>
<td>Regular meetings</td>
<td>0.09</td>
</tr>
<tr>
<td>Relationships and rapport</td>
<td>0.17</td>
</tr>
<tr>
<td>Role of leadership- org drivers other</td>
<td>0.11</td>
</tr>
<tr>
<td>Workload</td>
<td>0.07</td>
</tr>
</tbody>
</table>

**TABLE XX: C-COEFFICIENTS FOR ROLE OF LEADERSHIP- COMMUNITY AND SELECT CO-OCCURRING FACTORS**

<table>
<thead>
<tr>
<th>Role of leadership- community</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Flexibility- scheduling and telework</td>
<td>0.17</td>
</tr>
<tr>
<td>Leadership support</td>
<td>0.11</td>
</tr>
<tr>
<td>Relationships and rapport</td>
<td>0.08</td>
</tr>
<tr>
<td>Social activities</td>
<td>0.10</td>
</tr>
</tbody>
</table>
Staff feel valued | 0.09  
Work-life balance | 0.16  
Workload- heavy | 0.09  
Workload- prioritization of work | 0.15

**TABLE XXI: C-COEFFICIENTS FOR INTENTIONAL RECOGNITION AND SELECT CO-OCcurring FACTORS**

| Intentional recognition |  
|--------------------------|---
| Fairness | 0.08  
| Formal recognition | 0.26  
| Informal recognition | 0.18  
| Role of leadership- recognition | 0.27

**TABLE XXII: C-COEFFICIENTS FOR INFORMAL RECOGNITION AND SELECT CO-OCcurring FACTORS**

| Informal recognition |  
|----------------------|---
| Fairness | 0.16  
| Formal recognition | 0.32  
| Intentional recognition | 0.18  
| Regular meetings | 0.12  
| Role of leadership- fairness | 0.16  
| Staff feel valued | 0.10

**TABLE XXIII: C-COEFFICIENTS FOR FORMAL RECOGNITION AND SELECT CO-OCcurring FACTORS**

| Formal recognition |  
|--------------------|---
| Fairness | 0.23  
| FTE vs. non-FTE | 0.14  
| Inclusive environment | 0.13  
| Informal recognition | 0.32  
| Intentional recognition | 0.26  
| Role of leadership- fairness | 0.15

**TABLE XXIV: C-COEFFICIENTS FOR ROLE OF LEADERSHIP- RECOGNITION AND SELECT CO-OCcurring FACTORS**

| Role of leadership- recognition |  
|---------------------------------|---
| Fairness | 0.14  
| Formal recognition | 0.14  
| Informal recognition | 0.15  
| Intentional recognition | 0.26  
| Trust | 0.08
### TABLE XXV: C-COEFFICIENTS FOR TEAMWORK STRUCTURE AND SELECT CO-OCCURRING FACTORS

<table>
<thead>
<tr>
<th>Teamwork structure</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Diversity</td>
<td>0.11</td>
</tr>
<tr>
<td>Internal collaboration</td>
<td>0.13</td>
</tr>
<tr>
<td>Organizational drivers- other</td>
<td>0.10</td>
</tr>
<tr>
<td>Role of leadership- organizational drivers other</td>
<td>0.10</td>
</tr>
<tr>
<td>Strengths-based focus</td>
<td>0.14</td>
</tr>
<tr>
<td>Teamwork</td>
<td>0.20</td>
</tr>
<tr>
<td>Workload</td>
<td>0.10</td>
</tr>
</tbody>
</table>

