

MEDICAL SUPPORT TO THE DoD ARCTIC STRATEGY

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The current Joint Health Services Support annex to the *DoD Arctic Strategy* has four critical deficits. No one individual or entity has ownership of the entire effort; affected departments have disparate foci on cold-weather medicine support; resources are not being coordinated with Joint operations and capabilities in mind; and individual services are not thinking jointly when coordinating their service-level efforts. Waiting until conflict commences to remedy these issues will be too late. Improving the Joint Health Services Support annex to the *DoD Arctic Strategy* based on valid US planning assumptions and Ally, partner, and adversary strategies is the linchpin to facilitating Joint medical readiness capabilities that will safeguard US national interests in the Arctic.

A remote, harsh land, the Arctic is quickly becoming an arena of potential competition and conflict as sea ice vanishes due to climate change. The United States, an Arctic nation by virtue of Alaska, perceives the rising engagement and aggressive behavior by adversaries in the region as a potential threat to its national security. As recently as the October 2022 *National Strategy for the Arctic Region*, the United States has reiterated the importance of a peaceful, stable, and prosperous Arctic as an area of cooperation.¹ The updated national strategy was preceded in 2019 by the *DoD Arctic Strategy* and subsequent service-specific Arctic strategies.² Based on these service-focused documents, respective medical components are developing medical concepts for cold-weather medicine in a siloed fashion. This wastes resources and does not meet the intent of a Joint warfighting concept. The linchpin to facilitating integrated health services to support the *DoD Arctic Strategy* is an updated, Joint-focused Health Services Support annex.

While it may seem a challenge of glacial proportions, experienced medical strategists and planners should promptly revise the annex to facilitate Joint medical capabilities

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1. Joseph R. Biden Jr., *National Strategy for the Arctic Region* (Washington, DC: The White House, October 2022), <https://www.whitehouse.gov/>.

2. Department of Defense (DoD), Office of the Under Secretary of Defense for Policy (OUSDP), *Report to Congress: Department of Defense Arctic Strategy* (Washington, DC: DoD, June 6, 2019), <https://media.defense.gov/>.

that safeguard US national interests in the Arctic. It will be imperative to incorporate US strategic documents, Ally and partner strategies, and the military strategy of Russia, a highly likely adversary in a future Arctic conflict. In addition, the Joint Staff surgeon's office should designate Alaska Command (ALCOM) as the global synchronizer of Arctic medicine concepts, training, and equipment. This offers a route for genuine collaborative efforts. Finally, colocating a cold-weather medicine center of excellence with the Ted Stevens Center for Arctic Security Studies better promotes an all-of-government approach while allowing medics to understand policy at the strategic level.

Introduction

Often portrayed as the last frontier, the Arctic is an untouched, remote, and harsh land where only the most tenacious souls survive. It “produces an antipathy to control . . . particularly to any direct control,” requiring strength to overcome it, a strength evident in America's founding characteristics.³ Historically, the Arctic acquired special notoriety in Western military writing, which highlighted suffering, devastation, and defeat during campaigns in the high north.⁴

Although the land is unforgiving, it is also unique, mysterious, and rich in rare phenomena and natural resources, attracting those seeking to discover and exploit its wonders. Moreover, as climate change alters the once-timeless landscape, it is transforming into an arena with increased human presence and international competition. As the sea ice vanishes and permafrost thaws, Arctic and “near-arctic” states such as China are competing for trade routes, natural resources, and influence—some with adversarial intent. Naval borders once protected by the harsh environment are now vulnerable and require active defense.

Unlike Antarctica, which in its entirety is protected by international law that ensures peace and scientific cooperation, the Arctic has no such safeguards. Currently, the only international law that pertains to the region is the 1982 UN Convention on the Law of the Sea that declares a state's territorial sea extends from the shore up to 12 nautical miles, leaving decisions about the remainder of the Arctic Ocean to the Arctic Council—a forum comprising the United States, Canada, Denmark, Finland, Iceland, Russia, Norway, and Sweden.⁵ According to NATO, as a result of the lack of international law, nations are establishing military presences in the area, creating challenging security concerns.⁶ Today, states within and outside the Arctic Circle jostle for positions

3. Trent Hone, *Learning War: The Evolution of Fighting Doctrine in the US Navy, 1898–1945* (Annapolis, MD: Naval Institute Press, 2018).

4. Richard N. Armstrong and Joseph G. Welsh, eds., *Winter Warfare: Red Army Orders and Experiences* (Portland, OR: Frank Cass, 1997), 3.

5. United Nations Convention Concerning the Law of the Sea, BE, CA, GE, IT, JA, NE, IRL, US, UK, Montego Bay, Jamaica, signed December 10, 1982, effective November 16, 1994, United Nations, <https://www.un.org/>.

