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## Breaking Down Silos in the Workplace: A Framework to Foster Collaboration

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### Abstract

**Introduction:** Employees are often placed within an organization based on their respective roles or duties, which can lead to vertical and horizontal organizational silos. Organizational silos may restrict information, resources, and stymie progress and innovation. This analysis presents a framework to mitigate silos and overcome communication barriers within an organization by increasing collaboration.

**Methods:** The project team examined results from the Centers for Disease Control and Prevention (CDC), the National Center for Chronic Disease Prevention and Health Promotion (NCCDPHP) 2020 Employee Viewpoint Survey Results and conducted 19 key informant discussions with NCCDPHP employees. Participants were asked to provide feedback on (1) understanding silos in the workplace and (2) best practices for reducing silos and fostering collaboration. A thematic analysis was conducted to understand organizational silos, the motivation to reduce silos, and identify best practices and strategies.

**Results:** Respondents felt that siloing exists at the division and branch levels; however, 95% of respondents were motivated to reduce silos. Fifty-eight percent of respondents identified that institutional factors such as the organizational structure ( $n = 8$ ) and red tape/bureaucracy ( $n = 3$ ) contribute to siloing. Additional behaviors and actions that perpetuate silos were identified, and efforts to reduce silos were categorized to propose a model: Framework to Foster Collaboration for improving organizational collaborative efforts.

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**Discussion and Conclusion:** Key themes included inclusion, shared goals and vision, bi-directional communication, and relationship building and developing trust as critical elements for improving collaboration and creating synergy across teams in efforts to reduce silos in the workplace.

### Keywords

collaboration framework; communication; knowledge sharing; silos in the workplace; workplace culture

Collaboration is a critical tool in siloed organizations to increase innovation.<sup>1</sup> To address organizational silos, organizations are revisiting the way they do business and serve constituents.<sup>2</sup> Merriam-Webster's dictionary defines a silo as "an isolated grouping, department, etc., that functions apart from others especially in a way seen as hindering communication and cooperation."<sup>3</sup> Organizational silos are effective strategies to organize people but may create an environment where individuals or groups do not share knowledge, skills, or information with others within the same organization.<sup>4</sup>

Public health agencies have traditionally used silos, which have been ineffective in achieving their goals and objectives.<sup>5</sup> Different strategies to address organizational silos have emerged including system-wide performance management, leveraging organizational intelligence/knowledge management, and fostering different leadership styles, such as insisting on a culture of knowledge sharing and meta-leadership.<sup>6-9</sup> Collaboration is another strategy to reduce organizational silos that, when utilized properly, can make organizations more effective.<sup>10,11</sup> Moreover, collaboration requires thoughtful engagement to ensure efforts to collaborate do not outweigh benefits of collaboration.<sup>12</sup>

The coronavirus disease 2019 (COVID-19) pandemic exacerbated organizational silos. COVID-19 public health policy response (eg, social distancing) utilized a silo-based approach to response coordination and substantially altered the organizational landscape, for example, by reducing spontaneous ad-hoc meetings.<sup>13,14</sup> Creating a culture of collaboration may be an effective strategy for reducing the negative impacts of organizational silos.<sup>10</sup> This paper presents a conceptual framework that can be used to break down silos in the workplace through collaboration, which may improve organizational goals, culture, and outcomes when applied. This framework was developed during the National Center for Chronic Disease Prevention and Health Promotion's (NCCDPHP) inaugural 7-month Emerging Leaders Program (ELP) within the Centers for Disease Control and Prevention (CDC) and is the culmination of a 4-week capstone project applying lessons learned during the ELP.

