

Description of the Army's systems thinking pilot on suicide prevention

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Abstract

The Army Resilience Directorate (ARD) wants to explore a systems thinking approach for the integrated prevention of multiple harmful behaviors. As a first step, ARD asked CNA to partner with systems thinking experts from Bridgeway Partners to conduct a pilot program focusing on a single behavior: suicide prevention. This report describes the process of conducting the pilot program so that it may be replicated for other harmful behaviors and build towards a more integrated approach of harmful behavior prevention. The pilot program consisted of a modeling workshop, a three-day systems thinking retreat, and a Prevention Collaboration Team (PCT) meeting with experts from industry and academia. The pilot culminated in a report for Army Senior Leaders (ASLs) outlining key insights and actionable steps to prevent suicide in the Army and highlighting recommendations that could apply to holistic integrated prevention.

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Cover image: Sgt. 1st Class Jason Danielecki writes the inspirational characteristics of influential people in the lives of Soldiers in his small group during a team-building discussion for the Master Army Profession and Ethic Trainer course at Fort Hood, Texas (Photo Credit: U.S. Army)

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Executive Summary

The Army Resilience Directorate (ARD) wanted to explore a systems thinking approach for the integrated prevention of multiple harmful behaviors in Soldiers and asked CNA to execute a pilot focused on one such behavior: suicide. ARD selected experts from Bridgeway Partners to apply systems thinking methodologies to suicide prevention in the Army. CNA partnered with Bridgeway Partners to conduct a pilot program focused on suicide prevention. This program consisted of preparing for a three-day systems thinking retreat, conducting the retreat, and holding a prevention collaboration team (PCT) meeting to develop recommendations. The pilot culminated in a report for Army Senior Leaders (ASLs) outlining key insights and actionable steps to prevent suicide in the Army and highlighting recommendations that could apply to holistic integrated prevention.

Systems Thinking Overview

Systems thinking is a holistic approach to analysis that recognizes how individual parts work together to create a larger system. Traditional approaches to problem solving typically break the problem (and system) into its individual parts. This kind of approach often leads to myopic quick fixes to one part of a system without recognizing cascading effects on other parts of the system. By surfacing underlying structures that drive patterns of behavior, systems thinking can identify high-leverage points where small changes can shift long-term trends and patterns.

Systems Thinking Pilot on Suicide Prevention

Retreat Preparation

CNA contracted two systems thinking experts from Bridgeway Partners to plan and facilitate the retreat. In preparation, Bridgeway Partners conducted a literature review and held discussions with program officials to provide the necessary context for developing draft causal loop diagrams. Bridgeway Partners invited 16 participants with varied experience related to the Army's suicide prevention system to provide initial comments on the diagrams in a six-hour workshop. Based on the workshop discussion, Bridgeway Partners modified the causal loop diagrams to be presented at the systems thinking retreat.

Systems Thinking Retreat

The retreat took place over three days at CNA headquarters in Arlington, Virginia, and involved 38 participants with different perspectives on the Army suicide prevention system. They included a company commander, program managers at installations, and program managers for Headquarters, Department of the Army. The retreat was designed to identify leverage points for intervention through lectures, small group discussions, case studies, and in-depth exercises. The first two days of the retreat alternated between explaining systems thinking concepts and engaging the participants in exercises to apply those concepts to the Army's suicide prevention system. On the final day of the retreat, participants were asked to focus on identifying solutions to the challenges identified during the first two days.

Prevention Collaboration Team Meeting

After the systems thinking retreat, ARD and CNA shared insights developed thus far in the pilot with a group of five professionals from industry and academia who are experts on the prevention of destructive behaviors, community intervention, behavioral science, and public health. The PCT consisted of two two-hour meetings held five days apart. The first meeting discussed major takeaways from the pilot and identified high-leverage points for suicide prevention. The second meeting identified and refined innovative steps for ASLs to take in addressing suicide prevention.

Conclusion

This report describes the process used to conduct ARD's systems thinking pilot for suicide prevention, which provided Army suicide prevention system stakeholders an opportunity to collaborate and view the problem holistically. Although this pilot applied systems thinking tools specifically to suicide prevention, systems thinking concepts could inform the prevention of other harmful behaviors and the transition of harmful behavior prevention to a more integrated approach. These concepts include, for example, an understanding of time delays between action and observed changes and how the success of a near-term improvement can degrade the will for sustained change (e.g., if the suicide rate goes down one month, the command might shift focus away from suicide prevention efforts).

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Introduction

As part of a larger analytic effort to enhance integrated prevention of harmful behaviors in Soldiers, the Army Resilience Directorate (ARD) wanted to explore a systems thinking approach to preventing these behaviors. Thus, ARD asked CNA to execute a pilot version of its concept by exploring a systems thinking approach to prevention of one harmful behavior—suicide. This document describes the following primary steps taken during the pilot:

- 1) Convening a systems thinking retreat with Army suicide prevention experts
- 2) Hosting a prevention collaboration team (PCT) meeting with industry and academic experts in suicide prevention and integrated harmful behavior prevention
- 3) Developing key takeaways for Army Senior Leaders (ASLs) [1]

This report does not assess the value of using a systems thinking approach to address suicide prevention or, more broadly, the concept of integrated prevention. Rather, it documents the method used to conduct this pilot. Thus, this report will provide ARD personnel with a detailed description of the pilot and will allow ARD to replicate the pilot in the future.

Systems thinking overview and pilot retreat objectives

Systems thinking is a holistic approach to analysis that recognizes how individual parts work together to create a larger system. Traditional approaches to problem solving typically break the problem (and system) into its individual parts. This approach often leads to myopic, quick fixes to one part of a system without recognizing the cascading effects on other parts that can generate new problems. By instead looking at problems holistically, systems thinking can illuminate long-term solutions to chronic problems [2].

The systems thinking approach identifies patterns of behavior and reveals the underlying structures that drive those behaviors. It employs causal loop diagrams to outline complex relationships within a system. Specifically, these diagrams represent visually how different elements can cause or have a reaction to other elements in the system. Common elements of these diagrams include goals, policies, key players, actions, reactions, and results. Once stakeholders see and agree on the relationships depicted, they must decide how they want the system to operate differently [3]. The known difference between the current state and the desired end state is a “creative tension” that drives possible points of intervention [4]. Often,

systems thinking solutions result in multiple points of possible intervention. Systems thinking also reveals that there is no perfect solution, as every intervention affects another part of the system and disrupts equilibrium. For example, pressure on Headquarters, Department of the Army (HQDA) to address problems swiftly may result in hasty policy changes without detailed implementation guidance or sufficient resources to implement the changes. The field must adapt to these circumstances, leading to varied implementation and outcome quality across the enterprise. Frustrations on both sides lead to friction between HQDA and the field. Systems thinking, on the other hand, allows the user to make informed decisions and, in some cases, use cascading effects to their advantage.

The purpose of the pilot was to use systems thinking methods to address a focal question: *Why has the Army not been able to reduce Soldier suicides despite efforts from multiple organizations?* In 2021, the Army's suicide rate was at its highest since before WWII, and the total number of suicides was at a 20-year high [5]. By using the systems thinking approach, we hope to illuminate the root causes of the increase in suicides and identify high-leverage interventions to shift the trajectory of suicides. This report outlines the process to conduct this pilot and provides a guide that can be used to replicate this process to address *other* focal questions related to the prevention of other harmful behaviors.

Pilot overview

CNA contracted systems thinking experts from Bridgeway Partners,¹ who were selected by ARD, to plan and facilitate the pilot retreat and generate insights. Bridgeway Partners are experts on applying systems thinking methods to social problems. During the preparation phase, Bridgeway Partners gathered required knowledge about the Army suicide prevention system. Next, they facilitated the systems thinking retreat and delivered their conclusions to CNA and ARD. CNA provided logistical support to the pilot, provided Army knowledge and guidance to Bridgeway Partners, gathered insights from the retreat, designed and executed a PCT, and analyzed all insights to develop recommendations for ASLs.

Preparation for the retreat, conducted primarily by Bridgeway Partners, included a *literature review* on the prevalence of and contributing factors to suicide in the military and *discussions* with Army stakeholders and suicide experts to develop *draft systems diagrams*. In further retreat preparation, a *modeling team workshop* was conducted to discuss and refine initial causal loop diagrams generated by literature review and discussions with program officials

¹ Policy Dynamics was also contracted to design a system dynamics simulator for suicide prevention. Because of delays in contracting and execution challenges, the Policy Dynamics simulator was not developed in time to inform this effort.

The three-day retreat was held at CNA's headquarters in Arlington, Virginia. Two facilitators from Bridgeway Partners led participants through key systems thinking concepts and how they applied to different aspects of suicide prevention. The retreat concluded with an exercise to identify high-leverage points of intervention to make structural changes in the suicide prevention system.

After the retreat, CNA summarized key findings and hosted a PCT workshop with integrated prevention experts to explore the insights generated. CNA then synthesized information from all stages of the pilot to determine key aspects of the Army suicide prevention system and actions the Army can take to reduce the incidence of suicide and, potentially, other harmful behaviors.

Overview of report

This report provides an overview of the systems thinking pilot for suicide prevention. First, we describe the pilot retreat preparation, which included a literature review, discussions with program officials, and a modeling team workshop. Second, we discuss the three-day systems thinking retreat, including its purpose, composition, and major activities. Third, we discuss CNA's engagement with experts on a PCT, and review specifically the team's objectives, membership, and primary functions. We conclude this report with a brief discussion of aspects of the systems thinking methodology, illuminated through this pilot, that could be applied to other intractable Army problems.