6. Kirby R. Dennis, “Preparing for the Unexpected: Enhancing Army Readiness in the Arctic,” *Military Review* (July–August 2020), 7, <https://www.armyupress.army.mil/>.

to claim oil and gas reserves, fisheries, and mineral deposits with considerable economic value.⁷

Optimistically, this geopolitical competition creates the potential for the Arctic to become an area of cooperation. But more realistically, it will likely become one of tension and conflict, particularly with Russia. As an Arctic nation, the United States abides by its Arctic strategy that reiterates the requirement to be prepared to respond to conventional and asymmetric provocations to protect the region's political, economic, environmental, and other interests and international norms.⁸

The Obama administration was the first to publish a post-Cold War national Arctic strategy in 2013, which declared the need to safeguard peace and ensure stability.⁹ In 2019, the Department of Defense published an Arctic strategy.¹⁰ Each service subsequently produced its strategy, although these documents were not Joint-focused nor did they incorporate civilian support from the government or private sector, including that from the state of Alaska.¹¹

In practice, services and components pursued trajectories to prepare for Arctic challenges based on individualized operational concepts and equipment desires. The respective medical departments of the Army, Navy, and Air Force were no exception, creating Arctic medicine training and equipping models without an integrated focus to support the *DoD Arctic Strategy*.¹²

United States military medical support in the Arctic is further complicated by the fact responsibility for the defense of Alaska and the area north of the Arctic Circle is transregional, crossing three US geographic combatant command boundaries—US Northern Command, US Indo-Pacific Command, and US European Command. Yet a consensus on what organization is the lead for coordinating Arctic medical concepts and operations does not exist. Medical assets from these geographic combatant commands and service components work on individual capabilities and request funding separately for their respective projects.

7. Kjetil Bjørkum, "Arctic Space Strategy: The US and Norwegian Common Interest and Strategic Effort," *Strategic Studies Quarterly* 15, no. 3 (Fall 2021): 89, <https://www.airuniversity.af.edu/>; and Editorial Board, "Arctic Science Cannot Afford a New Cold War," *Nature* 586, no. 7827 (September 30, 2020): 7–8, <https://doi.org/>.

8. Dennis, "Unexpected"; Ronald O' Rourke et al., *Changes in the Arctic: Background and Issues for Congress*, R41153 (Washington, DC: Congressional Research Service [CRS], March 24, 2022), 1, <https://sgp.fas.org/>; and Biden, *Strategy for the Arctic*.

9. Barack Obama, *National Strategy for the Arctic Region* (Washington, DC: The White House, May 2013), <https://obamawhitehouse.archives.gov/>.

10. OUSDP, *DoD Arctic Strategy*.

11. Biden, *Strategy for the Arctic*.

12. US Army, *Regaining Arctic Dominance: The US Army in the Arctic* (Washington, DC: Headquarters, Department of the Army, January 19, 2021), <https://www.army.mil/>; Department of the Navy (DoN), *A Blue Arctic: A Strategic Blueprint for the Arctic* (Washington, DC: DoN, 2021), <https://media.defense.gov/>; and Department of the Air Force (DAF), *The Department of the Air Force Arctic Strategy* (Washington, DC: DAF, July 21, 2020).

The 2022 release of the US *National Security Strategy* and Russia's actions in Ukraine are compelling reasons to revise the Joint Health Services Support annex to the *DoD Arctic Strategy*. The existing annex has a number of deficits:

- While US Northern Command is the annex lead, no one individual, service, or command is orchestrating overall cold-weather medicine support efforts.¹³
- Many service-specific Arctic medicine initiatives supporting the DoD strategy for the area of responsibility have not garnered input from the Alaska Command surgeon general or Alaska Air National Guard components—organizations that will be on the front lines should conflict arise.
- Some medical concepts being fielded by specific services rely on historical combat operational ideas and are insufficiently integrated into future warfighting concepts to enhance an Arctic medical support posture commensurate with the theater's strategic importance.¹⁴
- Local Alaskan civilians, the indigenous tribal population, and coalition military partners with Arctic expertise are not included as participants in a meaningful way, in contravention of a vital aspect of the 2022 *National Security Strategy*—global alliances and strategic partnerships.¹⁵
- Larger cold-weather military medicine structural issues exist as well. These challenges create unnecessary friction and confusion in this environment.
- The Departments of Defense and Homeland Security have varying levels of focus on cold-weather medicine.
- Resources are not being coordinated and consolidated to create a Joint cold-weather operational vision and capability.
- Individual services do not tie their ideas to the Joint Warfighting Concept during collaborative meetings as evidenced by the lack of critical stakeholders in their efforts.

Without coordinated and integrated efforts focused on the same strategic problem, health services support in cold-weather operations may result in disjointed execution, impacting the US military's effective performance across all domains.

