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Who's Treating Your Soldier? Health Service Support in Coalition Operations

By/par

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ABSTRACT

Canada will likely never deploy troops outside of a coalition framework. There are far too many risks, from political, strategic, operational and tactical levels, inherent with deploying on one's own. Coalitions bring with them many advantages, as well as many difficulties or challenges. Health Service Support (HSS) in coalition operations is not unique and, unfortunately, fraught with similar challenges experienced by any other service. Frictions, both cultural and historic will present themselves. Differences amongst the partners' language, doctrine, goals, capabilities, and logistics will test a coalition's resolve and its chances for success. History is ripe with examples of HSS in coalition operations gone awry, yet we continue to struggle with the same issues. Leadership at the operational level and professionalism at the tactical level have often prevented absolute disaster. Recognizing the frictional differences early and agreeing on a common mission, doctrine, and associated responsibilities can greatly reduce these frictions. The Health Service (HS) leadership must be able to navigate through the complexities with a balance of flexibility, understanding, persuasion, influence, tact and sensitivity. Coping and succeeding in Health Service Support within a coalition is a leadership issue, most dramatically expressed at the operational HS commander level.

"Let the Nation also give its tribute to those who consecrated their service to the care of the wounded; to the men who went forward through the battle storm with bullet splattered ambulances to rescue those who had fallen; to the women whose first thought was to the helpless and suffering, when hospitals were bombed."[1]

Introduction

General Pershing, the Commander in Chief of the American Expeditionary Forces in France during World War I, won a Pulitzer Prize for his description of his experiences to include the dilemma forced upon him in having to depend on a coalition member's medical services during the early days of the US involvement. The French were to avail their hospitals to the anticipated American casualties. Despite the assurances given to Gen. Pershing from his coalition partner, when that care was called upon to treat his wounded US soldiers, it was not to be found. The French had suffered great losses of their own during the German offensive, including their hospitals. Notwithstanding the French predicament, Pershing concluded, "Our experience during these operations showed that we must depend on our own resources for the kind of hospitalization and treatment that we expect our sick and wounded to receive."[2]

Recently Canada has embarked as the lead nation in a Role Three[3] Multinational Health Care Facility in Kandahar, Afghanistan in support of Regional Command (RC) South, International Security Assistance Force (ISAF). Tasked with delivering health care

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[1] The Rt Hon. Sir Robert Borden, Prime Minister of Canada, 16th August 1918 in the Introduction to: *The Story of the C.A.M.C.1914-1915* by Col J. George. Adami, M.D., F.R.S., C.A.M.C., (London, E.C. 1915).

[2] General John J. Pershing, *My Experience in World War I*, Vol 2 (Blue Ridge Summit, Pennsylvania, 1931), 127.

[3] See Appendix I for details.

to the soldiers of the multinational coalition in the sector, the Canadian Forces Health Services (CFHS) is responsible for facility coordination and provides the largest percentage of personnel to the facility. Other coalition countries have contributed additional personnel and at times the military staff has been augmented with Canadian civilians. Despite the many challenges created by working within a multinational health care coalition, the CFHS has provided the coalition soldiers, their commanders and their countries with what they should expect: the highest standard of care possible.

According to Canadian Joint doctrine, "[I]n combined operations health services support (HSS) remains a national responsibility that is subject to combined force level co-ordination."[4] The North Atlantic Treaty Organization (NATO) goes on to state in its doctrine that "[W]hile there may be a variety of options to provide medical support to forces that nations have contributed to a NATO operation, the [contributing nations] remain accountable for the health of their own troops."[5] Today's coalition operations are complex, and not all countries contributing troops to present (or future) missions are members of NATO. As such, they might not agree with such doctrine. It has also become apparent that even countries within NATO have their own interpretations of the doctrine and some may not be capable of contributing sufficient HSS to every mission. Who then, will then take care of the soldiers?