Retreat Preparation

Literature review and discussions with program officials to develop draft system diagrams

In preparation for developing the systems thinking retreat, Bridgeway Partners conducted a literature review and held discussions with program officials to provide the necessary context for developing their models. The literature review included suicide statistics and trends in the Army and the US more broadly, current military policies related to suicide, past Army efforts to reduce suicide, and lessons learned from those efforts. The primary purpose of the literature review was to create a baseline understanding of suicide prevention in the Army and develop questions to discuss with program officials.

Bridgeway Partners also held 14 discussions with program officials and others involved in suicide prevention to develop the initial systems thinking models. These individuals were from different occupations and levels within the Army (tactical, operational, and strategic) and included uniformed Army personnel, Army civilians, and non-Army civilians. The participants included program managers from the Army Suicide Prevention Program (ASPP) and Ready and Resilient (R2), chaplains, behavioral health specialists, clinical social workers, policy-makers, and training developers.

The discussions primarily explored the focal question: *Why has the Army not been able to reduce Soldier suicides despite efforts from multiple organizations?* Topics included differences between Army and civilian culture, corresponding differences in the drivers of suicidal thoughts and attempts within those cultures, suicide prevention efforts within the Army, and program officials' perceptions on how those programs are successful and how they could be improved. Participants also were asked to identify aspects of the Army's prevention programs that were redundant, inefficient, under-resourced, and insufficiently aligned with other efforts. A summary of themes emerging from these discussions is provided in Appendix A.

Together, findings from the literature review and these discussions informed Bridgeway Partners' design of the systems diagrams, the modeling team discussions, and the pilot retreat content.

Modeling team workshop

The final element of Bridgeway Partners' preparation for the systems thinking retreat was the drafting of the systems thinking diagrams, informed by the literature review and discussions. Prior to the retreat, a modeling team reviewed, discussed, and refined the diagrams. Bridgeway Partners had the following three objectives for the modeling team workshop:

1. Provide the modeling team an overview of the systems thinking approach to analyze the objective: reducing suicides within the Army
2. Educate and inform the modeling team on the system dynamics of suicides and the efforts and programs implemented to date to reduce and eliminate suicides
3. Solicit feedback from the modeling team on the draft systems thinking diagrams to refine them prior to the retreat

Participants

The modeling team was composed of 16 participants with a variety of backgrounds with the Army, including chaplains, epidemiologists, program managers (ASPP, R2, Health Promotion Project Officers), and psychologists, among others. Many participants were among the program officials consulted in the earlier discussions used to generate the draft systems diagrams.

Modeling team workshop structure

The modeling team workshop was a six-hour meeting held virtually to accommodate time and resource considerations. Prior to the workshop, participants were given handouts that included the draft systems diagrams and a systems thinking overview described in three published articles.

The modeling team workshop began with a briefing of the findings from the prior discussions to provide the necessary context for the analysts to develop the draft systems thinking diagrams. The briefing also provided an opportunity for the modeling team to discuss any elements that were unclear or surprising and findings that stood out.

Following the discussion of themes from the initial discussions, the modeling team received an overview of the systems thinking methodology, described as a way to present and understand complex and dynamic systems. Bridgeway Partners explained the differences between systems and systems thinking, and between conventional thinking and systems thinking. They also provided the group a baseline vocabulary for systems thinking by describing structural items, key concepts, and symbols. Appendix B provides a key to reading systems thinking diagrams by depicting key symbols and concepts.

Next, the modeling team participants were asked to provide feedback that would be used to modify and refine the systems thinking diagrams in preparation for the systems thinking retreat.

A significant portion of the workshop involved discussing and refining the diagrams using the systems thinking approach. In total, five diagrams were presented at the modeling team workshop, including the following:

1. The Unintended Consequences of Recruiting Pressure
2. Disconnects Between Commanders and Soldiers
3. The Unintended Consequences of Rollout Pressure
4. Building Resilience Through Individual vs. Environmental Approach
5. The Importance of the Junior Leader-Soldier Connection

During the workshop, facilitators encouraged participants to dissect and refine the diagrams critically, identifying any gaps in the models presented.

A second modeling team workshop had been scheduled, during which Bridgeway Partners planned to present refined systems diagrams. However, because the virtual format was not conducive to the type of discussion necessary to refine the diagrams meaningfully,² this step was instead folded into the systems thinking retreat.

Summary

Prior to the retreat, Bridgeway Partners completed a literature review and 14 discussions with program officials to develop an understanding of the Army's suicide prevention efforts and develop initial systems thinking models. This background work was necessary because while Bridgeway Partners are experts in applying systems thinking methods, they are not Army suicide prevention experts. Replicating this process in the future will likely lead to a similar need to gather enough domain-specific knowledge to apply systems thinking tools.

After the literature review and discussions with program officials, Bridgeway Partners conducted a modeling team workshop to review the initial systems thinking models. During this iteration, CNA and Bridgeway Partners found that a *6-hour virtual format* was not

² During the first modeling team meeting, participants were frequently off camera and did not respond to questions/comments in a way that suggested they were fully engaged. Further, several participants noted at the end that they had to step away from the meeting for long durations. There are a variety of reasons why participants were not fully engaged (to include logistical choices like duration and camera norms). Regardless, the Bridgeway Partners, CNA, and ARD teams determined a second virtual modeling team would not be fruitful.

conducive to the discussion. We recommend holding the modeling team workshop in person or, at the very least, breaking it up into multiple, shorter virtual sessions.

Systems Thinking Retreat

Purpose

From August 30 through September 1, 2022, ARD, CNA, and Bridgeway Partners held a retreat to apply the systems thinking approach to Army suicide prevention efforts. With a larger audience than that of the systems thinking modeling team, the retreat portion of the pilot was designed to identify leverage points for intervention. The retreat consisted of the following steps:

- Reviewing findings from the initial discussions on reducing suicide in the Army
- Providing a primer on systems thinking methodology
- Developing a shared understanding of the difficulties in reducing suicide in the Army despite the efforts of multiple organizations and programs
- Using systems thinking principles to identify high-leverage intervention points to reduce suicide

The retreat included lectures, small group discussion case studies, and in-depth exercises applying principles and methods of systems thinking. Over the three days, the participants were placed in strategic groups to blend their professional expertise, organizational level (strategic, operational, tactical), and organizational components to provide different perspectives while engaged in group and table activities.

Composition

Although ARD selected participants for the retreat, Bridgeway Partners provided guidance regarding the composition of attendees. Bridgeway Partners requested that ARD invite persons with diverse perspectives on suicide and suicide prevention and decision-makers whose actions can affect the Army suicide prevention system. Overall, 38 people participated in the three-day retreat, including Community Readiness and Resiliency Integrators, ASPP managers, chaplains, psychologists, training managers, behavioral health specialists, nurses, other program managers, and ARD personnel. Several attendees also participated in the modeling team and initial discussions. The participants, both uniform and civilian personnel, represented four Army installations, HQDA, Training and Doctrine Command (TRADOC), and Forces Command (FORSCOM), and various units and commands within the Army. The participants' roles were categorized by ARD as tactical (e.g., in units), operational (e.g.,

installation program managers), and strategic (e.g., HQ personnel). Table 1 provides a breakdown of the representation of the retreat participants by organizational level.

Table 1. Organizational level of pilot retreat participants

Organizational Level	Representatives
Tactical	11
Operational	3
Strategic	24

Source: CNA.

Systems thinking retreat structure

Introductions

The facilitators kicked off the retreat by presenting their background in systems thinking and allowing the participants to introduce themselves. To illustrate how the process could improve a seemingly intractable, chronic social problem, the facilitators presented an example application of systems thinking to a community-level problem. They then presented the main takeaways from the 14 initial discussions to begin building a shared understanding of the Army suicide prevention system. Participants were given the opportunity to react and explain what they found surprising or unsurprising in the themes derived from initial discussions.

Systems thinking capacity building

Most of the first two days involved providing an overview of the systems thinking approach to help the participants apply systems thinking methods to understanding suicide prevention in the Army. Systems thinking uses common narratives, referred to as archetypes, to categorize inefficiencies in a system. The three archetypes introduced in the retreat were the following:

1. **Fixes that Backfire.** The fix for a problem works in the short term but has unintended consequences that perpetuate the problem in the long term.
2. **Shifting the Burden.** The short-term solution is chosen over the long-term solution because it is quicker, easier, and often cheaper, but because the long-term solution is never prioritized the problem persists.
3. **Accidental Adversaries.** Partners' individual corrective actions inadvertently undermine each other's success until they begin to view each other as enemies instead of partners.

The concepts used to describe the inefficiencies within these archetypes were the following:

- **Quick fixes vs. quick wins.** Resources are used to react to a symptom of the problem (quick fix) rather than to execute the first step of a long-term solution (quick win).
- **Virtuous cycles that turn into vicious cycles.** Part of the system rewards behavior that harms the systems in the long run.
- **Mental models.** Denote deeply held beliefs and assumptions about us and the world that we sometimes treat as facts.
- **Balancing loops.** When an increase in one variable in the system decreases a second variable or vice versa.
- **Reinforcing loops.** When an increase in one variable in the system increases a second variable or vice versa.
- **Time delays.** Reflect a lack of appreciation for the time it takes for a change to influence the system.

The facilitators alternated between explaining these archetypes and concepts and engaging the attendants in exercises to apply them to the Army's suicide prevention system.

Applying systems thinking to suicide prevention

Throughout the retreat, as the different archetypes and concepts were introduced, participants were given the chance to provide input on the Army suicide prevention system. Each archetype's presentation was accompanied by one or more diagrams modeling a certain aspect of the Army's suicide prevention system. For each archetype, participants were first asked to come up with their own examples to ensure that they understood the archetype. They were then shown the one or two diagrams and asked to comment on how accurately the diagrams reflected the depicted dynamic.