With the resurgence of attention on great power competition and the growing effects of climate change on the hemispheric poles and strategic military and economic interests, a renewed emphasis on military medical capabilities north of the Arctic Circle is needed. The Air Force designated novel tactical medical innovations and training to address challenges presented by subzero weather as "cold region expeditionary medical operations." The Below Zero medicine team from Alaska Command and Joint Base Elmendorf-Richardson presented these innovations and training to Air Force Medical

13. Author interview with Joint Forces Surgeon General, September 2021.

14. Dennis, "Unexpected."

15. Joseph R. Biden Jr., *National Security Strategy* (Washington, DC: The White House, October 2022), 2–3, 11, 17.

Service senior leaders in December 2020, illustrating the potential for operational medical platforms to excel in this environment.

Updating the Health Services Support Annex

The *DoD Arctic Strategy* and associated medical annex offer actionable ways to reach goals, set direction, and establish priorities to maintain a competitive advantage in the Arctic. Strategy, a collection of ideas for employing capabilities in a synchronized fashion, provides direction and focus, which are critical for any organization's success.¹⁶ It is also a narrative of how entities—in this case medical assets—should operate to bridge the present to the future, laying the groundwork for clinical capability generation.

With a strategy and the resulting assigned responsibilities, actions become purposeful, saving time and resources in the process. Even so, without a single authority, the question of who owns the problem arises, even if all entities involved believe they own that problem. This situation leads to strategic misalignment. In military medicine, strategic misalignment can mean the difference between success and failure on the battlefield.

The current advancement of cold-weather medicine concepts by service-specific medical components suggests these organizations are either unaware the Joint-focused annex exists or, due to frozen cultural mindsets, are simply pressing ahead to maintain forward momentum and claim limited resources first. These individual efforts could also be rooted in a misunderstanding of strategy or the benefits that arise from aligning efforts based on the strategic Joint Warfighting Concept.

On Strategy

An analysis of the annex revealed that the words *strategy* and *strategic* lacked common understanding among stakeholders. Operationally, the terms have different connotations for different individuals and groups. The lack of a common understanding of the terms resulted in an inability to determine who was responsible for the annex at the strategic level. While the process of identifying the owner of the annex created an avenue for connecting a network of individuals working toward the same end goal, it also highlighted how the absence of standard working definitions presents challenges in constructing an integrated plan across operational and tactical levels.

According to Joint Publication (JP) 5-0, *Joint Planning*, strategy is a “prudent idea or set of ideas for employing the instruments of national power in a synchronized and integrated fashion to achieve theater, national, and multinational objectives.”¹⁷ In addition, strategies “articulate a story that operates in a competitive space to bridge the

16. Chairman of the Joint Chiefs of Staff (CJCS), *Joint Planning*, Joint Publication (JP) 5-0 (Washington, DC: CJCS, December 1, 2020), <https://irp.fas.org/>.

17. CJCS, JP 5-0.

present to the future within the duration of the strategy.”¹⁸ While the scope of military strategy—in this case, the *DoD Arctic Strategy*—is regionally focused, it must incorporate the other instruments of power and tie itself to national policy objectives to be effective. The approach must be iterative and comprehensive for successful outcomes, bridging the present to the future.¹⁹

Also, a military strategy incorporates assessments and capabilities, which include medical support required to justify future Joint Force requirements. The context of strategy in this article derives from these definitions. The annex should use the same meanings to ensure a shared understanding among stakeholders. By breaking down complexity and having common, Joint-focused terminology, medical planning teams can be more effective, resilient, and creative.

Building the annex based on a common framework provides an optimal structure to develop and convey ideas across organizations. Joint Publication 5-0 identifies Joint planning requirements for Joint health services under logistics. Specifically, it addresses the need for a common frame of reference and fundamental principles of patient movement, supplies, logistics, and resources, including support to military working dogs.²⁰

It also requires establishing Joint medical assumptions that should be articulated in the annex. Joint Publication 4-02, *Joint Health Services*, states that coordination, such as that detailed in the Joint annex, addresses the complexity of medical functions by providing clearly defined roles and responsibilities to “effectively utilize scarce medical resources to their full potential and capability.”²¹ While there is no prescribed format, medical support can better present a more extensive array of capabilities to a Joint task force or geographic combatant commander by framing the annex in terms of a collective capacity.

Furthermore, JP 4-02 identifies the coordination and execution of these “responsibilities fall to the appropriate JFS [Joint Force Surgeon] level, such as the CCMD [Combatant Command] surgeon . . . until a single Service component or JFS lead is designated.”²² As the Arctic has no current mission for a Joint task force or appointed service lead, the ownership of the annex should reside with the USNORTHCOM surgeon general.