### TABLE XXVI: C-COEFFICIENTS FOR STRENGTHS-BASED FOCUS AND SELECT CO-OCCURRING FACTORS

<table>
<thead>
<tr>
<th>Strengths-based focus</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Diversity</td>
<td>0.08</td>
</tr>
<tr>
<td>Expertise valued</td>
<td>0.07</td>
</tr>
<tr>
<td>Internal collaboration</td>
<td>0.09</td>
</tr>
<tr>
<td>Leaders interested in developing staff</td>
<td>0.09</td>
</tr>
<tr>
<td>Organizational drivers- other</td>
<td>0.10</td>
</tr>
<tr>
<td>Role of leadership- org drivers other</td>
<td>0.11</td>
</tr>
<tr>
<td>Strategic planning/retreats</td>
<td>0.09</td>
</tr>
<tr>
<td>Teamwork</td>
<td>0.09</td>
</tr>
<tr>
<td>Teamwork structure</td>
<td>0.14</td>
</tr>
</tbody>
</table>

### TABLE XXVII: C-COEFFICIENTS FOR EXTERNAL COLLABORATION AND SELECT CO-OCCURRING FACTORS

<table>
<thead>
<tr>
<th>External collaboration</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Branch as resource</td>
<td>0.14</td>
</tr>
<tr>
<td>Build/expand evidence base</td>
<td>0.10</td>
</tr>
<tr>
<td>CDC collaboration</td>
<td>0.30</td>
</tr>
<tr>
<td>External support</td>
<td>0.29</td>
</tr>
<tr>
<td>External support impact- positive</td>
<td>0.13</td>
</tr>
<tr>
<td>Function focus</td>
<td>0.10</td>
</tr>
<tr>
<td>Mission clarity and alignment</td>
<td>0.13</td>
</tr>
<tr>
<td>Partner feedback</td>
<td>0.10</td>
</tr>
<tr>
<td>Partners in the field</td>
<td>0.20</td>
</tr>
<tr>
<td>Work products</td>
<td>0.08</td>
</tr>
</tbody>
</table>
### TABLE XXVIII: C-COEFFICIENTS FOR *EXTERNAL SUPPORT* AND SELECT CO-OCCURRING FACTORS

<table>
<thead>
<tr>
<th>External support</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>External collaboration</td>
<td>0.29</td>
</tr>
<tr>
<td>External support impact- neutral</td>
<td>0.25</td>
</tr>
<tr>
<td>External support impact- positive</td>
<td>0.39</td>
</tr>
<tr>
<td>Function focus</td>
<td>0.10</td>
</tr>
<tr>
<td>Partner feedback</td>
<td>0.10</td>
</tr>
<tr>
<td>Partners in the field</td>
<td>0.14</td>
</tr>
</tbody>
</table>

### TABLE XXIX: C-COEFFICIENTS FOR *CDC COLLABORATION* AND SELECT CO-OCCURRING FACTORS

<table>
<thead>
<tr>
<th>CDC collaboration</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Branch as resource</td>
<td>0.18</td>
</tr>
<tr>
<td>Build/expand evidence base</td>
<td>0.13</td>
</tr>
<tr>
<td>External collaboration</td>
<td>0.30</td>
</tr>
<tr>
<td>Function focus</td>
<td>0.14</td>
</tr>
<tr>
<td>Internal collaboration</td>
<td>0.13</td>
</tr>
<tr>
<td>Mission clarity and alignment</td>
<td>0.13</td>
</tr>
</tbody>
</table>

### TABLE XXX: C-COEFFICIENTS FOR *POLITICIZED ENVIRONMENT* AND SELECT CO-OCCURRING FACTORS

<table>
<thead>
<tr>
<th>Politicized Environment</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Sequestration</td>
<td>0.07</td>
</tr>
<tr>
<td>Shutdown</td>
<td>0.34</td>
</tr>
<tr>
<td>Shutdown- negative effect on engagement</td>
<td>0.11</td>
</tr>
<tr>
<td>Shutdown- programs negatively affected</td>
<td>0.08</td>
</tr>
<tr>
<td>Turnover in leadership</td>
<td>0.36</td>
</tr>
<tr>
<td>Turnover in leadership- opportunities</td>
<td>0.15</td>
</tr>
<tr>
<td>Turnover in leadership impact- neutral effect on engagement</td>
<td>0.10</td>
</tr>
<tr>
<td>Uncertain times</td>
<td>0.10</td>
</tr>
</tbody>
</table>