The **Fixes that Backfire** archetype is evident in two aspects of the Army's suicide prevention system:

- **Disconnects between senior leaders and Soldiers.** The pressure to create quality connections and communication leads to an increase of structured requirements for leaders to connect with Soldiers. The mandated requirements may lead to superficial engagements that decrease quality connections.
- **Unintended consequences of rollout pressure.** The pressure to roll out new policies and programs to reduce suicide overwhelms the capacity of program implementers and decreases the effectiveness of any individual program.

Participants were then introduced to the concept of mental models and how articulating mental models can illuminate biases and beliefs that influence connections in a system. The

facilitators then showed several mental models at play in the system diagram and asked participants to comment on their accuracy and influence.

The second archetype introduced was **Shifting the Burden**. This archetype is evident in two aspects of the Army's suicide prevention system:

- **Building resilience through individual vs. environmental approach.** Currently, the Army's suicide prevention efforts focus heavily on individual resilience training and toughness to try to reduce suicide risk; however, this "quick fix" can degrade senior leadership's long-term commitment to a public health approach.
- **Overburdening mental health providers.** Reacting to incidents by sending Soldiers to healthcare providers is easier than taking a longer-term, prevention-focused approach involving chaplains, counselors, and leaders; however, these actions can lead to decreased availability of mental health providers for others who need these services.

The third archetype introduced was **accidental adversaries**. This archetype was evident in one aspect of the suicide prevention system:

- **HQ-field relations around suicide reduction.** The Army at the HQ-level is pressured by Congress and other external forces to reduce suicides via the continuous rollout of new programs. However, this frequent introduction of new programs and processes confuses and overwhelms the implementers in the field (at the installation level). The installations are then forced to modify policies because of time or resource constraints, leading to installation-level variation and frustration at the HQ level.

Moving to solutions

On the final day of the retreat, participants were asked to focus on identifying solutions to the challenges identified on the first two days using two systems thinking concepts:

- **Case for change vs. case for status quo.** The argument for change must be stronger than the argument for the status quo.
- **High-leverage points.** Places within a complex system where a small change (or focused action) has the potential to lead to a lasting, significant improvement [4]. Put another way, high-leverage points are "the few things that change everything else" [6].

The participants were asked to identify the costs and benefits of change regarding suicide prevention. This activity illuminated the strength of the case for the status quo—there were many reasons why the suicide prevention system was functioning the way it was. This activity also highlighted potential arguments to strengthen the case for change.

The facilitators then introduced strategies for identifying high-leverage points for each archetype. The facilitators also noted that, in some cases, it was necessary to shift existing mental models to gain buy-in for new interventions. The participants were split into six groups—two per archetype discussed—and asked to identify high-leverage points for their assigned diagram and the mental models that would need to shift to implement new intervention.

Summary

The systems thinking retreat took place over three days during which the 38 participants learned about systems thinking concepts, how to apply those concepts to suicide prevention, and how to develop solutions moving forward. While the basic structure could remain the same for replication of this pilot, there may be differences when looking at other harmful behaviors and other focal questions. The number of participants, the Army organizations represented, and the spread of organization level (tactical, operational, and strategic) may change depending on the harmful behavior and the resources allocated for the retreat. Other harmful behaviors may require learning a different number of archetypes and system thinking concepts, so the retreat schedule should be adjusted accordingly. CNA also recommends allotting more time to identifying and refining solutions—a goal of the retreat that could not be fully developed by participants as that section took place on the last afternoon of the retreat and was hampered by time constraints.

Prevention Collaboration Team

Purpose

The objective of the PCT was to turn the retreat insights into actionable ideas for ASLs to improve suicide prevention. To support this objective, CNA and ARD shared insights developed thus far in the pilot with a diverse group of five professionals from industry and academia who have expertise in community-based interventions, integrated prevention, suicide prevention, and public health approaches to prevention. The PCT consisted of two two-hour virtual meetings held five days apart. The topics discussed were the following:

- Application and expansion of findings from the retreat and aspects PCT participants identified as missing from the pilot thus far
- Key aspects and high-leverage points of the Army suicide prevention system
- Innovative methods to address high-leverage areas
- Aspects of suicide prevention that could apply to an integrated prevention approach for multiple harmful behaviors

Preparation

In preparation for the PCT, CNA and Bridgeway Partners analyzed and documented their insights developed from the systems thinking retreat. CNA and ARD identified five professionals from industry and academia to include in the PCT. CNA collated introductory material and sent documents to the PCT members to review prior to the first meeting. These documents included PCT member bios, a description of the Army's current suicide prevention program, three published documents that briefly introduce systems thinking methodology [2-4], and the two working papers created by Bridgeway Partners and CNA summarizing key themes and takeaways from earlier stages of the pilot (Appendix C and Appendix D). Participants were expected to review the provided read ahead-materials and be ready to comment on current insights prior to the first meeting.

Composition

The five professionals CNA and ARD identified for the PCT included the following:

- **Dr. Vincent T Francisco**, a Kansas Health Foundation Professor of Community Leadership in the Department of Applied Behavioral Science at the University of

Kansas. He is also the Director of the Center for Community Health and Development, a World Health Organization Collaborating Centre at the University of Kansas. He works with community initiatives to help them build capacity for systems change, create environments in which those organizations can succeed in accomplishing their mission, and evaluate those interventions within an open systems environment.

- **Dr. Dennis Reidy**, an Associate Professor in the department of Health Policy & Behavioral Sciences in the School of Public Health at Georgia State University. He is the Director for Community Engagement and Outreach for the Center for Research on Interpersonal Violence at Georgia State University. His research focuses on informing, developing, and evaluating innovative interventions to prevent violence and associated delinquency outcomes (e.g., substance use, risky sexual behavior) and to promote health and well-being.
- **Dr. Eren Watkins**, an epidemiologist and public health practitioner who previously worked for the Department of the Army. She is the Director of Outcomes Research (Epidemiology) at Organon, a pharmaceutical company focused on Women's Health.
- **Dr. Peter A. Wyman**, a professor in the Department of Psychiatry and Co-Director of the Center for Study and Prevention of Suicide at the University of Rochester School of Medicine. His work focuses on the prevention of suicide, depression, and substance use. A key theme of Dr. Wyman's research is using natural social networks to strengthen group social bonds, augment protective psychosocial processes, and use influence among group members to sustain the impact of interventions.
- **Ms. Sally Thigpen**, a health scientist who joined the Centers for Disease Control and Prevention in 2009 in the Injury Center's Division of Violence Prevention after spending nearly 15 years leading efforts to prevent child abuse and neglect. She served in a variety of roles, including as Associate Director for Programs at Prevent Child Abuse Georgia. She has served as a health scientist and senior evaluation officer in the Division of Injury Prevention since 2011, providing support across the centers for program evaluation and research, with specific focus on promoting behavioral and social change.

PCT structure

Meeting 1: Identifying Key Aspects and High-Leverage Points

The first meeting focused on the major takeaways from the pilot thus far and identifying high-leverage points for suicide prevention. After conducting introductions and reviewing the

agenda, participants were asked to provide their initial reactions to the read-ahead materials. Then, they worked together to identify key aspects and high-leverage points. Each participant was asked, from the vantage point of their field of expertise, to elaborate on why the identified key aspects are significant and how identified high-leverage points could create lasting change.

Between meetings, CNA asked participants to revisit the previously sent materials, specifically the two synthesis documents, and to return with two to three actionable ideas for the Army to consider.

Meeting 2: Identifying Actionable Ideas

The goal of the second meeting was to identify three to five innovative steps for ASLs to take in addressing suicide prevention. First, the participants each described actionable ideas they generated between the first and second meetings. They then expanded on and critically evaluated the identified actionable ideas through two refinement activities. In the first refinement activity, participants were asked to identify how each actionable idea connected to an high-leverage point or key aspect. In the second refinement activity, they discussed how each actionable idea could be implemented and how they would lead to long-term, sustainable change.

Development of insights for Army Senior Leaders

Following the PCT, CNA and ARD discussed the salient themes and ideas generated from the PCT and throughout the entire pilot. We categorized them into the following four high-leverage points for intervention: leaders, prevention training and implementation, organizational culture, and evaluation.

Next, CNA and ARD will further develop these ideas into concrete recommendations for ASLs. For each recommendation, CNA and ARD will provide a rationale and justification for the recommendation and specific next steps to implement ideas in line with the long-term concept. These recommendations will be codified in a final report.

Summary

The final elements of the pilot included PCT meetings and developing insights for ASLs. In this iteration of the pilot, CNA analyzed insights from the retreat and presented those to the PCT along with insights generated by Bridgeway Partners. The composition and number of

participants at the PCT will depend on the specific harmful behavior and the resources available. Future iterations may also wish to hold the PCT in person instead of virtually.

CNA developed insights and recommendations for ASLs based on information from the entire pilot. Although the PCT members were asked to provide feedback on CNA's analysis of PCT meeting insights, neither the PCT members nor Bridgeway Partners had an opportunity to comment on the final document. Future iterations may allocate resources for the PCT members and/or the systems thinking experts to contribute to or provide feedback on the final document.

Conclusion

ARD asked CNA to help them conduct a pilot using systems thinking methodology to address the pervasive problem of suicide in the Army, with a primary goal of developing actionable recommendations for ASLs. A secondary goal was to pilot this method for ARD to determine if systems thinking methodology could be a valuable approach to addressing other pervasive challenges.

This report describes the process used to conduct ARD's systems thinking pilot for suicide prevention. It details the preliminary activities (e.g., literature review and discussions with program officials) to develop a baseline understanding of suicide prevention in the Army. The report also documents major aspects of the three-day systems thinking retreat with stakeholders throughout the Army. Further, the report describes analytical activities conducted after the retreat, including consultation with prevention experts who have diverse perspectives (i.e., the PCT members). All these activities were conducted with the end goal of identifying actionable ideas for ASLs to implement to enhance suicide prevention.