For the annex to be effective, medics must base it on a Joint concept. Working toward a common objective is nothing new for military healthcare specialists. During the last 20 years in the war on terror, medics demonstrated their effectiveness in accomplishing exceptional healthcare results in contingency operations. Still, the Joint mindset is in its infancy across much of the services, and the Joint Staff recognizes all

18. CJCS, *Strategy*, Joint Doctrine Note (JDN) 2-19, (Washington, DC: CJCS, December 10, 2019), II-2, <https://www.jcs.mil/>.

19. CJCS, JDN 2-19, I-1.

20. CJCS, JP 5-0, A-8.

21. CJCS, *Joint Health Services*, JP 4-02 (Washington, DC: CJCS, September 28, 2018), IV-1, <https://www.jcs.mil/>.

22. CJCS, JP 4-02, X.

service components have room to grow.²³ The annex must allow Joint medical assets to integrate while maintaining service-specific medical capabilities in contingency operations in the Arctic, where the security environment could be in flux and fraught with environmental challenges.

Assumptions

Before revisions to the Joint Health Services Support annex can commence, strategists and planners must establish assumptions. This process provides a shared operational context in which the premises for Joint medical support can be considered valid.²⁴ But it is crucial to understand assumptions also incur risk in a plan. When postulations fall outside an assumption, determining a new assumption requires reevaluating all known premises to ensure relevancy. Also, the premises must be revalidated throughout the process and into the future, especially as planning considerations change or events in the world evolve.²⁵ While not exhaustive, the following recommended assumptions will help medical strategists and planners craft effective Joint medical goals in support of the *DoD Arctic Strategy*.

Assumption 1: The United States will encounter formidable opposition to current capabilities, including in multidomain operations that will impact even nonthreatening evacuation missions.²⁶ Emerging technologies and integrated threats against air, land, sea, space, and cyberspace, in conjunction with aging weapons systems, will endanger the ability to exploit opportunities to triumph over adversaries.²⁷

Assumption 2: Meeting the goal of evacuating casualties at the “golden hour”—the period where a trauma patient’s chances of survival are greatest if they receive care—in high-intensive operations in the Arctic will be difficult. Current predictions of the number of potential casualties in light of tactical evacuation assets that can function in the Arctic are grim, and the possibility of contested evacuation due to weather, polar location, navigation, and communication capabilities will directly challenge survivability.²⁸

Assumption 3: Despite pursuing a regionally postured naval force and coast guard, sea evacuation support may be limited as an alternate means of moving patients. The Navy does not have ice-hardened ships nor does it plan to pursue the capability. The

23. Todd Kennedy, “Joint Force Capabilities, Why They’re Important,” Buckley Space Force Base (website), n.d., accessed February 5, 2022, <https://www.buckley.spaceforce.mil/>.

24. Alan M. Hammons, “Facts and Assumptions at the Theater Strategic and Operational Levels of War—A JPG Primer,” *Small Wars Journal*, March 9, 2018, <https://smallwarsjournal.com/>.

25. Hammons, “Facts and Assumptions.”

26. Sanders Marble, “Larger War, Smaller Hospitals?,” *Military Review* (July–August 2020), <https://www.armyupress.army.mil/>.

27. Air Force Enterprise Capability Collaboration Team, *Air Superiority 2030 Flight Plan* (Washington, DC: DAF, May 2016), <https://www.af.mil/>; and US Army Training and Doctrine Command (TRADOC), *The Operational Environment and the Changing Character of Warfare*, TRADOC Pamphlet 525-92 (Fort Eustis, VA: TRADOC, October 7, 2019), <https://adminpubs.tradoc.army.mil/>.

28. Marble, “Smaller Hospitals?”

Coast Guard currently has a limited infrastructure to support expanded medical operations.²⁹ In addition, any support using water is time-intensive.

Assumption 4: Communication and navigation capabilities may be hindered because existing US communication systems support operations in lower latitudes rather than the Arctic and Antarctic polar regions. Electromagnetic and inertial forces cause signal delays, while ionospheric gradients impact satellite capabilities to clarify navigation in real time, potentially affecting patient movement and evacuation abilities.³⁰

Assumption 5: This environment will present congested logistics.³¹ When adversaries target logistics modes and nodes in the supply chain, it may inhibit or constrain the supply chain, including all aspects of temporary class 8/medical logistics.³² Moreover, enduring class 8/medical logistics hubs do not exist in the region.

Assumption 6: Arctic attacks will involve NATO members, potentially triggering mutual defense provisions under Article V of the treaty. Canada, Denmark, Iceland, and Norway are vital stakeholders in this arena. If Finland and Sweden join NATO, it is more likely the United States will be involved in an Arctic conflict.