### TABLE XXXI: C-COEFFICIENTS FOR *TURNOVER IN LEADERSHIP* AND SELECT CO-OCCURRING FACTORS

<table>
<thead>
<tr>
<th>Turnover in leadership</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Politicized environment</td>
<td>0.36</td>
</tr>
<tr>
<td>Turnover in leadership- heart disease as a priority</td>
<td>0.17</td>
</tr>
<tr>
<td>Turnover in leadership- opportunities</td>
<td>0.43</td>
</tr>
<tr>
<td>Turnover in leadership impact- neutral effect on engagement</td>
<td>0.27</td>
</tr>
<tr>
<td>Turnover in leadership impact- positive effect on engagement</td>
<td>0.13</td>
</tr>
<tr>
<td>Uncertain times</td>
<td>0.11</td>
</tr>
</tbody>
</table>

**TABLE XXXII: C-COEFFICIENTS FOR **\textit{SHUTDOWN}** AND SELECT CO-OCCURRING FACTORS**

<table>
<thead>
<tr>
<th>Shutdown</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Anti-government rhetoric</td>
<td>0.17</td>
</tr>
<tr>
<td>Politicized environment</td>
<td>0.34</td>
</tr>
<tr>
<td>Shutdown- negative effect on engagement</td>
<td>0.21</td>
</tr>
<tr>
<td>Shutdown- neutral effect on engagement</td>
<td>0.12</td>
</tr>
<tr>
<td>Shutdown- programs negatively affected</td>
<td>0.17</td>
</tr>
</tbody>
</table>

**TABLE XXXIII: C-COEFFICIENTS FOR **\textit{BUREAUCRACY}** AND SELECT CO-OCCURRING FACTORS**

<table>
<thead>
<tr>
<th>Bureaucracy</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Bureaucracy- benefits</td>
<td>0.10</td>
</tr>
<tr>
<td>Bureaucracy- burden</td>
<td>0.48</td>
</tr>
<tr>
<td>Bureaucracy impact on engagement- negative</td>
<td>0.36</td>
</tr>
<tr>
<td>Bureaucracy impact on engagement- neutral</td>
<td>0.21</td>
</tr>
</tbody>
</table>

**TABLE XXXIV: C-COEFFICIENTS FOR **\textit{FUNDING}** AND SELECT CO-OCCURRING FACTORS**

<table>
<thead>
<tr>
<th>Funding</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Building internal workforce capacity</td>
<td>0.14</td>
</tr>
<tr>
<td>Funding- negative effect on engagement</td>
<td>0.26</td>
</tr>
<tr>
<td>Funding- neutral impact on engagement</td>
<td>0.23</td>
</tr>
<tr>
<td>Funding- positive effect on engagement</td>
<td>0.13</td>
</tr>
<tr>
<td>Retention of staff despite budget</td>
<td>0.16</td>
</tr>
<tr>
<td>Uncertain funding</td>
<td>0.26</td>
</tr>
</tbody>
</table>

**TABLE XXXV: C-COEFFICIENTS FOR **\textit{JOB SECURITY}** AND SELECT CO-OCCURRING FACTORS**

<table>
<thead>
<tr>
<th>Job security</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Financial incentives</td>
<td>0.09</td>
</tr>
<tr>
<td>Job security- neutral effect on engagement</td>
<td>0.09</td>
</tr>
<tr>
<td>Job security- neutral effect on engagement</td>
<td>0.63</td>
</tr>
<tr>
<td>Uncertain times</td>
<td>0.22</td>
</tr>
</tbody>
</table>
### TABLE XXXVI: C-COEFFICIENTS FOR *FINANCIAL INCENTIVES* AND SELECT CO-OCCURRING FACTORS