The systems thinking pilot provided Army suicide prevention system stakeholders an opportunity to collaborate and view the problem holistically. Although the systems thinking tools were applied to the specific problem of suicide prevention, there are features of this methodology that are broadly applicable. Specifically, the systems thinking approach taken in this pilot provided the following:

- An opportunity for cross-communication among entities (e.g., HQ policy-makers, program officials at installations, and unit leaders)
- An opportunity to look at problems through a different lens
- A replicable process for addressing intractable problems

This methodology can also be applied to transitioning harmful behavior prevention from its current individual-level focus to a more holistic, integrated approach.

Appendix A: Key Themes from Discussions with Program Officials

Bridgeway Partners derived the following key themes from the 14 discussions focusing on the question, “Why hasn’t the Army been able to reduce suicides despite the best efforts of multiple organizations?”:

1. We have successes we can feel good about—particularly given the vulnerability of our Soldier population when compared with the civilian population.
 - a. Alaska (base not specified) provides 30–45 minute off-the-record counseling sessions with a military family health counselor; these are required annually (the requirement reduces the stigma of asking for help) and are supported by all commanders.
 - b. Reduced up-tempo training allows Soldiers more time to meet other needs.
 - c. Increased predictability of Soldier hours limits work on nights and weekends.
 - d. People First Initiatives at Ft. Hood—rotating Foundation Days on such topics as suicide awareness, racism/sexism/equal opportunity, sexual harassment, and assault.
 - e. “Not in My Squad (Team)” is an excellent program that leads to culture shift.
 - f. Chain Teach made a big difference.
 - g. STARS research has been very insightful and helpful in suicide prevention.
 - h. We have a very robust suicide-tracking system.
 - i. Leadership seems to be taking a more comprehensive approach across all harmful behaviors more seriously—there seems to be such movement as revived synergy among public health counselors at the local level; new policies just emerging to align approaches to reduce harmful behaviors of all kinds; and more collaboration happening at the FORSCOM level (though not necessarily at the local level).
 - j. We can see installations where suicide declines seem to correlate with leadership buying into a comprehensive approach; they are modeling, mentoring junior leaders, taking time out, and putting resources behind it.
2. Military families have more stressors than the general population.
 - a. Examples include isolation, frequent moves, burdens of younger families, low income, and lack of predictability/schedule control.

- b. The glamour of an Army at war that is portrayed by recruiters contrasts with the more mundane and less obviously purposeful reality of garrison life.
 - c. Some recruits are disappointed because they think they are joining a brotherhood/sisterhood, but that is not guaranteed.
 - d. Recruits have fewer opportunities than in the past to build cohesion with their teammates because they are more able to isolate (e.g., private rooms, social media, off-base living).
 - e. Most suicides occur at garrison or during Reset—not in war zones.
 - f. The lack of predictability/schedule control at the garrison is harder to accept than during deployment.
3. Our Soldier population is more at risk of harmful behaviors, including suicide.
- a. Our recruiters do not have the ability (training, tools) to screen closely for a history of mental disorders or child abuse, family problems, or substance abuse (except recently for pharmaceutical records)
 - b. Behavioral health providers say previous histories are predictive, people join the Army as a last resort, and people break if they do not get connected right away.
 - c. Suicide among the younger population is more acceptable than previously.
 - d. Some recruits are missing basic life skills.
 - e. A large number of military kids become our Soldiers, and most military kids have experienced the trauma of having at least one parent in a war zone.
 - f. Youth are more impulsive, and suicide is an impulsive act.
 - g. Social media has bred isolation and resulted in recruits with fewer social skills.
 - h. Everybody has been rewarded just for participating—some are not accustomed to failure.
 - i. There are more economic, social, and spiritual stresses on younger people (junior leaders as well as recruits) due to broad societal breakdowns.
4. Leaders at all levels struggle to model help-seeking behaviors as well as to know and connect with their Soldiers; moreover, the negative impacts of their behavior are not sufficiently addressed.
- a. Base commanders
 - i. We still have some toxic leaders—they are hard to remove and still get their paychecks.
 - ii. Golden Boys who perform well on readiness are more readily excused when it comes to a lack of people skills.

- iii. There are no rewards for commanders to pay as much attention to governance and coordination of people programs vs. readiness programs.
 - iv. Leadership still runs things by the numbers.
 - v. The current surveillance system focuses on behavioral risks, but our data suggest few commanders even look at this data.
 - vi. The operational tempo has been intense since 9/11, and unit commanders are more overburdened and stressed as a result.
 - vii. Therefore, they have limited bandwidth for connecting more personally with Soldiers and modeling and endorsing help-seeking behaviors.
- b. Junior leaders
- i. They are often under 25 years old themselves.
 - ii. They are expected to take care of their Soldiers as well as their own young families.
 - iii. Junior leaders with families can live off base, so they are not as engaged with their Soldiers as they need to be.
 - iv. Seventy-one percent of suicides are now among junior leaders vs. among E1-3.
 - v. They need more development to take care of themselves, their families, and their Soldiers.
- c. Leadership overall
- i. We are not equipping our leaders with knowledge about the entering cohort as well as we can.
 - ii. There is a disconnect between Soldiers who are less likely to seek help and leaders who are less likely to know of difficult situations and struggles.
 - iii. We do not infuse understanding of harmful behaviors into our doctrine and training, especially for leadership.
 - iv. The “People First” initiative was intended to focus leaders on knowing subordinates, but it has become much more of a check-the-box exercise.
5. Cultural barriers impede seeking help.
- a. We send mixed messages: Soldiers get resiliency training so they can be more self-reliant (soldier up), but at same time we encourage seeking help.
 - b. Mental health is more of a stigma among the older generation than it is in the current generation of Soldiers.

- c. We are not doing a good job of postvention because commanders believe that suicide is dishonorable; they do not want to glamorize it so there is no memorial service, etc., and it becomes undiscussable.
 - d. Soldiers do not feel free to get help before attempting suicide and do not believe that the Army can/will help them with larger issues; they feel that they will only get lip service.
6. The Army's approach to prevention is focused on programs, training, and individual harmful behaviors.
- a. Our previous efforts have been strongly focused on programmatic solutions with little evidence that they are making any difference.
 - b. We develop great training—but then turn it over to almost anyone to speed rollout, which leads to uneven training quality/fidelity.
 - c. Getting rid of all suicides will always be a losing battle; the best we can do is target risk factors and protective factors to reduce all harmful behaviors, including suicide.
 - d. There is too much attention on risk factors vs. protective factors.
 - e. Harmful behaviors programs are stove-piped despite the similar risk and protective factors across them.
7. Not only are there disconnects between policy design and implementation, but implementation itself is also a challenge.
- a. Policies are created by G-1 without input from garrisons—but garrisons have own policies and resourcing.
 - b. While policies are written to enable flexible implementation, they often are implemented poorly or not at all at the installation level.
 - c. Implementation of people policies such as those related to harmful behaviors, including suicide, suffer from inadequate local resourcing, unaccountable leaders, and/or poor measurement.
 - d. There has been a lack of senior leadership (commanding general) involvement.
 - e. FORSCOM drives the work around suicide even though they do not completely understand the issue or partner with subject matter experts (SMEs) who have legitimate concerns about the Army's ability to deliver (e.g., sufficient qualified staff, support, available and tools).
 - f. The people who are creating suicide prevention programs are often two generations behind the current generation of Soldiers.

- g. FORSCOM says we do not need qualifications/credentials to be a suicide prevention program manager (SPPM); this leads to lack of clarity regarding roles and responsibilities of an SPPM and a subsequent loss of talent at installations.
 - h. We have lost 25 percent of our preventative workforce that supports commanders over last 5 years due to budget focused on weapons modernization.
 - i. Budget cutbacks have led to people wearing multiple hats, work not getting done, a failure to start new initiatives, and overall diminished impact of suicide prevention at the installation level.
 - j. Mental health providers are over-burdened.
 - k. Chaplains who focus on Soldiers' spiritual readiness and family health counselors who address domestic problems are both under-utilized.
 - l. Suicide prevention standards vary across enterprise because suicide prevention policy tends to be open ended, thus standards vary across enterprise.
 - m. Prevention is pretty much left up to commanders however they choose to apply it, and many do not even know it is mandatory.
 - n. Some Soldiers report having suicidal ideations and seek mental health care shortly before they are about to be assigned to a difficult deployment or abusive commander.
8. There is a tendency to focus on individual vs. environmental factors impacting suicide (a mental health vs. public health perspective).
- a. There is a lot of focus on the bottom (most at-risk) 10 percent of the population vs. moving the curve up for everyone.
 - b. A focus on the individual is emphasized.
 - i. Training focuses on individual coping skills.
 - ii. The behavioral side is more visible and gets more attention because it is easier to track and aggregate than broader environmental approaches.
 - iii. We promote self-help, yet many are not aware of resources or choose not to ask for help.
 - iv. Many senior leaders see suicide more as an individual than an environmental problem.
 - v. The voice of suicide prevention has been diminished because of resource cuts; as a result the suicide working group has morphed into a behavioral health focus.
 - vi. At the same time, spiritual readiness is an undervalued protective factor.
9. An environmental focus is not as valued.