These six assumptions allow medical strategists, planners, and stakeholders to commence planning with a degree of certainty about how future events in the Arctic may evolve. With these assumptions for US forces in mind, it is also essential to consider the strategies of the most likely adversary in the region—Russia.

Russia's Arctic Strategy

During the fall 2021 tactical- and operational-level planning meetings to cement Arctic medicine concepts, references to past ideas, tactics, and strategies of the United States and its adversaries were common. Using historical references as a starting point may be beneficial for contemplating integrated medical support for the *DoD Arctic Strategy*. Historical research can provide insight into policy objectives, the political and military structure at the time, military order of battle, the use of infrastructure, and physical landscape in which the United States and its opponents fought.³³

Still, studying the history as to how current adversaries fought in World War II, Korea, and the Cold War and past medical successes merely provides an intellectual foundation upon which to build current concepts and practices. It is imperative to look at the operational and strategic concepts of how adversaries currently fight and will potentially fight in the Arctic to ensure a medical plan is aligned. Misinterpreting and

29. O' Rourke et al., "Arctic"; and US Coast Guard (USCG), *United States Coast Guard Arctic Strategic Outlook* (Washington, DC: USCG Headquarters, Office of Emerging Policy, April 2019), <https://www.uscg.mil/>.

30. Anna B. O. Jensen and Laura Ruotsalainen, "Challenges for Positioning and Navigation in the Arctic" (slide presentation, Nordic Institute of Navigation), accessed May 8, 2022, <https://www.unoosa.org/>.

31. Frank Wolfe, "Joint Warfighting Concept Assumes 'Contested Logistics,'" *Defense Daily*, October 6, 2020, <https://www.defensedaily.com/>.

32. Wolfe, "Contested Logistics."

33. Michael W. Jones, "Strategic Decision Making—A Case Study," *Military Strategy Magazine* 7, no. 2 (Summer 2020), <https://www.militarystrategymagazine.com/>.

misapplying history to future strategy can lead to inappropriate or under-resourcing and diluting attention or urgency in vital areas.

Russia—with 53 percent of the Arctic coastline and the largest population living within the region—is the primary Arctic Circle competitor for the United States, its NATO Allies, and its partners.³⁴ Yet the contest is not constrained to protecting a coastline and industrialized areas. To Russia, conquering the Arctic has great symbolic value. It represents the nation's historical imperialistic determination and offers tremendous prestige, thereby making it a core national interest.³⁵

The Arctic is also a perceived area of weakness in its defenses, and this feeds into Russia's general paranoia. But by controlling the hydrocarbon treasures beneath the melting ice, Russia may once again become a global power. With a lack of a diversified economy, Russia sees the hydrocarbons as assisting the regime's survival against the evils the West exacts upon it, including countering recently imposed sanctions. Even if it requires coercive diplomacy and military confrontation, Russia will protect these assets to sell to other buyers such as China and India to ensure continued income flows.³⁶

Moscow's current policy for the Arctic explicitly recognizes the potential for conflict, prevention, and adaptation, citing the necessity for a constant increase in military and security forces' capacity and surge capability to counter the threat.³⁷ The acknowledged threat was formidable enough for Russia to establish an entire command dedicated to the Arctic in 2014. In 2015, Russia launched a Center for Military Medicine in the Arctic focused on emerging diseases and evacuation.³⁸

The Arctic Joint Strategic Command has focused on conventional deterrence and hybrid warfare including “low-intensity conflict, network-centric warfare, and sixth-generation warfare, combined with components of reflexive control” to launch offensives against NATO's northern flank.³⁹ Russia's Northern Fleet, charged with Arctic operations, is considered its most prestigious naval unit, indicating its value in Arctic operations.

Russia has also strengthened its cold-weather air defense and submarine capabilities to fight a high-tech conventional war but has “substantial and potentially usable

34. “Russia,” Arctic Institute Center for Circumpolar Security Studies (Arctic Institute) (website), updated August 1, 2022, <https://www.thearcticinstitute.org/>.

35. Pavel K. Baev, “Russia's Arctic and Far East Strategies,” in *Russia's Military Strategy and Doctrine*, ed. Glen E. Howard and Matthew Czekaj (Washington, DC: Jamestown Foundation, 2019).

36. Baev, “Strategies,” 77; and Jonathan Jordan, “Russia's Coercive Diplomacy in the Arctic,” Arctic Institute, July 6, 2021, <https://www.thearcticinstitute.org/>.

37. Elizabeth Buchanan, “Russia's 2021 National Security Strategy: Cool Change Forecasted for the Polar Regions,” Royal United Services Institute (RUSI) (website), July 14, 2021, <https://rusi.org/>.

38. E. A. Солдатов et al., “Медицинское обеспечение в Арктике: 2015 г.,” trans. Brian Hoettels, *Военно-медицинский журнал* 337, no. 5 (May 15, 2016): 44–51, <https://journals.eco-vector.com>.