### Methods

Qualitative and quantitative data were used to examine factors contributing to silos in the NCCDPHP. First, the project team reviewed the NCCDPHP's results from the 2020 Federal Employee Viewpoint Survey (FEVS; <https://www.opm.gov/fevs>) to understand employee perspectives on communication, collaboration, and satisfaction in the workplace. The FEVS is an annual voluntary survey administered by the Office of Personnel and Management to

assess how Federal employees experience policies, practices, and procedures within their agency.<sup>15</sup> Through the FEVS, employees share their perceptions on their work, agency, and leadership, which allow leaders to identify potential areas of improvement.<sup>15</sup> FEVS results helped the project team understand NCCDPHP and CDC staff, which informed the key informant discussions. The project team developed a Discussion Guide to facilitate key informant discussions and standardize qualitative data collection (see Supplemental Digital Content 1, available at <http://links.lww.com/JPHMP/B399>).

Using a convenience sample, 19 federal staff were recruited from 7 divisions and one office within NCCDPHP. Interviewing staff from all organizational units within the NCCDPHP provided a broad and diverse perspective of operations across the NCCDPHP, instead of the perspective on a singular division/office. During each discussion, notes were typed directly into the Discussion Guide and recorded with verbal consent. Recorded interviews were uploaded into the Temi transcription service ([www.temi.com](http://www.temi.com)) to validate that responses were accurately recorded in the Discussion Guide. Hence, multiple methods were used to ensure the responses were accurately captured. Responses were anonymized to protect confidentiality, promote candidness, and reduce the likelihood of biases during analysis.

The project team analyzed qualitative data using thematic analysis and frequency counts. Given the length of the responses, 2 team members reviewed each response to every question and summarized the main points in a Microsoft Excel abstraction form. This double review and abstraction method helped ensure thematic points were accurately captured. Project team members referred to the recordings and Temi transcriptions as needed to ensure key points were accurately captured in the Discussion Guide.

One team member reviewed each question and summarized responses to develop themes and definitions. In a blinded fashion, 2 reviewers independently coded responses into the various themes. During the reconciliation process, the 2 team members reviewed the variance between their assignments, collaboratively revised the themes and definitions as needed, and determined final assignments by reviewing and discussing all responses. Results were then analyzed to develop the collaboration model.

## Results

The project team analyzed qualitative data from the key informant discussions to develop the model: *Framework to Foster Collaboration* (Figure 1). Respondents described their perception of organizational silos within the NCCDPHP. On a scale of 1 to 10, respondents first identified the degree of siloing in their branch and/or division (less siloed: 1–3, somewhat siloed: 4–6, and most siloed: 7–10). Over half of respondents identified divisions as most siloed, while over half felt that branches were less siloed (Figure 2). Note, of the 19 respondents, 10 described the degree of siloing in both their division and branch. Table 1 showcases results from the thematic analysis. Respondents described the culture at CDC (42%, N = 8), CDC's organizational structure (42%, N = 8), and lack of information sharing, regard-less of intentionality (37%, N = 7) as specific organizational behaviors or actions that perpetuate silos.

Despite the challenge of reducing organizational silos, almost all respondents (95%, N = 18) were motivated to reduce them. One respondent indicated “not anymore” when asked if they were motivated to remove silos, suggesting that at one point, the respondent wanted to reduce silos but is now disillusioned with the possibility. Most respondents (79%, N = 15) indicated that they were motivated to collaborate to produce quality work or improve a work product. More than half of the respondents (53%, N = 10) identified in-reach activities, activities intended to allow coworkers to engage in meaningful collaboration, as the primary method they used to reduce silos within the CDC.

Organizational culture was a common theme identified across response categories. Respondents described how a culture of collaboration is used to reduce silos at CDC. For example, collaboration is promoted by providing forums for open communication and collaboration (63%, N = 12) and is actively encouraged and emphasized in CDC, usually, but not exclusively, by leadership (37%, N = 7). Respondents identified several best practices to foster collaboration. Intentional collaboration (32%, N = 6) and building a culture of collaboration (32%, N = 6) were the most frequently identified best practices, followed by structural changes that encourage collaboration (26%, N = 5), encouraging collaboration (21%, N = 4), and advocating for collaboration (21%, N = 4). Thematic descriptions of identified best practices are described in Table 1.