<table>
<thead>
<tr>
<th>Financial incentives</th>
<th>C-coefficient</th>
</tr>
</thead>
<tbody>
<tr>
<td>Financial incentives- neutral effect on engagement</td>
<td>0.16</td>
</tr>
<tr>
<td>Financial incentives- positive effect on engagement</td>
<td>0.27</td>
</tr>
<tr>
<td>Pay, benefits, bonuses- positive</td>
<td>0.44</td>
</tr>
<tr>
<td>Pay, benefits, bonuses- room for improvement</td>
<td>0.22</td>
</tr>
<tr>
<td>PMAP</td>
<td>0.15</td>
</tr>
<tr>
<td>Promotion opportunities- positive impact on engagement</td>
<td>0.11</td>
</tr>
</tbody>
</table>

### TABLE XXXVII: C-COEFFICIENTS FOR *PUBLIC SERVICE ETHIC* AND SELECT CO-OCCURRING FACTORS

<table>
<thead>
<tr>
<th>Public service ethic</th>
<th>C-coefficient</th>
</tr>
</thead>
<tbody>
<tr>
<td>Partner feedback</td>
<td>0.14</td>
</tr>
<tr>
<td>Partners- in person interaction</td>
<td>0.20</td>
</tr>
<tr>
<td>Partners in the field</td>
<td>0.24</td>
</tr>
<tr>
<td>Work makes a difference</td>
<td>0.15</td>
</tr>
</tbody>
</table>
Appendix H: Matrix displaying relationships between pairs of theme codes (organizational drivers)

<table>
<thead>
<tr>
<th></th>
<th>Establishes and Aligns Purpose</th>
<th>Empowers the Workforce</th>
<th>Encourages Growth</th>
<th>Fosters Community</th>
<th>Provides Recognition</th>
<th>Establishes Collaborative Structure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Establishes and Aligns Purpose</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Empowers the Workforce</td>
<td></td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Encourages Growth</td>
<td>Employees exercise their initiative in how they work to fulfill mission</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fosters Community</td>
<td>Opportunities for continuous learning experiences while working to fulfill mission</td>
<td>Continuous learning increases sense of competence and confidence in exercising initiative</td>
<td></td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Provides Recognition</td>
<td>Sense of community helps employees to feel safe and supported to work to fulfill mission</td>
<td>Feeling safe and supported increases confidence in exercising initiative</td>
<td>Branch learning and development opportunities help employees bond</td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Establishes Collaborative Structure</td>
<td>Recognition provided in connection with exceptional work that advances mission</td>
<td>Receiving recognition for exceptional work reinforces confidence in exercising initiative</td>
<td>Receiving recognition for exceptional work reinforces experiential learning through increased responsibilities</td>
<td>Recognition provided in team/branch meetings are opportunities for positive social interactions</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Enhances collaboration working towards shared goals which are guided by mission</td>
<td>Sense of individual and collective responsibility is nurtured and enhanced</td>
<td>Branch learning and development opportunities help improve individual skills and competencies that are brought to team</td>
<td>Collaborative work helps employees to bond</td>
<td>Collaborative work accomplished in teams is recognized</td>
<td>X</td>
</tr>
</tbody>
</table>
Appendix I: Matrix displaying driver relationships- implications for leaders and employees’ roles in maximizing employee engagement