- i. There is not enough focus on such environmental factors as culture, purposefulness, unit cohesion, people skills of leaders, and inherent difficulties of military life.
 - ii. There should be a norm that it is OK to check in with someone you know or look up to on a regular basis (e.g., chaplain, peer, mentor, squad leader, commander).
 - iii. The public health approach was never fully resourced or accepted by leaders at many levels.
 - iv. We defunded public health experts at the local level (a full prevention task force) and the Community Health Promotions Council that met quarterly across installations to share learnings; this is a big mistake we are now rectifying through funding but not yet with regulation.
10. Metrics are inadequate in that important measures are hard to quantify or too focused on the short-term.
 - a. Inputs (e.g., policy written, training available) or outputs (training attended) are measured more than outcomes (policy implemented, results of implementation).
 - b. Measures are not longitudinal; the positive immediate impact of a program is not necessarily indicative of long-term outcomes.
 - c. There is a tendency to carefully assess failures but not track and learn from successes.
 - d. Although readiness and people are both important, readiness predominates when conflict arises between them.
 - e. It is hard to measure a negative, i.e., the absence of prevention.
 - f. SP metrics are especially hard to identify.
 - g. It is hard to assess the quality of support given to transitioning Soldiers.
 - h. People skills are more difficult to measure overall.
 - i. There is no accountability for such protective factors as support of families or effectiveness of financial training.
 - j. Bases suffer from survey fatigue.
11. Suicide is hard to predict at the individual level.
 - a. The risk factors leading to suicide can be identified: there is usually both a history of mental disorder and at least three more immediate life stressors (e.g., relationship/financial/legal problems) involved.
 - b. Ideation does not itself predict suicidal acts.
 - c. The action itself is impulsive and unpredictable.

- d. Fifty percent of suicides were not seeing a behavioral health provider.
 - e. It is unclear why some people commit suicidal acts despite having similar or even fewer life stressors than other people who do not commit suicide.
12. Lethal means restrictions prevent suicides, but it is very difficult for the Army to control the most serious and likely means, which is the use of firearms.
- a. Means restriction is the best thing to do, but US culture and law protect gun access.
 - b. We cannot even have conversations about safe weapon storage.
 - c. Gun use means low survivability; 85–95 percent of first attempts with weapons are lethal.
 - d. The Army is missing a lethal means approach although there is clear evidence that access to lethal means (guns) is a significant contributor to suicide.
 - e. We focus on identifying who's at risk vs. addressing the hazard condition (weapon access).
 - f. By removing the lethal means, you create distance and time barriers to suicide.
 - g. Emotional reactivity (impulsiveness) + comfort with guns + access to weapons is a deadly combination.
 - h. There is plenty of gun safety education already, and still some people do not even use the gun locks that are distributed to them.

Appendix B: Reading Systems Thinking Maps

Bridgeway Partners created this guide to provide an understanding of the notation in the systems maps they created during this pilot.

Causal Links

The relationship between variables on the maps are shown through different styles of arrows:

- Causal Link: change in A causes change in B in SAME direction

A \longrightarrow B

- Causal Link: change in A causes change in B in OPPOSITE direction

A \dashrightarrow B

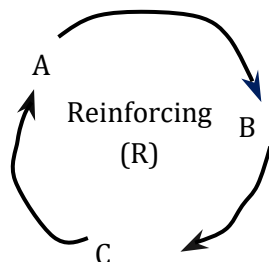
- Delay: Although A and B are connected, there is a significant delay or lag before a change in A produces a change in B

A $\overset{||}{\longrightarrow}$ B

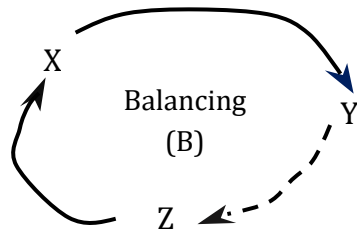
Feedback Loops

All living systems can be described as webs of interconnected reinforcing (R) and balancing (B) processes:

- Reinforcing processes (R loops)
 - Generate virtuous cycles of growth or vicious cycles of decline
 - Produce organic growth that is exponential (explosive) instead of linear



- Balancing processes (B loops)
 - Are the corrective mechanisms that sustain all functioning systems
 - Provide self-regulation, correction, and continuous adjustment
 - Seek stability and are intended to maintain a condition or state (status quo)
 - Are often non-obvious



Rule: If odd number of dashed (opposite) links => B LOOP. Otherwise, must be R LOOP

Mental Models

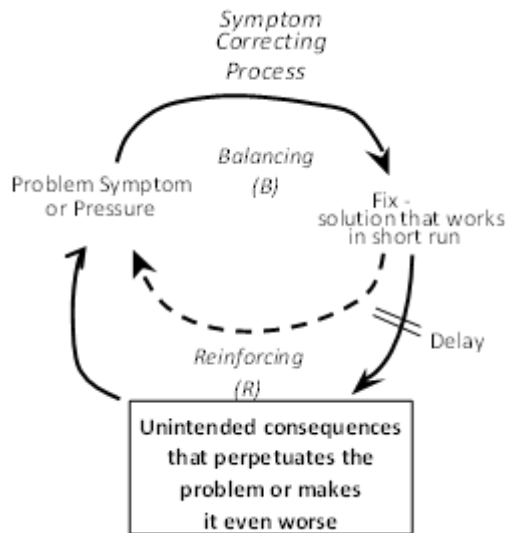
Mental models are beliefs, assumptions, and mindsets strongly influencing the actions and policies driving behavior in the diagram. Mental models on the maps are marked by cloud bubbles:



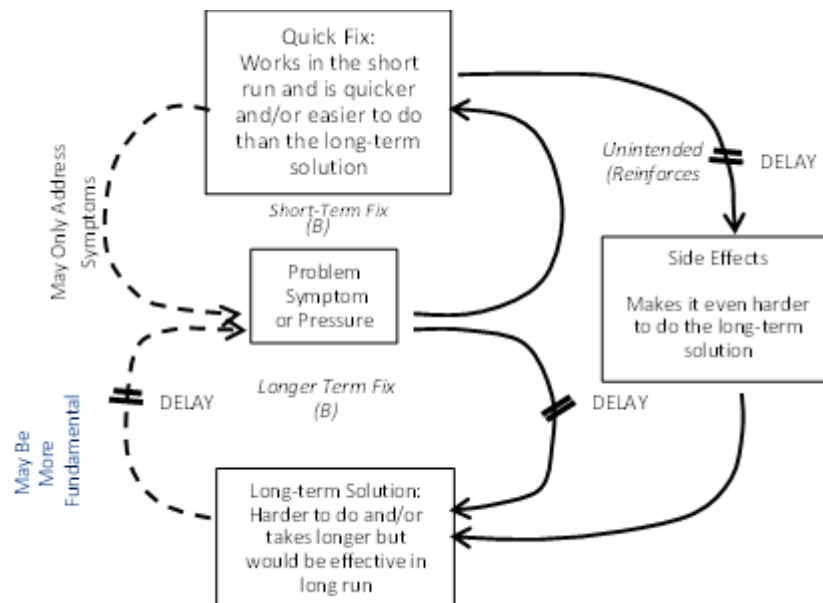
Archetype Templates

Archetypes are common narratives used in systems thinking to describe inefficiencies in the system. The three archetypes introduced at the retreat were the following:

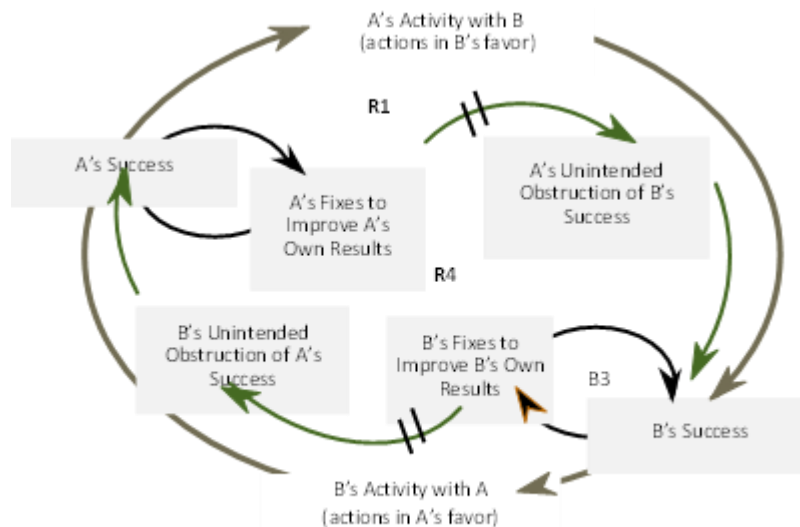
- **Fixes that backfire:** Unintended consequences that make the original problem symptom even worse.
 - Our “fix” for a regularly occurring problem works in the short run. But in the longer term, the fix has unintended consequences that make the original symptom even worse or perpetuate the problem. More of the fix is required, or the fix has to be used more and more often.



- **Shifting the burden:** Unintended dependency that perpetuates the problem.
 - People are aware of a long-term, fundamental solution to a problem symptom. However, it is easier for them to implement a quick fix instead. Over time, their dependence on the quick fix makes it difficult to implement the long-term solution. This is the core dynamic of addiction.



- **Accidental adversaries:** Partners' individual corrective actions inadvertently undermine each other's success.
 - While two entities form a partnership that is intended to serve them both, their individual corrective actions inadvertently undermine each other's success. A virtuous partnership cycle is undermined by interlocking fixes that backfire creating a vicious adversarial cycle.



Appendix C: Systems Thinking Retreat Analysis

This appendix outlines CNA’s synthesis of the systems-thinking retreat on suicide prevention. The document is organized based on the following three related concepts of suicide prevention in the Army:

1. Key aspects of the current suicide prevention system—these include aspects of the current Army system that inhibit suicide prevention. Included in this category are leadership, climate, and cultural issues that apply to suicide as well as other aspects of Army life.
2. High-leverage points—places within a complex system where a small change (or focused action) has the potential to lead to a lasting, significant improvement.³ Put another way, high-leverage points are “the few things that change everything else.”⁴
3. Possible interventions to enhance suicide prevention—include potential actions that take advantage of high-leverage points to change key aspects of the current system.