Finally, respondents identified specific tools, approaches, or strategies to foster collaboration. Two interrelated strategies included identifying the potential benefits of collaboration, asking what is trying to be accomplished, and keeping collaboration front and center by continually engaging with colleagues and subject matter experts as projects are implemented. A few respondents identified new technologies as specific collaboration tools, for example, Microsoft Teams, Zoom, and Google Documents. Finally, one respondent identified a 2 × 2 framework wherein a person talks about 2 things they are working on, 2 things they need help with, and 2 things that are mundane but required.

## Discussion and Conclusion

This project sought to identify strategies to reduce organizational silos in the workplace drawing on lessons learned from CDC. The *Framework to Foster Collaboration* describes a model that can be used to foster collaboration and reduce silos (see Figure 1). Tools, strategies, and funding lines are essential inputs of the framework that assist in improving the ability to collaborate. For example, if multiple divisions have individual funding lines with overlapping outcome interests or geographic coverage, the divisions could collaborate to maximize opportunities for synergistic activities. Similarly, organizations can consider sharing data collection resources and best practices in order to create an opportunity to communicate about and conduct additional analysis.

With collaboration placed firmly in the center of the model, this framework leverages themes of inclusion, shared goals and vision, bi-directional communication, and relationship-building and developing trust as core principles that foster, support, and promote collaboration. Results from the 19 key informant discussions provide tangible examples of these themes. Inclusion involves establishing a culture where everyone feels valued,

respected, and engaged. Inclusivity can be achieved by understanding other communication preferences, professional interests, and experiences. Shared goals and vision include identifying the aim, goals, and benefits of the collaboration, establishing processes and protocols to guide the collaboration, and describing the expectations of all collaborators. Bi-directional communication is a strategy for improving information exchange within organizations. As the final core principle of the Collaboration Framework, this strategy is vital to building relationships and developing trust in the workplace. Relationship building, trust, and rapport in the workplace improves collaboration.

These core principles may require structural changes to foster successful collaboration. Some structural changes that encourage collaboration mentioned by respondents (26%, N = 5) include increased transparency, communication channels, cross-team projects, and communities of practice workgroups. These best practices may promote collaboration within an organization. This model also identifies organizational tools available that may increase collaboration and synergy across various levels of management and disciplines. Tools, such as virtual platforms and video conferencing for meetings, support inclusion and bi-directional communication and enable organizations to communicate with one another regardless of physical location.

Leadership support is also an important factor in building strong collaborations and one determinant of partnership synergy.<sup>17</sup> Leaders must embrace core values such as trust, transparency, inclusivity, and collaboration to facilitate shared goals and vision and support relationship-building and develop trust. The framework emphasizes why leaders should establish a shared vision and goals to increase collaboration and reduce organizational silos. This framework can aid leadership staff in identifying opportunities for collaboration and ways collaborative work can help organizations achieve program goals and objectives. Establishing a culture where everyone feels valued, respected, and included is paramount to fostering collaboration and encouraging communication.

Some limitations to this project are worth noting. The project team was given a 4-week timeframe to complete this capstone project as part of the NCCDPHP inaugural ELP. Consequently, time constraints limited the project team's capacity to cognitively test the discussion guide, recruit additional participants, and conduct interviews. This prevented the project team from interviewing more federal staff to gather more information on best practices for reducing silos in the workplace. Also, response bias is possible. For example, respondents may not have responded truthfully to interview questions or might perceive their branches or divisions more favorably than other branches and divisions when asked about siloing in the workplace.

