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## CANADIAN FORCES HEALTH SERVICES: ARE CHANGES REQUIRED TO EFFECTIVELY SUPPORT FUTURE LAND FORCE OPERATIONS?

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## **CANADIAN FORCES HEALTH SERVICES: ARE CHANGES REQUIRED TO EFFECTIVELY SUPPORT FUTURE LAND FORCE OPERATIONS?**

### **AIM**

1. The future battlespace has become inherently unpredictable making it extremely difficult to define the nature of future Land Force operations. Heavy demands have been placed on Land Forces to manage these uncertainties while at the same time military interventions in places such as Afghanistan, Iraq, and Syria pose new questions on how best to respond to the unknowns in terms of future force structure, force employment, equipment and doctrinal practices. To meet these anticipated future challenges, the Canadian Army has acknowledged the potential gains of a comprehensive approach to future land operations and has taken steps to progress a concept to prepare the Army of Tomorrow called adaptive dispersed operations (ADO). ADO is characterized by the deliberate use of dispersion and aggregation undertaken by adaptive forces in order to create and sustain an advantage over adept, adaptive adversaries.<sup>1</sup> It is envisioned that the advancement of this ADO concept will guide the Army of Tomorrow and its' combat service support elements through the next decade and perhaps beyond.<sup>2</sup> To that end the purpose of this service paper is to highlight the need for the Canadian Forces Health Services (CF Health Services) to examine its own doctrinal practices and organizational structure with a view on how best it can meet the evolving needs of future Land Force operations. Explicitly, this service paper will identify several operational areas that CF Health Services should advance should it want to keep pace and be better suited to meet the challenging needs of the future Land Forces within the ADO framework.

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<sup>1</sup> Department of National Defence, *Land Operations 2021 Adaptive Dispersed Operations – The Force Employment Concept of Canada's Army of Tomorrow* (Kingston: Army Publishing Office, 2007), 2.

<sup>2</sup> *Ibid.*, 41.

## INTRODUCTION

2. Since the end of the Cold War, the nature of military interventions and operations has become innately unpredictable, making it challenging to define the character of future warfare.<sup>3</sup> While the prospect of inter-state war will not disappear, future challenges will be more diverse, with asymmetric terrorist attacks, political instability, civil war and humanitarian crises making up the lion's share of turmoil in the 21<sup>st</sup> century.<sup>4</sup> Acknowledging the uncertain future security environment, the *Land Operations 2021 Force Employment Concept* is founded upon an operating concept of adaptive dispersed operations that will guide Land Force intervention across the full spectrum of operations.<sup>5</sup> To meet the challenges associated with ADO, Canadian Land Forces to include their responsible supporting elements must be agile, highly trained, and have the capacity of participating in all aspects of a Whole of Government (WoG) approach across the entire spectrum of operations.

3. CF Health Services is responsible for providing full-spectrum, high quality health services to Canada's military forces wherever they may serve.<sup>6</sup> The medical resources that had once belonged to the environmental commands have been realigned and are now centralized under the CF Health Services Commander. This realignment has allowed the organization to become more efficient with a standardization of medical and professional training. While CF Health Services continues to evolve as it prepares for the future in a dynamic spectrum of military activity, it is now time for CF Health Services to transform itself yet again to ensure that it is well suited to support Land Forces within the construct of ADO. Although the complete

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<sup>3</sup> Australian Army Headquarters, *Future Land Warfare Report* (Canberra: Modernization and Strategic Planning, 2014), 3.

<sup>4</sup> Department of National Defence, *Land Operations 2021 Adaptive Dispersed Operations – The Force Employment Concept of Canada's Army of Tomorrow* (Kingston: Army Publishing Office, 2007), 4.

<sup>5</sup> *Ibid.*, 16.

<sup>6</sup> H. Tien *et al*, *Advances in damage control resuscitation and surgery: Implications on the organization of future military field forces* (Bethesda MD: US national Library of Medicine, 2015), 1.

picture of the future battlespace remains blurry, what is known for certain is that Canadian Land Forces operations will have the potential to produce Canadian casualties who will need to be recovered from their point of injury, effectively stabilized, and successfully evacuated to the next higher level of medical care. The current CF Health Services doctrine and organizational structure in respect to providing an agile, multipurpose, full spectrum capable health services element do not support the developing ADO depiction of the future Land Forces security environment. This service paper will offer recommendations in which CF Health Services should focus its attention towards should it want to effectively support the future Land Force.

## **DISCUSSION**

4. As mentioned, the future battlespace will require Land Forces and their supporting elements to be agile, highly trained, and have the capacity to function within a dispersed environment. This will require health service support (HSS) elements to be lightweight, very mobile, and have the ability to provide resuscitative surgery as far forward as the situation allows it in order to stabilize casualties for rearward evacuation. Thus, the responsibility for the CF Health Services to keep abreast of the advancing Land Forces concepts will fundamentally require a shift in thought on how the organization is currently structured and how it will provide health services within the future battlespace. The following three areas will identify opportunities for CF Health Services leadership to examine should it want to remain in step with the Land Forces ADO concept: agile HSS element, highly trained HSS personnel, and a modular approach towards full spectrum capable health services elements.