39. Baev, “Strategies,” 87; and Jānis Bērziņš, “Not ‘Hybrid’ but New Generation Warfare,” in *Russia's Military Strategy*, 158.

nuclear weapons on standby and always on display” that President Vladimir Putin considers first-use in his playbook.⁴⁰ Russia’s statement that it will use nuclear weapons in response to the West’s support of Ukraine requires purposeful consideration. Based on previous military exploits in Chechnya and Syria, Russia’s decision to use chemical weapons, including thermobaric munitions, cannot be ruled out.⁴¹

Still, Russia’s view on modern warfare centers on the mind as the primary battlespace; information and psychological operations to intimidate and demoralize the attitudes of the enemy’s military and civilian population will be the way of war in its future.⁴² Medical operations in the Arctic can be impacted by Russian strategic concepts of warfare and pose varying challenges to treatment, transportation, and survival rates. The challenge will be to formulate medical ideas that “operate within these areas of warfare and [rapidly] provide clinical best practices in a thoroughly dynamic [Arctic] environment.”⁴³

Historically, the Arctic has posed significant challenges for medical response to military action, including conflict on home territory in Alaska. The following recommendations are intended to support an update to the Joint Health Services Support annex and offer additional ideas for support.

Annex-Specific Recommendations

Urgency

First and foremost, the USNORTHCOM surgeon general team should prioritize revisions to the Joint Health Services Support annex, especially in light of recent events in Ukraine.

Medical Strategists

Annex authors should be experienced strategists or planners, preferably with a relevant medical background in Arctic operations from all medical service components. Military medical strategists are the stewards of the process. They will understand how to include current and forward-thinking medical concepts to support the *DoD Arctic Strategy*. In addition, they know how to incorporate relevant future-focused objectives, identify and evaluate performance measures, and adjust operations as needed based on changes to the internal and external environments.

40. Stephen Blank, “Putin’s ‘Asymmetric Strategy’: Nuclear and New-Type Weapons in Russian Defense Policy,” in *Russia’s Military Strategy*, 258.

41. Blank, “Asymmetric Strategy,” 267.

42. Bērziņš, “Not ‘Hybrid,’” 166.

43. John M. Quinn et al., “NATO and Evidence-Based Military and Disaster Medicine: Case for Vigorous Warrior Live Exercise Series,” *Central European Journal of Public Health* 28, no. 4 (December 18, 2020): 328, <https://doi.org/>.

Strategists also comprehend the peculiarities of a unique operational environment, the key stakeholders, the organizations involved, and how best to connect with the right people to ensure a collaborative effort at the strategic level. As a result of the planning process, these strategists become the focal point for communication, clarifying concepts and direction for all parties. Training new medical strategists builds key planning capabilities that can be sustained across military move cycles. Incorporating civilian positions into the team can also limit the loss of institutional knowledge, while a total force team brings diversity of thought.

Strategic Objectives and Milestones

Relevant strategic objectives with a Joint focus need to incorporate medical support requirements that mitigate threats in a contested Arctic environment, provide interoperability to meet a core set of Joint and perhaps coalition standards, and incorporate flexibility and sustainment considerations. Revisions to the annex should focus on a 2035 horizon; however, the annex should include milestones to ensure the conversion of plans into action along the way and provide a method for periodic reassessments, incorporating hard-won lessons.

At the same time, milestones or transition points must be closely monitored as they will drive a resourcing requirement of human capital.⁴⁴ Some groups or services, with eyes on the dangerous escalation in Ukraine, may want to go faster; monitors need to make sure that all efforts remain focused and services are held accountable to ensure on-time execution of capabilities.

Allies and Partners

Revisions to the annex should consider the strategic frameworks of other Arctic countries. For example, medical strategists can consider concepts from the 2020 Norwegian Government's Arctic Policy and the 2020 *Defense of Norway: Capability and Readiness*.⁴⁵ As a nation, Norwegians live, function, and thrive within the Arctic Circle and understand the country's significant strategic role within the region and as a NATO partner.⁴⁶ Moreover, they are very aware of Russia's strategic threat. Other top international defense forces with the shared goal of a stable and secure operating environment that also have Arctic expertise include Finland, Denmark/Greenland/Faroe Islands, Sweden, and Canada. Each of these countries includes healthcare in its

44. Pentagon briefing.

45. Norwegian Ministry of Foreign Affairs (MFA), *The Norwegian Government's Arctic Policy: People, Opportunities and Norwegian Interests in the Arctic* (Oslo: MFA, 2020), <https://www.regjeringen.no/>; and Norwegian Ministry of Defence (MoD), *The Defence of Norway Capability and Readiness: Long Term Defence Plan 2020* (Oslo: MoD, 2020).