The results of this project provide avenues for leadership and staff to identify organizational areas for collaboration and ways collaborative work can help organizations achieve program goals and objectives. Understanding why silos exist in the workplace is the first step to reducing silos in an effort to cultivate collaboration. To increase productivity, leverage resources, and establish an inclusive environment, organizations can invest in shared programs and initiatives.<sup>18</sup> The Framework to Foster Collaboration (Figure 1) promotes the inclusion of all employees, their ideas, interests, and experiences, supporting a cultural shift

within the workplace. When utilized in practice, this model may inspire leveraging skills and resources toward more cross-team, cross-program, and cross-organization collaboration in the workplace.

## Supplementary Material

Refer to Web version on PubMed Central for supplementary material.

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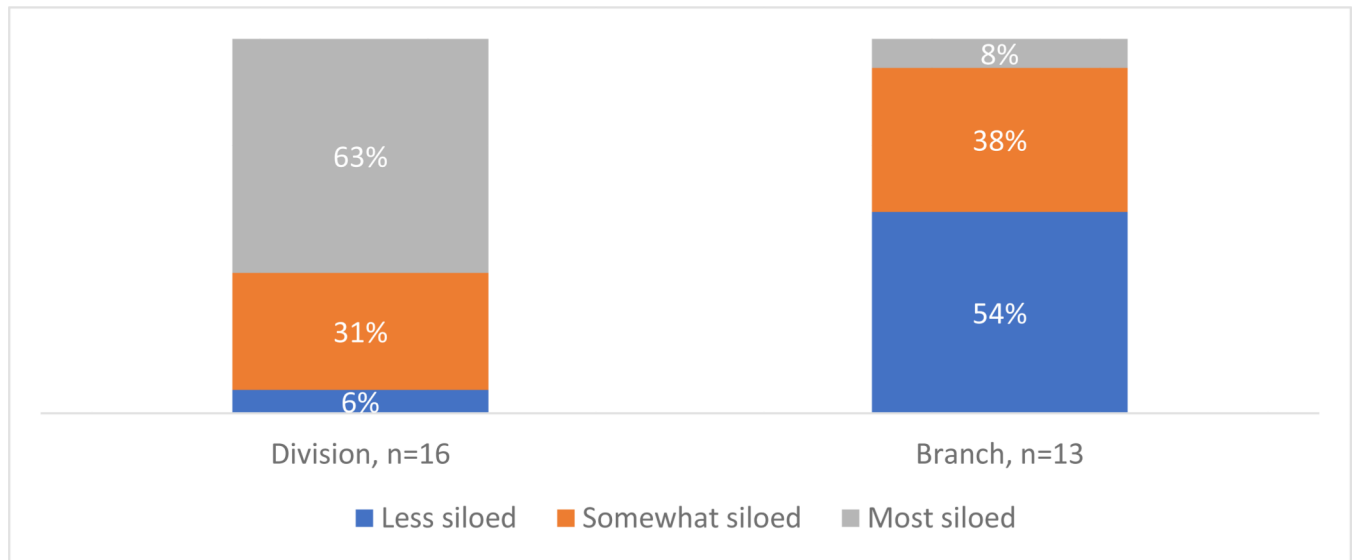
### Implications for Policy & Practice

- This project identified mitigating strategies for reducing silos in the workplace and best practices for fostering collaboration among 19 Federal full-time employees.
- One resounding theme identified from the key informant discussions was the importance of building a culture of collaboration in the workplace. Establishing relationships, rapport, and trust building are vital aspects of a positive organizational culture.
- The results of this project underline the importance of collaboration, bi-directional (2-way) communication, and synergy across teams as key strategies for reducing silos in the workplace. Effective collaborative efforts involve establishing shared goals, vision, and trust through relationship building and establishing a mutual understanding and respect among all parties.<sup>16</sup> These values align with best practices identified from this project and can be used to promote collaboration.