### **Agile**

5. The development of new technologies, combined with the emergence of adept and adaptable adversaries, will lead to an operational framework that is rapidly expanding,

multidimensional and more distributed in terms of time, space, and purpose.<sup>7</sup> Speed and agility will be the keys to survival in an environment where smaller but more capable groups of soldiers come together to accomplish specific missions and then quickly disperse again for protection.<sup>8</sup> With Land Force elements becoming smaller in size and more dispersed throughout the area of operations, it will substantially reduce the population at risk and lower the number of casualties limiting the requirement for medical holding facilities forward. Another key aspect with dispersion is that increased evacuation distances will be created due to the fact that larger medical treatment facilities will be positioned further in the rear for security.<sup>9</sup> Thus, for an HSS element to advance with the Land Forces in the future battlespace, it will need to be agile. This agility can be achieved by the decentralization of health services resources and enhancements of surgical proficiencies at the lowest levels within the HSS chain of command. The future security environment within the ADO concept will not afford CF Health Services the economies of scale traditionally achieved by larger medical units.<sup>10</sup> Medical assets will need to be lightweight and flexible in order to support the battle, while offering a surgical capability that will permit the transfer of casualties through the evacuation chain. While the current HSS doctrine acknowledges that the initial surgery should be performed as far forward as possible, it precisely recognizes this care capability as being inherently a Role 3 Field Hospital function.<sup>11</sup> To that end, it is time for the CF Health Services leadership to reevaluate its operational HSS doctrine

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<sup>7</sup> Department of National Defence, *Land Operations 2021 Adaptive Dispersed Operations – The Force Employment Concept of Canada’s Army of Tomorrow* (Kingston: Army Publishing Office, 2007), 16.

<sup>8</sup> S. Beaty, “The Revolution in Military Medical Affairs,” *Parameters* 27, no. 4 (Winter 1997/1998): 66.

<sup>9</sup> A.M. Smith, “Military Medicine: Not the Same as Practicing Medicine in the Military,” *Armed Forces and Society* 18, no. 4 (Summer 1992): 579.

<sup>10</sup> P.W. Lund, “Medical Support for Future Combat: No More Vietnams,” *Naval War College Review* 45, no. 2 (Spring 1992): 88.

<sup>11</sup> Department of National Defence, B-GL-343-001/FP-000 Health Service Support (Ottawa: DND Canada, 2001), 12.

with a view of advancing the way in which it will provide health care for the Land Forces in the future ADO battlespace.

### **Highly Trained HSS elements**

6. In 2011, the NATO Committee of the Chiefs of the Military Medical Services endorsed a new NATO Life & Limb saving timeline of “10-1-2” to replace the old “1-2-4” rule.<sup>12</sup> This new timeline places even greater emphasis on the first ten minutes of injury than ever before.

Advances in the control of bleeding, in resuscitation fluids and artificial blood will change the dynamic of trauma care, enabling first responders to do more and allow more severely wounded patients to be appropriately stabilized for transport.<sup>13</sup> As such, by having highly trained medical personnel deployed as far forward as possible, closer to the fight will not only be a requirement for future Land Force conflicts but should also be considered critical for mission success.

Remick et al advocate that “A significant portion of trauma patients can now be treated initially by physicians and medics performing Advanced Trauma Life Support (ATLS) intervention near the point of injury in outlying locations.”<sup>14</sup> While the benefits of deploying ATLS qualified personnel forward to extend the survival time of patients are universally well known, it is surprising to note that most military physicians and medical technicians are currently underutilized in this role. Using highly trained health services personnel to their full potential will undeniably improve survival within the pre-surgical, near point of injury portion of the military trauma system; it also proves to enhance the system’s efficiency and resource utilization.<sup>15</sup> While focusing on supporting the Land Forces within the ADO framework, it is of

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<sup>12</sup> H. Tien *et al*, *Advances in damage control resuscitation and surgery: Implications on the organization of future military field forces* (Bethesda MD: US national Library of Medicine, 2015), 93.

<sup>13</sup> David Salisbury and A. English, *Prognosis 2020: A military medical strategy for the Canadian Forces* (Kingston: Canadian Military Journal, 2003), 52.

<sup>14</sup> K. Remick *et al*, *Transforming US Army Trauma Care: An Evidence-Base Review of the Trauma Literature* (Kentucky: The Army Medical Department Journal, 2010), 12.

<sup>15</sup> *Ibid.*, 12.

utmost importance that increased ATLS training opportunities be given to health services personnel so that a higher level of care at the point of injury can occur. Deploying these highly trained medical personnel forward will also aid in the prolonged acceptable transportation times of patients who are required to be evacuated to the next level of medical care.