46. Bjørkum, "Arctic Space Strategy," 89.

Arctic strategy documents.⁴⁷ Engaging with Sweden and Finland has increased importance with their recent applications to join NATO.

Doctrine

While some NATO definitions for care roles differ from US doctrine, the shared understanding and interoperability of medical support to the Arctic improves coordination and integration at the highest levels.⁴⁸ If established doctrine is insufficient, coordinated efforts between the services and coalition partners to enhance existing doctrine or develop new doctrine will cement fundamental principles and a standard frame of reference to solve cold-weather medicine problems. The ever-present possibility of an Article V or subthreshold event will require a unified commitment—including medical operations—to sufficiently execute multidomain or hybrid warfare, especially in resource-constrained environments.⁴⁹

Supporting the Annex

Global Synchronizer

First, USNORTHCOM should request that the Joint Forces surgeon general designate Alaska Command as the global synchronizer for medical efforts to support the annex to ensure unity of effort within and across services and geographic combatant commands. The Alaska Command surgeon general's team connects with cold-weather medicine experts and liaisons under the Below Zero Medicine working group. This established platform negates having to create a new organization.

In addition, the ALCOM surgeon general understands the complex relationships of command, the missions of the organizations, and unique challenges within the region. Reassigning the team to another organization outside Alaska risks costly mistakes for those unfamiliar with the area's unique characteristics. As ALCOM is a Joint subordinate unified command, all services would have the opportunity to be represented and place liaisons in the area to more fully understand the region. Coordinated efforts eliminate redundancies and save resources for future or other requirements.

47. Government of Canada, *Canada's Arctic and Northern Policy Framework* (Ottawa, ON: Government of Canada, June 14, 2019), <https://www.rcaanc-cirnac.gc.ca/>; Denmark, *Greenland, and the Faroe Islands: Kingdom of Denmark Strategy for the Arctic 2011–2020* (Copenhagen, Denmark: Ministries of Foreign Affairs of Denmark, Greenland, and the Faroes, August 2011), <https://um.dk/>; Finnish Government, *Finland's Strategy for Arctic Policy* (Helsinki, Finland: Finnish Government, 2021), 73, <https://www.europeanpolarboard.org/>; and Ministry for Foreign Affairs Department for Eastern Europe and Central Asia, Arctic Secretariat, *Sweden's Strategy for the Arctic Region 2020* (Stockholm, Sweden: Regeringskansliet, Government Offices of Sweden, November 10, 2020), <https://www.government.se/>.

48. CJCS, JP 4-02, II-1.

49. Quinn et al., "Disaster Medicine," 327.

Resource Constraints

Protecting scarce medical resources is significant, because historically, when the United States was in an interwar period, military budgets were constrained based on domestic assumptions that the status quo, if not less, could support contingencies.⁵⁰

Concurrently, service-specific medical departments should overcome their tendencies to become self-serving and entrenched in their policy, doctrine, training, and equipping preferences during times of resource scarcity.⁵¹ Instead, these medical departments must concentrate on reengineering processes and concepts of operation, exploiting existing technologies, and making sound organizational changes.⁵² These were the commonalities seen amid the most effective interwar military organizations.⁵³

Requirements

The Defense Department established a forcing mechanism to ensure integrated efforts, including medical, across all service departments' work toward strategy. Requirement requests must be in the form of a Joint Integrated Priority List.⁵⁴ Before approval, these requirements must link directly to the Joint Warfighting Concept 2.0.

Additionally, requirement requests must include sustainment considerations. When it comes to logistics, one service may have to fund the product line for the rest of the services; medical supplies and equipment will be no exception. Highly effective products already researched and developed by foreign partners must be considered for purchase and licensing. Exploring manufactured goods in use external to the medical industry to augment capabilities could provide additional options. Pursuing these acquisitions saves research and development funding which services can reallocate for novel capabilities, but such actions also respond to the *National Security Strategy*. Specifically, the United States recognizes that "our alliances and partnerships around the world are our most important strategic asset and an indispensable element contributing to international peace and stability."⁵⁵

Optimal Geostrategic Location

Colocating a cold weather medicine center of excellence with the Ted Stevens Center for Arctic Security Studies in Anchorage, Alaska, supports an all-of-government approach to the *DoD Arctic Strategy*. The center's mission is to build "strong, sustain-

50. Brett D. Steele, *Military Reengineering between the World Wars* (Santa Monica, CA: RAND Corporation, 2005), 2, <https://www.rand.org/>.

51. Rebecca W. Hamilton et al., "How Financial Constraints Influence Consumer Behavior: An Integrative Framework," *Journal of Consumer Psychology* 29, no. 2 (2019), <https://doi.org/>.