<table>
<thead>
<tr>
<th>Related Drivers</th>
<th>Organizational leaders</th>
<th>Employees</th>
</tr>
</thead>
<tbody>
<tr>
<td>Empowers the Workforce – Encourage Growth</td>
<td>Provide opportunities for employees to lead activities and exercise initiative in the development and execution of work projects. Ask employees for their ideas and input. Increased responsibility and ownership provide experiential learning and professional and personal development opportunities. Be available to consult, support and give constructive feedback.</td>
<td>Bring ideas and input to leaders and work projects. Take initiative in leading and developing work activities. Consider the learning opportunities available in daily work; try to take on challenging work.</td>
</tr>
<tr>
<td>Establishes and Aligns Purpose – Empowers the Workforce</td>
<td>Clarify and communicate the organizational mission and how employee work contributes to fulfillment of mission. Make connection to target audiences/end users/stakeholders receiving products and services. Reinforce the mission through priorities and projects. The clear connection to the mission will guide and direct employees’ efforts in leading and executing work. Be available to consult, support and give constructive feedback.</td>
<td>Keep the mission, priorities and goals in the fore front of work. Consider the target audiences/end users/stakeholders receiving products and services; get their feedback when possible. Use this information to help stimulate ideas for developing projects and executing work.</td>
</tr>
<tr>
<td>Provides Recognition – Establishes and Aligns Purpose</td>
<td>Clarify and communicate the organizational mission and how employee work contributes to fulfillment of mission. Reinforce the mission through priorities and projects. When employees’ do excellent work that contributes to the fulfillment of mission, show appreciation and recognition in informal and formal ways. Have regular intervals of recognition so that people and successes are not taken for granted.</td>
<td>Keep the mission, priorities and goals in the fore front of work; lead and execute work with these things in mind. Always strive to excel and go above and beyond expectations.</td>
</tr>
<tr>
<td>Fosters Community – Establish Collaborative Structure</td>
<td>Value employees as individuals holistically in terms of their professional and personal selves. Find and create opportunities to socialize and get to know colleagues better on a personal level. Nurturing these relationships will enhance individual and collaborative work.</td>
<td>Be open to leaders and colleagues. Find and create opportunities to socialize and get to know colleagues better on a personal level. Identify your unique strengths and how they are best applied to work projects and activities. Utilize strengths in collaborative work.</td>
</tr>
</tbody>
</table>
Building these bonds will create a safe work environment where employees feel comfortable sharing diverse ideas and perspectives, which can enhance projects and outcomes. Identify and value unique, individual strengths and utilize diverse strengths in creating collaborative teams.
Cited Literature


LEADERSHIP AND PROFESSIONAL EXPERIENCE

Centers for Disease Control and Prevention, National Center on Birth Defects and Developmental Disabilities, Division of Blood Disorders, Epidemiology and Surveillance Branch, Atlanta, GA
Lead Health Scientist, Bleeding Disorders Team 4/2012 - Present

- BLEEDING DISORDERS SURVEILLANCE AND HEALTH STUDIES: Provide scientific and technical leadership for surveillance, research and health promotion programs to improve the health of people with hemophilia and other bleeding disorders. Provide oversight and monitor progress of hemophilia and bleeding disorders surveillance, research and health promotion programs. Lead and design implementation of a national surveillance project within the network of 135 U.S. Hemophilia Treatment Centers representing over 46,000 people with hemophilia and other bleeding disorders. Design multi-prong surveillance strategy to identify gaps in public health knowledge related to medical complications of bleeding disorders. Identify complex strategic and operational challenges and develop innovative solutions based on systems thinking. Lead the development of data collection plan, associated tools and documentation. Direct data quality and assurance activities to ensure the retention of valid and reliable information. Disseminate surveillance findings through publications and reports. Serve as internal and external subject-matter expert on hemophilia and bleeding disorder surveillance.

- GRANTS MANAGEMENT: Provide oversight of over $5.4 million per year in cooperative agreement funding for hemophilia and bleeding disorders surveillance and health promotion projects. Lead the development of a national hemophilia and bleeding disorders surveillance funding opportunity announcement, including scientifically-relevant strategies, activities and outcomes for which awardee is responsible. Lead development of process and outcomes measures to monitor and evaluate awardee performance against project goals. Serve as project officer and manage bleeding disorder health promotion cooperative agreement through the lifecycle of the project.

- TEAM MANAGEMENT: Provide supervision, guidance and mentorship to 4 team members on the Bleeding Disorders Team. Establish scientific direction and lead team members toward bleeding disorder program goals. Establish open communication and regular individual meetings to discuss project progress, professional development and training opportunities. Align team member interests and strengths with work assignments to
maximize productivity. Conduct and contribute to annual performance appraisals; provide constructive feedback and make recommendations for future performance evaluations.