Key factors that impede suicide prevention in the Army (“as-is” system)

1. Current system works against long-term solutions:
 - National Defense Authorization Act annual cycles and pressure for fast results.
 - Two-year leader rotation breeds either a “wait it out” mentality or a pressure to “do something” on your command tour, i.e., leave your mark.
2. The Army’s well-intentioned fixes have backfired:
 - In an attempt to reduce the stigma to seek help, one policy was to send everyone to behavioral health specialists. The unintended consequence was that the system became overwhelmed and Soldiers were unable to get services they needed.
 - Understanding the value of connectedness and other similar initiatives, commands were required to track activities and initiatives (e.g., “under the oak

³ Senge, Peter M. (1990). *The Leader’s New Work: Building Learning Organizations*. *Sloan Management Review*, 32 (1). Massachusetts Institute of Technology.

⁴ Strohm, David (2000), “Leveraging Change: The Power of Systems Thinking in Action.”

tree” and formal mentoring programs). However, the nature of inspecting these programs reduced them to a “checklist activity” that minimized their impact.

3. Barriers to help-seeking exist:
 - Stigma.
 - Concerns about career impact.
 - Overwhelmed behavioral health resources.
4. Leader-related challenges impede prevention efforts:
 - The junior leaders are overwhelmed by the number of resources; thus they are unsure whom to call and when.
 - Challenges exist in creating connections and communicating between leaders and Soldiers.
 - How to communicate with young Soldiers (e.g., use of mobile technologies, a tool to “meet the current generation where they are”).
 - How to support them without crossing the line into fraternization or invading privacy.
 - Two-year leader rotations (pressure to perform leads to quick fixes)
 - *If it doesn't happen on my watch, I am doing okay* (instinct for a quick fix is baked in because of the two-year leader rotations).
 - Leaders may neglect established processes/program modifications that have already begun so they can “make their stamp.”
5. Leader training/leadership behaviors have not adapted to the shift to a primarily garrison environment (as opposed to the 2001–2020 primarily deployed environment):
 - Since 2001, there has been an emphasis on leadership behaviors needed for success on the battlefield with less emphasis on leadership behaviors needed in a primarily garrison environment.
 - There are different tasks, pressures, and meaning assigned to leading in garrison versus in combat/deployed situations.
 - Leaders in garrison are playing a more managerial than leadership role.
6. Pressure to mitigate suicide risk has exacerbated/created accidental adversaries within the system:
 - There is no unity of effort between HQ and the field: the field implements changes in absence of policy, HQ experiences considerable pressure to rollout policy quickly, and there is a lack of policy feedback loop between HQ and the field.

- FORSCOM and TRADOC⁵ compete for the highest quality NCOs.
- 7. Emphasis on developing individual Soldier resilience fails to account for environmental issues:
 - Isolation.
 - Lack of connections between Soldiers and leaders.
 - Soldier quality of life issues (e.g., housing, dining, cell phone services, transportation, family supports).
 - Stigma associated with help-seeking.
- 8. Implementation failures have been identified:
 - Policies and programs may be good, but are implemented poorly (e.g., death by PPT), inconsistently, or not at all.
 - Policies are written to be one size fits all and do not allow for customization.
 - Training fatigue.
 - Commanders are given leeway and authority to drive programs, but are supplied with few skills, resources, and knowledge to do so.
 - They are asked to make very difficult decisions with little information.
 - Chain-teach (leaders trying to train new leaders) is a concept that the Army relies on; it can be problematic for the following reasons:
 - Commands do not have the expertise, they want someone else to teach it.
 - Lack sufficient resources to have prevention experts do all the teaching.
 - “Where do we teach commanders HOW TO chain teach?”
- 9. No systematic evaluation and supporting metrics are in place to show what is working and help identify what can be “taken off the plate.”

High-leverage points for interventions (target or focus of interventions)

1. Unit-level leaders/first-line supervisors
2. Prevention training for Soldiers, leaders, and instructors
3. Organizational climate surrounding readiness (e.g., mission and personal readiness; Army values)

⁵ FORSCOM – Army Forces Command is responsible for employing Soldiers throughout the Army; TRADOC – Training and Doctrine Command is responsible for all aspects of training and education. Soldiers rotate between FORSCOM and TRADOC units throughout their careers.

4. Evaluation and research

Interventions (actions the Army can take to reduce suicide and other harmful behaviors)

1. Offer/improve training for first-line supervisors to help them do the following:
 - Build trust within the unit
 - Understand changing norms for interpersonal interactions (how to develop supportive relationships with Soldiers without crossing lines or coddling them)
 - Learn to build connectedness in healthy ways
 - Recognize and respond to risk factors/warning signs
 - Communicate empathetically
 - Lead in the garrison (in addition to battlefield)
 - Easily access needed resources
 - Understand their role in prevention
 - Remove unnecessary tasking; give them white space to lead/get to know their Soldiers
2. Provide additional training to Soldiers
 - Incorporate Army values in Professional Military Education (PME) across the career continuum
 - Teach life skills/soft skills early in the career Basic Combat Training or Advanced Individual Training and refresh throughout
 - At installations:
 - Move away from clicking through slides to discussion formats
 - As much as possible, provide on the job training; job-embedded development and education
 - Use integrated prevention modules versus siloed efforts
3. Acquire/train qualified and trained instructors who are good communicators
 - Instructor Military Occupational Specialty
 - Need PME for senior NCOs on how to teach prevention
4. Address needed organizational and policy changes
 - Shift from installations supporting HQ to HQ supporting installations
 - Need for cross-communication forum
 - Need more partnership/more of a feedback loop between different entities (HQ and field) on draft policies/early implementation

- Leader assignments/rotations: Change rotations from two to five years to increase consistency/investment in efforts
 - Redefine *readiness* to encompass both mission readiness and personal readiness, incorporate Army values; use strategic messaging and other tools to inculcate this perspective
5. Develop metrics/evaluation to identify what is working
- Cultivate knowledge networks with academic institutions for mixed methods studies
 - Evaluate programs systematically and conduct longitudinal studies including follow-up measures
 - Determine if the right data are being collected
 - Develop better metrics for primary prevention—it is not a reduced number of suicides. It is harder to measure such factors as connectedness, belonging, and positive command climate. Defense Equal Opportunity Climate Survey might be able to provide some indicators.
 - Ensure that the right people have access to current reporting tools
 - Stay with an idea/program long enough to allow the effects to materialize

Appendix D: Proposed Leverage Points for Suicide Reduction

Bridgeway Partners created the following summary of their findings from the systems thinking retreat. This summary, along with CNA's summary, was presented to the PCT as input into their discussion.

Overview

The following leverage points emerged from Bridgeway Partners' systems analysis of why it has been so difficult to reduce suicides in the Army. They are based on preliminary discussions with Army stakeholders and inputs from participants in the August 30 to September 1, 2022, retreat. The systems diagrams refined during the retreat are included below. We identified three classic system templates (archetypes) that are the basis of our analysis.

The leverage points fall into the following four major categories:

1. Transform culture at the garrison level to one that embodies connectedness, trust, cohesion, and purposefulness
2. Strengthen the development of first-line leaders to interact more closely and effectively with soldiers
3. Increase the effectiveness of policy/program design and implementation
4. Deepen the Army's ability to learn continuously about suicide prevention as conditions evolve

Transform culture at the garrison level

Systems Diagram #1 "Building Resilience Through Individual vs. Environmental Approach" describes two different ways to increase Soldier resilience and hence reduce the risk of suicide:

1. Build the self-sufficiency of individual Soldiers
2. Build a garrison culture/environment that supports Soldier connectedness, trust, cohesion, and purposefulness

Currently, the Army's suicide prevention policies and programs focus on building the self-sufficiency of individual Soldiers by requiring resilience training, providing follow-up support resources, and encouraging participants to take advantage of these resources in times of need. While this approach works to a certain extent, it depends heavily on the initiative of individual Soldiers to seek help when necessary. However, depending on such initiative contradicts the

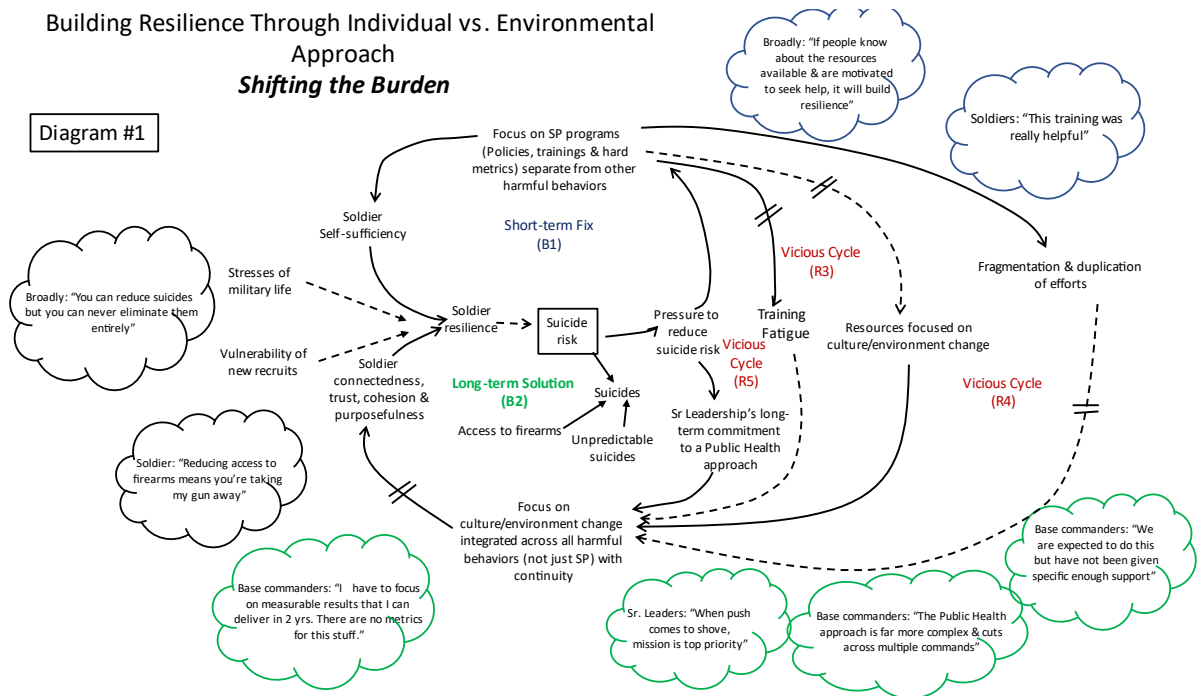
culture of toughness and stoicism that the Army has historically encouraged, one that is perhaps better suited to wartime conditions on the battlefield than to peacetime conditions in the garrisons.