52. A. W. Marshall, "Some Thoughts on Military Revolution - Second Version," memorandum for the record (Washington, DC: Office of the Secretary of Defense, Director of Net Assessment, August 23, 1993), <https://stacks.stanford.edu/>; and Steele, *Military Reengineering*.

53. Steele, *Military Reengineering*, 4.

54. Pentagon briefing.

55. Biden, *National Security Strategy*, 11.

able, domestic, and international networks of security leaders” and promote and conduct “focused research on Arctic security to advance DoD security priorities in the Arctic region.”⁵⁶

For an all-of-government approach, having medical assets from each stakeholder physically at the center of action would allow teams to cocreate and co-construct avenues to support US activities in the Arctic. The concept is akin to NATO civil-military cooperation, a joint function comprised of command representatives who work together to establish cooperation with a diverse spectrum of military and non-military actors.⁵⁷ Locating a cold weather medicine center of excellence in Anchorage would foster interaction with stakeholders including Alaska government entities such as the National Guard, public health service, and the representatives of the indigenous community.

These organizations and individuals are vital to this approach. Working together minimizes negative impacts to operations, overcomes conflict, and builds shared understanding. In addition, incorporating Arctic partners in this mission will further US, Canadian, and Nordic cooperation, which again ties back to the *National Security Strategy* that acknowledges the “critical role” alliances and partnerships have played in national security policy over the last 80 years.⁵⁸

Colocating a cold weather medicine center of excellence with the Ted Stevens Center, while building interagency connectedness, would increase the professional knowledge of the military medical staff as it becomes the intellectual backbone of cold-weather medicine.⁵⁹ The pursuit of continuous improvement-based education can successfully empower medics with the knowledge and resources to lead through mentally and physically demanding situations. Engagement in cold-weather medicine and operational concepts at a center of excellence could also provide an avenue to create a specialized military experience identifier that would allow services to quickly identify individuals with critical Arctic medical knowledge and capabilities.

Conclusion

The diverse and rugged landscape of the Arctic was the last frontier, a place of harsh climatic conditions as formidable for humans as any human adversary. As such, it has been a land where, over the centuries, militaries have suffered humiliating defeats due to inadequate preparation for extreme terrain and cold weather.

Armed with these lessons, military medicine can plan effectively for future fights in the Arctic, plans that include strategic thinking about this rapidly changing and increasingly important region. Medics can no longer rest on the laurels of the 98.2-percent

56. DoD, “DOD Announces Basing Decision for the Ted Stevens Center for Arctic Security Studies,” press release, November 17, 2021, <https://www.defense.gov/>.

57. NATO, “2.1.1. Fundamentals,” in *CIMIC Handbook*, Civil-Military Cooperation Center of Excellence (CIMIC COE) (website), last updated November 2, 2020, <https://www.handbook.cimic-coe.org/>.

58. Biden, *National Security Strategy*, 17.

59. Dennis, “Unexpected,” 9.

survival rate from the past 20 years of war in the Middle East, especially since the United States' adversaries, including Russia, have grown militarily. Future Arctic wars will most certainly feature mass casualties, delayed evacuation times, and significant resource strains. These conflicts will challenge medics' training, knowledge, and spirit.⁶⁰ It is not an option for US military medical members to be less than fully prepared to operate in the harsh Arctic weather.

Capitalizing on the interwar years, the military can break through the ice and make headway on Joint cold-weather medicine concepts applicable to the Arctic and Antarctica. Thoughtful planning and novel revelations of US military strategic, operational, and tactical visionaries during previous interwar years led to success. These individuals and the organizations they led and worked in incorporated medical advances, waded through lessons learned, and envisioned adaptations to challenges that included weapons more powerful than their ancestors imagined. They also designed the system of military medicine used today.⁶¹

While the United States should remain focused on China, underestimating Russia's determination and military strategic goals will be detrimental, as the world has recently learned. Now a global pariah, Russia has stated its intent to pursue its imperialistic goals in the Arctic unilaterally despite statements by the other seven members of the Arctic Council that they would suspend engagement with Moscow.⁶² Any notion of preserving polar collaboration and cooperation in the Arctic is melting. It is time to make the necessary improvements to Joint health services support to Arctic military contingency planning. **Æ**

60. Rebecca Lee and Jeremy Pamplin, "How Advanced Military Medical Technology Could Help in the Fight against COVID-19," *War on the Rocks*, March 30, 2020, <https://warontherocks.com/>.

61. Charles Van Way III, "War and Trauma: A History of Military Medicine - Part II," *Missouri Medicine* 113, no. 5 (September–October 2016), <https://www.ncbi.nlm.nih.gov/>.

62. Elizabeth Buchanan, "The End of Antarctic Exceptionalism?," *The Interpreter*, March 18, 2022, <https://www.lowyinstitute.org/>.

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