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Key Point: A joint virtual curriculum is feasible and addresses gaps in military-specific hematology/oncology training. Additional strategies are needed to strengthen leadership and administrative competencies.

INTRODUCTION

- Military hematologist-oncologists must master both clinical expertise and officer-specific leadership/operational requirements. Despite ACGME requirements, formal military-specific training in fellowship remains fragmented and frequently deprioritized.
- The "Accidental Leader" Model: Historical reliance on informal leadership development often leaves graduates underprepared for administrative and team-based challenges. Only ~33% of medical schools require formal leadership curricula; longitudinal data on sustained behavioral change remains scarce.
- To improve upon this critical skill, we implemented a Military Unique Curriculum (MUC) Built on experiential learning theory and competency-based medical education.

METHODS

- Design:** Prospective, longitudinal, repeated cross-sectional study (N=24 PGY 4–6 fellows) conducted at WRNMMC and BAMC.
- Curriculum:** Quarterly synchronous virtual Military Unique Curriculum (2023–2025) covering leadership, conflict resolution, and operational medicine.
- Framework:** Content mapped to ACGME Leadership and Systems-Based Practice competencies.
- Evaluation:** Anonymous 13-item quarterly surveys using 5-point Likert and preparedness scales (Figure 1).
- Analysis:** Comparison of early (PGY 4–5) vs. senior (PGY 6) fellows using nonparametric tests (p < 0.05)
- IRB-exempt.**

Table 1. Military-Unique Curriculum Lectures

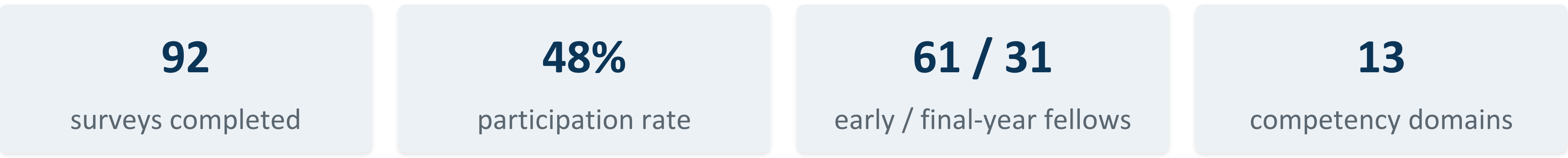
Lecture Topic	Focus
Cancer in service members	Risk & protective factors, deployability, retention, disability evaluation
Military retention standards	Which heme/onc conditions meet standards for continued service
Leadership styles	Matching leadership styles to varied scenarios
Conflict management	Defining conflict types and management styles
Transfusion medicine	Massive transfusion indications; whole blood vs. component in deployed care
Radiation injury	Hematologic effects of acute radiation syndrome; long-term cancer risk
Deployment preparation	Isolated-care challenges, mental-health resources, resilience
Operational medicine	Tenets of care in a deployed combat zone



Table 2. Joint Heme/Onc Military Unique Curriculum Survey

Number	Survey Question	Response Scale
1	I understand different leadership styles	0 = not at all 5 = complete understanding
2	How well-prepared do I feel to manage conflict resolution?	–2 = very unprepared –1 = slightly unprepared
3	In a leadership position, how well-prepared am I to implement change when necessary?	0 = neutral +1 = slightly prepared +2 = very prepared
4	I feel prepared to step into the role of an administrative leadership position	0 = not at all 5 = complete understanding
5	As a hematologist/oncologist, I understand what it means to be operationally ready for a conflict	0 = not at all 5 = complete understanding
6	I understand when to implement a massive transfusion protocol	0 = not at all 5 = complete understanding
7	I understand the different indications for whole blood transfusion compared to component blood product replacement	0 = not at all 5 = complete understanding
8	I know how to look up retention standards for service members with hematologic/oncologic conditions for each branch of service	0 = not at all 5 = complete understanding
9	I understand when and how to create a profile/LIMDU for service members with certain hematologic/oncologic conditions	0 = not at all 5 = complete understanding
10	I understand survivorship issues pertaining to adolescents and young adults with cancer	0 = not at all 5 = complete understanding
11	I understand that cancer care received within the Military Health System is associated with a lower risk of race, gender, and socioeconomic healthcare disparities	0 = not at all 5 = complete understanding
12	I understand short-term hematologic/oncologic consequences of high dose ionizing radiation exposure	0 = not at all 5 = complete understanding
13	I understand long-term hematologic/oncologic consequences of high dose ionizing radiation exposure	0 = not at all 5 = complete understanding

RESULTS



Two training sites · 2.5 years · 61 early-year (PGY4–5) and 31 final-year (PGY6) respondents