- **COLLABORATION:** Engage with diverse partners in order to leverage multiple areas of expertise and solve complex problems related to bleeding disorders. Coordinate and cooperate with internal and external stakeholders to advance division mission, objectives and programs. Establish and maintain professional and strategic partnerships with multiple external collaborators including Hemophilia Treatment Center regional leaders, clinicians and staff; non-profit organizations; community-based organizations (ex. National Hemophilia Foundation); and other federal agencies within the Department of Health and Human Services.

- **WRITTEN AND ORAL COMMUNICATION:** Communicate complex scientific and programmatic findings and their public health implications to a variety of audiences, including senior leadership; people with bleeding disorders and their families; clinicians and other researchers; community-based organizations; policy makers; and the general public. Compile information for internal and external audiences including manuscripts, abstracts, reports and other materials in order to present scientific results and other findings. Develop, organize and present dozens of scientific presentations describing surveillance, research projects and programmatic activities related to hemophilia and other bleeding disorders; presented in a variety of forums including scientific and consumer educational meetings and conferences.

**Centers for Disease Control and Prevention, National Center on Birth Defects and Developmental Disabilities, Division of Blood Disorders, Epidemiology and Surveillance Branch, Atlanta, GA**  
Acting Deputy Branch Chief/Health Scientist  
7/2008 – 4/2012

- **NEEDS ASSESSMENT:** Co-conducted needs assessment of hemophilia and bleeding disorders surveillance program to determine future directions. Convened stakeholder meeting to present available evidence and gather input regarding current surveillance and emerging issues in the bleeding disorders population. Analyzed a combination of project operational and epidemiological data, an external surveillance evaluation (including interviews and document review) and stakeholder input to refine the scope and direction of the surveillance system over an 18 month period. Co-led the design of new surveillance with additional outcomes of interest and expansion of surveillance outside of Hemophilia Treatment Center network.

- **ORGANIZATIONAL DEVELOPMENT AND STRATEGIC PLANNING:** Initiated and assisted in division-wide visioning and organizational development activities to facilitate growth and improve workplace culture. Member of internal working group assessing division practices regarding perceived morale through use of survey and focus group data; developed recommendations based on findings and presented to the division. Led branch initiatives in employee relations and workforce development, including preparation of award nominations and justifications, development of strategies to improve or maintain good morale, and serving as point of contact for personnel concerns. Coordinated division visioning and strategic planning sessions to help set future direction, inform decision making.
and appropriately allocate scarce resources. Contributed to the development of division vision, mission, goals, team role statements/core functions and priorities with milestones and objectives.

- **ASSIST BRANCH CHIEF:** Assisted Epidemiology and Surveillance Branch Chief with development and implementation of Branch scientific strategic planning and priority setting for blood disorders portfolio, including hemophilia and other bleeding disorders, clotting, sickle cell disease, and bleeding in women programs; interviewing personnel candidates and providing feedback for hiring decisions; development of annual branch budget; and served as Branch Chief delegate as assigned.

**Centers for Disease Control and Prevention, National Center on Birth Defects and Developmental Disabilities, Division of Blood Disorders, Epidemiology and Surveillance Branch, Atlanta, GA**
Health Scientist 12/2004 – 4/2012

- **HEALTH RESEARCH STUDIES:** Led division activities related to preventing and/or reducing morbidity associated with bleeding disorders among women. Developed a surveillance instrument to monitor symptoms, treatment, and reproductive outcomes among females with bleeding disorders receiving care at specialized clinics. Developed a survey to assess provider knowledge, perceptions, and services related to recognition, testing, and provision of care for women at risk for blood disorders. Managed a multisite clinical trial assessing the efficacy of two pharmacologic treatments to reduce bleeding and improve quality of life among women with bleeding disorders. Analyzed epidemiologic data and disseminated study findings.