Moreover, research demonstrates that suicide risk increases with social isolation and the absence of a meaningful purpose. These conditions now exist on many bases because of such factors as social media and its impact on new recruits, increased separation between first-line supervisors and Soldiers, an ambiguity of purpose created by US reluctance to deploy Soldiers in battle, a perceived conflict between mission readiness and people readiness, and the short rotations of base commanders that mitigate against longer-term culture change.

By contrast, what is required is a greater emphasis on cultural/environmental change at the base level that builds Soldier resilience and readiness through increased connectedness, trust, cohesion, and purposefulness. As one participant said, “It is no longer enough to lead on the battlefield and manage in the garrisons”—the Army must also learn to lead in the garrisons. Some implications of this new leadership and culture include the following:

1. Building this new culture requires the long-term commitment of base commanders, which in turn demands new metrics and incentives for commander success.
2. Instead of training primarily for war, a new sense of purpose in the garrisons could include training for life, i.e., developing the kind of resilience that all Americans will need as we learn to deal with such threats as climate change, economic upheaval, and political polarization.
3. To align with changing conditions at home and globally, the Army might want to reinvent itself as a resilience development organization. This means building Soldiers’ resilience at the emotional, mental, and spiritual, as well as physical, levels.
4. Mission and people readiness need to be perceived and developed in ways that are synergistic. This involves increasing not only performance but also trust; thus, the Army needs to think more carefully about how to build Soldiers’ trust.
5. It is important to cultivate a better sense of community on base, for example, by expecting leaders to visit barracks on weekends and attend Soldiers’ personal events, asking unit members to help Soldiers move, and engaging families more effectively.
6. The Army should invest early in interpersonal and other life skills for all Soldiers with continuous reinforcement at frequent touch points; this approach meets the criteria for effective training by providing sufficient dosage that is well-timed.
7. Because a culture of connectedness and purposefulness addresses the risk and protective factors for not only suicide but also other harmful behaviors, it makes sense to better integrate efforts to mitigate *all* harmful behaviors as part of a revitalized public health approach at the garrison level.

- Given an expanded view of resilience, it also makes sense to reduce dependence on a limited cadre of mental health providers and utilize more effectively other professional supports, such as chaplains and family health counselors.



Systems Diagram #1 above is an example of the Shifting the Burden archetype (see Appendix B). In this case, the boxed variable “Suicide risk” represents the problem symptom. The short-term fix (see loop B1 above) represents the Army’s current approach to reducing suicide risk and the resulting pressure to reduce suicide risk. This approach emphasizes focusing on suicide prevention programs to increase individual Soldier self-sufficiency, thereby increasing Soldier resilience and decreasing suicide risk. This fix is reinforced by the mental models (thought bubbles) in blue above.

A more permanent and sustainable long-term solution to reducing suicide risk (see loop B2 above) is to increase senior leadership’s commitment to a public health approach by focusing on cultural/environmental change at the garrison level, thereby increasing collective Soldier connectedness, trust, cohesion, and purposefulness and thus increasing Soldier resilience.

However, it is difficult to get traction on investing in the long-term solution for four reasons. First, the short-term fix temporarily reduces suicide risk and the pressure to decrease it further, which undermines the motivation of senior leaders to implement the more fundamental long-term solution. Second, the long-term solution takes longer to implement and is therefore less attractive in the face of immediate pressures to reduce suicide risk. Third, the

mental models bordered in green above discourage senior leaders from making the necessary investments. Fourth, dependence on the short-term fix produces delayed side effects that make it increasingly difficult to implement the long-term solution even if senior leaders want to implement it. These side effects are the diversion of resources from cultural/environmental change (vicious cycle R3 above), fragmentation and duplication of efforts (vicious cycle R4 above), and training fatigue (vicious cycle R5 above).

Diagram #1 also shows that the Army must take into account several other factors to reduce suicide risk. First, it needs to think about how to mitigate, where possible, the vulnerability of new recruits and the stresses on military life that lower Soldier resilience. Second, suicides are a function not only of suicide risk but also of access to firearms and the inherent unpredictability of suicide even when all risk and protective factors are addressed. Limiting access to firearms, however desirable, is not easy to do, and reducing suicides to an “acceptable” level versus eliminating them entirely is the only reasonable goal. These constraints are shown as mental models in black bubbles above.

Strengthen the development of first-line supervisors

Systems Diagram #2 below points to the critical relationship between first-line supervisors and Soldiers. From the perspective of suicide prevention, the first-line supervisor has the unique ability both to observe the daily behavior of young Soldiers and help those who are struggling to seek help. This is important because most suicidal actions are taken at very short notice and signaled by a buildup of stressors and warning signs that are best identified through frequent first-hand observation.

Another benefit of developing first-line supervisors is that they are especially capable of building unit cohesion and thereby directly reducing the social isolation so many young Soldiers experience. Close-knit units also motivate buddies to look out for each other, thereby creating an immediate level of support not dependent on either a supervisor or professional expertise. Finally, because suicidal acts have also been increasing among young first-line supervisors, developing their capacities to support themselves as well as others could reduce their own actions to harm themselves.

At the same time, it is important to test the assumption that everyone can learn the soft skills associated with effective leadership. More effort should be put into identifying potential leaders who exhibit these skills and who will benefit most from further development. Fixing the performance center and expanding implementation of the squad leader development course might also strengthen the development of more effective first-line supervisors. Finally, “booster” sessions throughout one’s career are helpful to check for learning and further advance these skills.

Quality/Frequency of First-line Supervisor - Soldiers' Connections

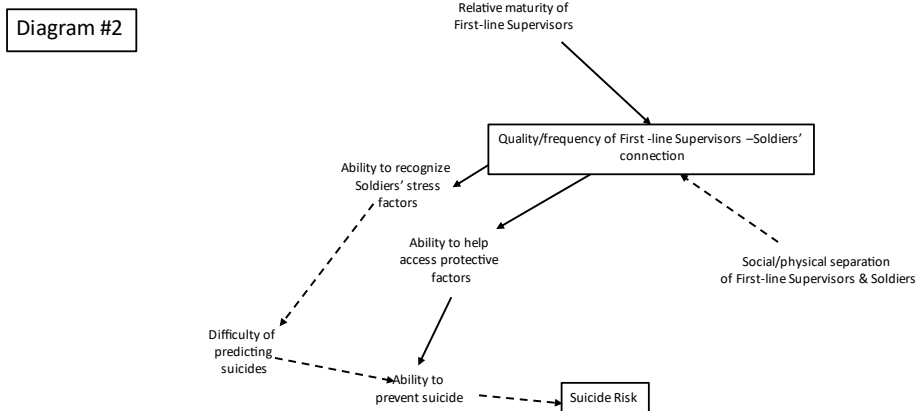


Diagram #2 shows several linear connections between the quality/frequency of first-line supervisors—Soldiers' connection and suicide risk (the two boxed variables above). First, increasing the quality/frequency of this key connection would increase the Army's ability to recognize Soldiers' stress factors, thereby reducing the difficulty of predicting suicides and thus increasing its ability to prevent suicide and decrease suicide risk. Second, strengthening this critical connection would increase the Army's ability to help Soldiers access protective factors, thereby also increasing its ability to prevent suicide and decrease suicide risk.

To increase the quality/frequency of the first-line supervisors-Soldier connection, the Army must increase the relative maturity of first-line supervisors and reduce the social/physical separation between first-line supervisors and Soldiers.

Increase effectiveness of policy/program design and implementation

Systems Diagram #3 below describes the many ways in which efforts to increase the speed and scale of suicide prevention program rollouts have backfired, actually reducing the Army's ability to prevent suicides over time. They include excessive flexibility of base commanders, vague standards for success, inappropriate program designs, the dilution of professional talent as well as program quality/fidelity, and more program rollouts that are not integrated with

each other. Disconnects between HQ and field units also make it difficult to align the work of policy/program design and effective implementation (see Systems Diagram #6 below).