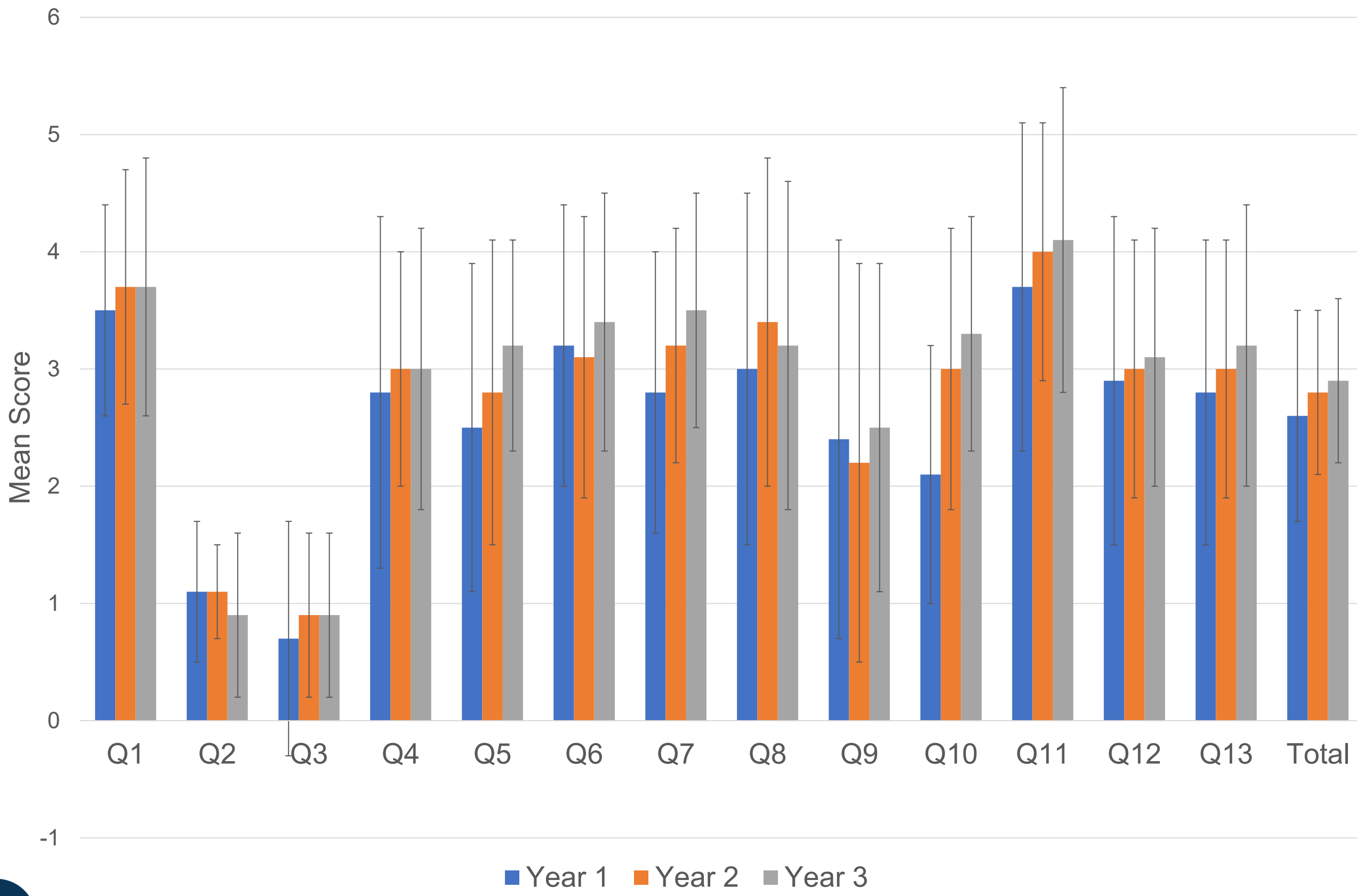
Table 2. Preparedness across all 13 survey domains

#	Competency domain	Early-year vs. final-year
1	Understanding leadership styles	Not significant
2	Managing conflict resolution	Not significant
3	Implementing change as a leader	Not significant
4	Stepping into an administrative role	Not significant
5	Operational readiness for conflict	▲ Significant p = 0.0178
6	When to implement massive transfusion	Not significant
7	Whole blood vs. component indications	▲ Significant p = 0.0217
8	Looking up retention standards	Not significant
9	Creating a profile / LIMDU	Not significant
10	Adolescent & young adult cancer survivorship	▲ Significant p = 0.0012
11	MHS care reduces disparities	Not significant
12	Short-term radiation consequences	Not significant
13	Long-term radiation consequences	Not significant



KEY FINDINGS

- First joint military-specific Heme/Onc curriculum across two DHA fellowship programs — delivered virtually and sustained 2.5 years
- Mean survey score of 2.8 +/- 0.8, indicating moderate-to-high self-reported preparedness.
- Significantly higher preparedness (Figure 1):
- Q5: Operationally ready for a conflict (p=0.0178)
- Q7: Understanding different indications for whole blood vs component blood replacement (p=0.0217)
- Q10: Understanding survivorship issues pertaining to AYA patients(p=0.0012)
- Highest Rated Competencies:
- Q10: AYA survivorship issues (3.9 +/- 1.3).
- Q1: Understanding leadership styles (3.6 +/- 1.0).
- Areas with no significant improvement are the target for refinement



CONCLUSIONS

Success: Successfully implemented a joint MUC at two major medical centers, shifting from "accidental" to structured, longitudinal leadership development.

Impact: Domains with the largest early- vs. final-year differences, operational readiness, transfusion decision-making, and AYA survivorship, are those reinforced through repeated clinical encounters, suggesting targeted instruction plus clinical experience strengthens preparedness. Leadership competencies progressed little. Lecture-based teaching alone may not build confidence in conflict resolution, change implementation, or administrative roles; mentorship, coached practice, and scenario-based learning may serve these domains better.

Scalability: Provides a repeatable blueprint for military and civilian GME to bridge gaps in formal professional development and deployment readiness.

Future Work: Evaluate long-term knowledge retention, career trajectory impact, real-world performance using qualitative and 360-degree metrics as well as longitudinal outcomes-based evaluations after fellows transition to staff physicians.

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