**FIGURE 1:**  
Framework to Foster Collaboration



**Figure 2:**  
Degree of Siloing as indicated by Respondents: Divisions vs. Branch

**TABLE 1:****Best Practices Themes and Descriptions**

<b>Question 2. What behaviors or actions perpetuate silos in your division or branch?</b>			<b>n=19</b>
<b>Theme</b>	<b>Description</b>	<b>n (%)</b>	
Lack of Information Sharing	Information is not shared within the organization, regardless of whether information is intentionally or unintentionally withheld.	7 (37%)	
Remote Work	Working remotely, i.e., not in the office and/or routinely interacting with co-workers in-person.	2 (11%)	
Organizational Structure (funding streams, disease centric, task/branch organization)	The method by which workflows through an organization such as funding streams, disease-centric Divisions, and tasks or activities organized between Branches and Teams.	8 (42%)	
Red Tape / Bureaucracy	Excessive bureaucratic regulation, typically or more commonly associated with over undue burden associated in a Public/Government organization.	3 (16%)	
Culture	Merriam-Webster (person centric): The customary beliefs, social forms, and material traits of a racial, religious, or social group. Merriam-Webster (institution centric): The set of shared attitudes, values, goals, and practices that characterize an institution or organization.	8(42%)	
<b>Question 3. How is collaboration encouraged in your division/branch?</b>			<b>n=19</b>
<b>Theme</b>	<b>Description</b>	<b>n (%)</b>	
Forum for Collaboration	There is a forum for open communication and collaboration where people may seek feedback or engagement on a product, topic, proposal, or other work-related activity.	12 (63%)	
Collaboration Encouraged	Collaboration is encouraged and emphasized within the organization, usually but not exclusively, by leadership.	7 (37%)	
Building a Culture of Collaboration	Building or integrating a culture of collaboration into the organizational structure itself.	3 (16%)	
<b>Question 4b. What motivates you to collaborate with others?</b>			<b>n=19</b>
<b>Theme</b>	<b>Description</b>	<b>n (%)</b>	
Respect/ Building Internal Culture	Building or integrating a culture of collaboration into the organizational structure itself.	4 (21%)	
Producing Quality Work Products/ Collaborative Work	Collaboration intended to produce quality work or improve a work product. Requesting or providing input or feedback to generate new ideas or refine concepts to foster more collaborative relationships.	15 (79%)	
<b>Question 5. What efforts are you taking / how are you working to reduce silos?</b>			<b>n=19</b>
<b>Theme</b>	<b>Description</b>	<b>n (%)</b>	
Respect/ Building Internal Culture	Building or integrating a culture of collaboration into the organizational structure itself.	3 (16%)	
In Reach	Intentional individual or team efforts to reach out and engage in meaningful collaboration within an organization.	10 (53%)	
Leveraging Forums and Structures	Utilizing organized structural forums for new or ongoing activities.	3 (16%)	
Respect/ Building Internal Culture	Building or integrating a culture of collaboration into the organizational structure itself.	3 (16%)	
<b>Question 6. What are some best practices for fostering collaboration in the workplace?</b>			<b>n=19</b>
<b>Theme</b>	<b>Description</b>	<b>n (%)</b>	
Intentional Collaboration	Individual or team efforts are intentional in activities solicit feedback, reach out, share information, or encouraging others to collaborate.	6 (32%)	
Leverage Technology	Use technology to increase visibility/transparency such as MS teams, Zoom, SharePoint, Salesforce, etc.	1 (5%)	
Building a Culture of Collaboration	Building or integrating a culture of collaboration into the organizational structure itself.	6 (32%)	
Encouraged Collaboration	Encourages or incentivizes participation to facilitate knowledge sharing and professional growth. Includes communicated leadership expectations that collaboration is expected and important.	4 (21%)	

Question 2. What behaviors or actions perpetuate silos in your division or branch?		n=19
Theme	Description	n (%)
Structural Changes that Encourage Collaboration	Organizational structural that encourage and foster collaboration, communication, and transparency are prioritized such as funding cross-branch projects, cross-branch workgroups, learning labs, community of practices, etc.	5 (26%)
Advocating for Collaboration	Identify, advocate, and communicate the potential benefits of collaboration.	4 (21%)