### **Modular Approach to Full Spectrum Capability**

7. Current theater HSS elements and assets, to include unit aid stations, unit medical stations, ground evacuation vehicles, personnel and equipment contributions to the multi-nation medical Role 3 facility for instance in Kandahar, are working adequately for today's land operations. However, these health services elements may be insufficient to meet tomorrow's requirements. A shift of the current CF Health Services organizational structure should now be undertaken to better suit the demands of future Land Forces operations. Accordingly, the US Army Medical Department conducted its own evidence based research to determine how best it can support anticipated US future conflicts and found that a modular, hospital system utilizing a comprehensive trauma system model should be adapted for future operational environments.<sup>16</sup> Similarly, to mitigate potential medical shortfalls, NATO has also taken a multinational modular approach to providing military health care along the entire continuum of care, while on expeditionary operations.<sup>17</sup> Therefore, it is now time for the CF Health Services to consider making the appropriate changes that will entail modifications to its Field Ambulance structure towards a more robust modular system. This modular concept must include a versatile, mobile HSS element that can deploy and operate as close to combat as the situation allows. This modular concept should be task tailored to the trauma system, it should be based on precise theater needs and have the ability to either augment higher level medical treatment facilities or

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<sup>16</sup>Ibid., 5.

<sup>17</sup>H. Tien *et al*, *Advances in damage control resuscitation and surgery: Implications on the organization of future military field forces* (Bethesda MD: US national Library of Medicine, 2015), 93.



function independently in the future ADO battlespace. The idea of a small forward surgical team with only one operating table and no patient holding capacity should be explored to provide effective timely care.<sup>18</sup> It will be imperative that these HSS elements have the flexibility and the surgical capabilities to stabilize casualties for further evacuation. For the modular concept to be successful in a theater of operations the HSS Commander will have to retain command and control over all medical assets to ensure a smooth operating theater trauma system, in doing so it will allow CF Health Services to effectively function within the ADO concept and the full spectrum of operations.

## CONCLUSION

8. The fundamental purpose of the ADO concept is to defend Canada at home and abroad by contributing to the maintenance of long-term stability and security in regions of conflict.<sup>19</sup> While the Land Forces are contemplating how best to manage the uncertainties of the future battlespace it is now time for its' combat service support elements to do the same. This service paper identified several key areas that CF Health Services should examine further should it want to advance its organizational structure and doctrine. The CF Health Services doctrinal practices and organizational structure that once worked do not meet the emerging operational picture of the future battlespace. The time to adapt and seize the opportunity is now for CF Health Services. Another fundamental benefit of having an agile, highly trained, modular surgical medical team forward is the enhanced fighting morale. Having this HSS capability will permit Land Forces' personnel to conduct operations with the knowledge that their medical needs will be effectively met by highly skilled nearby health care practitioners. This service paper

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<sup>18</sup> David Salisbury and A. English, *Prognosis 2020: A military medical strategy for the Canadian Forces* (Kingston: Canadian Military Journal, 2003), 53.

<sup>19</sup> Department of National Defence, *Land Operations 2021 Adaptive Dispersed Operations – The Force Employment Concept of Canada's Army of Tomorrow* (Kingston: Army Publishing Office, 2007), 16.

described three key areas in which the CF Health Services should further explore should it want to effectively meet the challenging needs of future Land Forces within the ADO concept: an agile HSS element that can keep pace with a dispersed Land Force; highly trained HSS personnel who can deploy as far forward as the combat situation allows; and a flexible modular HSS capability that can function within the ADO concept and the full spectrum of operations.

## **RECOMMENDATION**

9. To effectively support the Land Force in the future battlespace, CF Health Services will need to conduct an internal examination of its organizational structure and doctrine. With the advancement of the ADO concept, this is an excellent opportunity for CF Health Services to determine how it can meet the challenges of the future security environment. Three operational areas were identified that require further examination by CF Health Services senior leadership to determine their suitability moving forward. For this examination to occur, it is being recommended that the lead on this activity be given to the Deputy Commander CF Health Services who oversees the doctrinal and structural changes for the organization. Furthermore, a committee consisting of senior CF Health Services leaders within the National Defence Medical Center Headquarters should be tasked to participate in this endeavour. An implementation team could also be established to initiate and be responsible for the coordination, management, and conduct for any approved organizational modifications. CF Health Services senior leaders have an important role to play in implementing, monitoring and adapting to the changing environment to ensure the sustainability of any proposed change. It is essential for CF Health Services leadership to recognize that any significant changes to its organizational structure or doctrine will take time, and sustaining the change takes enormous energy. Should the CF Health Services

want to ensure it is well suited to support the Land Force in the future environment, time and energy must be spent now to avoid being left behind on the future battlefield.

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