**Centers for Disease Control and Prevention, Hematologic Diseases Branch, Atlanta, GA**
Association of Schools of Public Health (ASPH)/ CDC Fellow - Oak Ridge Institute for Science and Education Fellow 9/2001 – 12/2004

- **HEALTH RESEARCH STUDIES:** Coordinated participant recruitment and enrollment efforts of multisite clinical trial for women with bleeding disorders. Collected, compiled, and analyzed study data, including medical history questionnaire, quality of life, and laboratory blood specimen results. Processed blood samples for plasma, DNA, and serum using a refrigerated centrifuge. Prepared IRB documentation and maintained IRB compliance. Coordinated blood safety surveillance activities monitoring new viral hepatitis cases among people with bleeding disorders.

**Harvard Medical School/Harvard Pilgrim Health Care, Department of Ambulatory Care and Prevention, Boston, MA**

- **HEALTH RESEARCH STUDIES:** Recruited and enrolled women to participate in an intervention study to decrease adverse effects of false-positive mammograms. Implemented an educational intervention designed to help women cope with anxiety after a mammogram. Performed data entry and management of patient enrollment and interview data. Abstracted
medical records for a study examining the effectiveness of prophylactic mastectomy and early screening in preventing breast cancer mortality. Designed and implemented a survey assessing radiologists’ preferences and perspectives regarding immediate review of mammograms. Conducted qualitative data analysis for study evaluating an educational intervention for women with menopause.

**EDUCATION**

**Doctor of Public Health, Concentration: Leadership**
University of Illinois at Chicago, Chicago, IL
Cumulative GPA: 3.91

**Masters of Public Health, Concentration: Social and Behavioral Sciences**
Boston University School of Public Health, Boston, MA
Cumulative GPA: 3.48

**Bachelor of Arts, Major: Sociology**
Emory University, Atlanta, GA
Cumulative GPA: 3.36

**PEER-REVIEWED PUBLICATIONS**


**PEER-REVIEWED ABSTRACTS AND POSTER PRESENTATIONS**


Owens W, Oakley M, Le B, and Byams VR. Public Health Surveillance of People Not Receiving Care at US Federally-funded Hemophilia Treatment Centers: Methods and Demographics of the CHOICE Project. World Federation of Hemophilia 2016 World Congress, Orlando, FL, July 2016.


Sidonio R, Berry V, and Byams VR. Reported bleeding among females with FVIII/FIX Deficiency and Type 1 von Willebrand Disease: Results from national surveillance. Thrombosis and Hemostasis Societies of North America Summit, Chicago, IL, April 2016.


Kouides PA, Heit JA, Philipp CS, Stein SF, Lukes AS, Byams VR, Dowling NF, Miller CH, Kulkarni R. A Multisite, Prospective Crossover Study of Intranasal Desmopressin and Oral


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**LEADERSHIP TRAINING**

*University of Illinois at Chicago, Doctor of Public Health courses*

Introduction to Epidemiology: Principles and Methods, fall 2012
Public Health Leadership Seminar I, fall 2012
Quantitative Methods for Leadership in Public Health Practice, spring 2013
Public Health Leadership Seminar II, spring 2013
Personal Leadership Development, summer 2013
DrPH Integrative Methods Seminar I, fall 2013
Public Health Leadership Tools, fall 2013
DrPH Integrative Methods Seminar II, spring 2014
Leadership in Public Health Policy Development, spring 2014
Dissertation Seminar I, summer 2014
Survey Questionnaire Design, fall 2014
DrPH Dissertation Research Hours, fall 2014
Independent Study, spring 2015
Dissertation Seminar II, spring 2015
DrPH Dissertation Research Hours, summer 2015, fall 2015, spring 2016, summer 2016, fall 2016, spring 2017, summer 2017, fall 2017, spring 2018

CDC Management Seminar, May 14 – 18, 2012, Helen, GA

SOFTWARE SKILLS

Statistics: SAS

Microsoft Office: Word, Access, Excel, and PowerPoint