High-leverage interventions to address these symptoms involve the following:

1. Increase vertical alignment between the work of HQ and installations by creating a cross-communication forum with both parties to improve dialogue between them, defining the benefits of a deeper partnership, showing the unintended consequences of each party's actions on the other party's success, and co-creating structures that more deliberately increase the effectiveness of both parties
2. Leverage existing resources for evaluating program effectiveness
3. Create more specific policy requirements, clearer standards and milestones for success, and sufficient incentives to meet these standards
4. Challenge the assumption that "policy is enough to ensure change" by empowering installations to be more candid about their ability to meet HQ expectations before agreeing to do so
5. Closely engage prospective program participants, their families, and suicide prevention specialists, as well as other harmful behavior specialists, in program design
6. Ensure program designs that foster more interaction and less one-way communication
7. Eliminate less effective training
8. Reduce the number of new programs introduced
9. Integrate existing programs, e.g., across the prevention of all harmful behaviors
10. Use more pilots to test the fidelity and effectiveness of programs before scaling them up
11. Facilitate greater integration among the public health professionals located at different installations

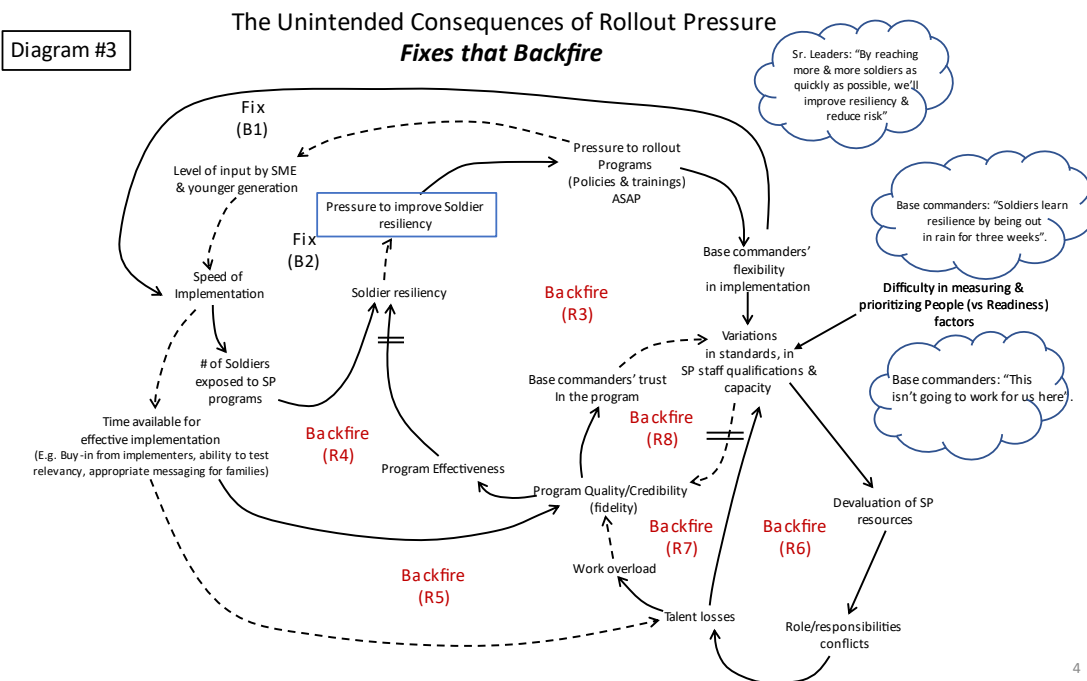
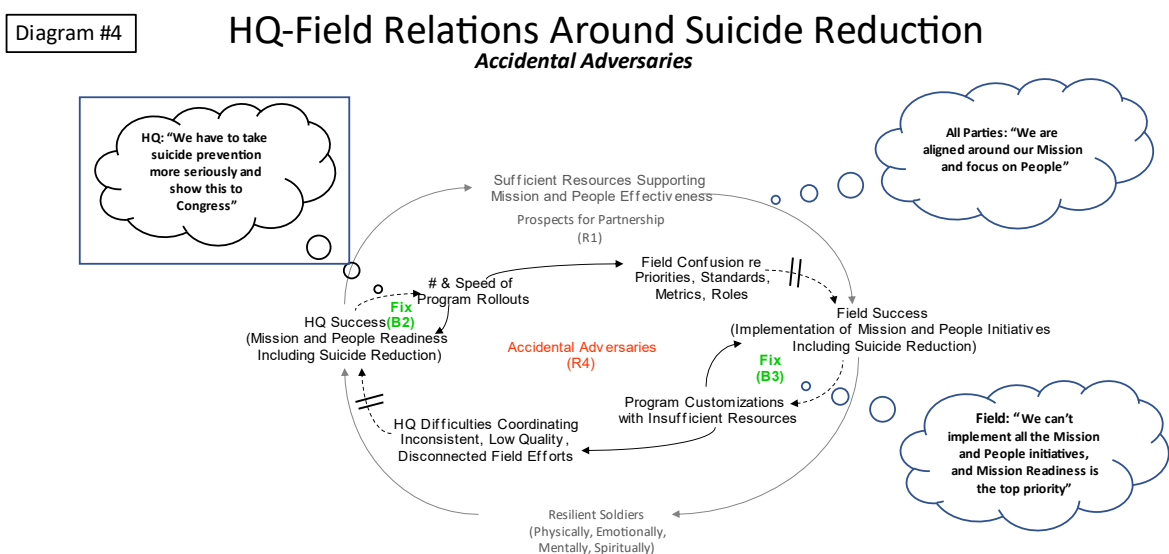


Diagram #3 is an example of the Fixes that Backfire archetype described in Appendix B. In this case, the pressure to improve Soldier resiliency (see boxed variable above) has resulted in increased pressure to rollout programs ASAP. In its efforts to decrease rollout pressure, the Army has implemented two fixes that inadvertently *increase* this pressure. First, the pressure to roll out programs ASAP has led the Army to issue policies designed to give base commanders flexibility in implementation. This flexibility increases the speed of implementation in the short run, thereby increasing the number of Soldiers exposed to suicide prevention programs and short-term Soldier resiliency, and thus reducing the pressure to improve Soldier resiliency (see Fix B1 above). Second, the speed of implementation and number of Soldiers exposed to suicide prevention programs have been further increased by limiting the engagement of SMEs and the younger generation (the primary intended audience for the programs) in program design (see Fix B2 above).

However, increasing base commanders' flexibility in implementation and reducing the level of input to designing programs by SMEs and the younger generation have backfired in at least six ways, thereby reducing program effectiveness and Soldier resiliency in the longer term. First, the current level of implementation flexibility has led to high variations in program standards, suicide prevention staff qualifications, and capacity. These variations are exacerbated by the Army's difficulty in measuring and prioritizing people (vs. mission) readiness. The variations have reduced program quality/credibility over time, thereby reducing program effectiveness and Soldier resilience. This series of consequences is described by backfire R3 above.

Second, the high speed of implementation has reduced the time available for effective implementation, e.g., through getting buy-in from implementers, testing program relevancy, and appropriately messaging families. This in turn has reduced program quality/credibility both directly (see backfire R4 above) and indirectly by increasing talent losses when frustrated professionals leave the organization and increase the workload of those who remain (backfire R5). Moreover, the losses in talent further increase program variations, which lead to a devaluation of suicide prevention resources, increased confusion about roles/responsibilities, and more loss of talent (backfire R6 above). The increased variations also reduce program quality/credibility directly (backfire R7). Finally, decreases in program quality/credibility reduce base commanders' trust in the program, thereby increasing program variations even further (backfire R8).

All of these dynamics are further reinforced by the beliefs and assumptions held by senior leaders and base commanders (see thought bubbles in Diagram #3 above).



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The pressure to take suicide prevention more seriously and show quick results to Congress (see boxed thought bubble in Diagram #4 above) has also increased tensions between Army HQ and the field/garrisons in how they each relate to suicide reduction. As a result, the two parties, who should both be able to benefit from partnering with each other, have fallen into an accidentally adversarial relationship.

The benefits to both sides of partnering more closely are shown in the Prospects for Partnership R1 virtuous cycle in Diagram #4. As HQ becomes more successful in increasing

mission and people readiness (and reducing suicides as a result), it can provide sufficient resources to the field to increase mission and people readiness (including suicide reduction), thereby increasing field success and resulting in more resilient Soldiers and reduced suicides, which further increases HQ and field success. Both parties recognize the alignment between them in the mental model in the upper right of the diagram.

However, under pressure to show quick results to Congress, HQ has increased the number and speed of program rollouts (see fix B2 above). The unintended consequence of these actions on the field has been to increase its confusion about priorities, standards, metrics, and roles related to suicide reduction, making it harder for the field to reduce suicides. This confusion and resulting tension also manifest in the mental model shown on the lower right side of the diagram. Faced with its own challenges in reducing suicides, the field responds by trying to customize suicide prevention programs with insufficient resources (see fix B3 above). While this fix temporarily works for the field, it also has the unintended consequence of increasing HQ's difficulties in coordinating inconsistent, low-quality, and disconnected field efforts—thereby reducing HQ's ability to reduce suicides. The combination of fixes and unintended consequences created by both parties leads to an accidentally adversarial relationship (see accidental adversaries R4 above).

Deepen the Army's ability for continuous learning

Individuals and organizations often have difficulty keeping up with changing conditions. For example, Army suicides formerly were more associated with post-traumatic stress disorder arising from battlefield trauma, while suicides today are more easily traced to the increasingly disconnected and purposeless life in garrisons. As another example, the Army has recruited and trained Soldiers under the premise that they will face wartime conditions. However, the current reality of Army life is that it involves primarily living in garrisons under peacetime conditions where the greatest threats to America appear to come from within and from climate change rather than from the need or willingness to engage foreign on-the-ground combatants. Moreover, as these conditions have changed, so have the requirements for Soldier resilience. Resilience is no longer just a matter of physical toughness or emotional stoicism, but a blend of these with broader emotional intelligence, cognitive abilities to deal with life's everyday stressors, and spiritual faith.

All of these changes, and those the Army cannot predict going forward, point to the need for robust capacities for continuous learning at both the individual and organizational levels. In order for the Army to keep up with the times, humility and curiosity must become as important as firmness and toughness.

Conclusions

In summary, the most promising paths for reducing Army suicides in sustainable ways involve the following:

1. Cultural/environmental transformation directed to supporting Soldiers so they feel connected and purposeful during peacetime conditions
2. More effective support for first-line supervisors
3. Increased alignment between policy/program design and implementation
4. Deepening the Army's capacity for continuous learning in peacetime as well as during wartime conditions

Abbreviations

ARD	Army Resilience Directorate
ASL	Army Senior Leader
ASPP	Army Suicide Prevention Program
FORSCOM	Forces Command
HQDA	Headquarters, Department of the Army
PCT	Prevention Collaboration Team
R2	Ready and Resilient
SME	subject matter expert
SPPM	suicide prevention program manager
TRADOC	US Army Training and Doctrine Command

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