The paper will argue that Canada, as with any nation, has a responsibility to its soldiers and its coalition partners to maintain a robust professional Health Services, able

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[4] Department of National Defence, *Canadian Forces Joint Doctrine: Health Services Support to Canadian Forces Operations*, B-GJ-005-410/FP-000 (Kingston: Canada 2007), 7-1.

[5] NATO, *AJP-4.10; Allied Joint Medical Support Doctrine* (2002), 57.

to deploy equitably amongst its partners, with strong leadership able to cope with and successfully deliver care despite the challenges of Health Service Support in Coalition Operations. It will define and examine the issues inherent with combined, coalition and multinational force operations from a general perspective. It will then examine historical examples illustrating the benefits, and inherent difficulties, in providing health service support to such operations. Documented as they are, recent coalition experiences demonstrate that the HS community continues to struggle with the same issues. Issues persist on mission clarity, echelon structure, disjointed interpretation of troop medical and dental readiness, and the definition of an acceptable standard of care amongst the diverse HS professionals within a given coalition. What can be expected of partners? Will each partner's system work within the overall mission's architecture? If not, can they adapt? The paper will then provide solutions to mitigate the shortcomings, how to cope at times, and how to succeed in the delivery of health service support within coalition operations. Issues can be alleviated by simply communicating and agreeing from the initial planning stage on common HS goals and a common HSS structure with well delineated responsibilities at each level for each coalition member. Developing a standard of care, from predeployment readiness standards, to professional credentialing, to patient eligibility would better ensure success of the coalition's HSS mission.

Background

Alliances and coalitions date back as long as people have organized themselves into groups, tribes, states or nations. Conflicts between such peoples were bound to arise,

and as such, different bands were sure to come together in pursuit of similar interests or simply self-preservation.

Defined by the Oxford English Dictionary, an alliance is a "[C]ombination for a common object, confederation, union offensive and defensive; especially between sovereign states."[6] It is considered formal and more permanent in nature than a coalition. NATO, for example, sees itself as "an alliance of 26 countries from North America and Europe committed to fulfilling the goals of the North Atlantic Treaty[7]… to safeguard the freedom and security of its member countries by political or military means…[to safeguard] its allies' common values of democracy, individual liberty, [and] the rule of law…"[8]

A coalition however, as defined by the American-British-Canadian-Australian (ABCA) Program, "is an *ad-hoc* arrangement between two or more nations for common action."[9] It is formed for a particular action or operation, for a set period of time and normally dissolves upon (but occasionally prior to) the operation's completion. Coalitions are formed when nations have similar interests or seek the security afforded by standing together. They serve a military function allowing countries to address issues or conflicts where they would not have been able to with their own resources. States pool

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[6] Oxford English Dictionary, http://dictionary.oed.com/

[7] North Atlantic Treaty. Washington D.C. - 4 April 1949. The Parties to this Treaty reaffirm their faith in the purposes and principles of the Charter of the United Nations and their desire to live in peace with all peoples and all governments. They are determined to safeguard the freedom, common heritage and civilisation of their peoples, founded on the principles of democracy, individual liberty and the rule of law. They seek to promote stability and well-being in the North Atlantic area. They are resolved to unite their efforts for collective defence and for the preservation of peace and security. They therefore agree to this North Atlantic Treaty http://www.nato.int/docu/basictxt/treaty.htm

[8] NATO, http://www.nato.int, 2007

[9] American-British-Canadian-Australian (ABCA) *Coalition Operations Handbook*. Introduction (Rosslyn, Virginia: ABCA Program Office, 2005), *ix*

their resources in such a way that no single military is required to take on too great of a responsibility, allowing smaller states that perhaps specialize in one aspect of warfare to contribute on a greater or larger stage. Coalitions are unlike alliances in that they do not necessarily have the same political clout of something more long-standing. That said, coalitions (and alliances) serve a political purpose, giving greater credence or legitimacy of action within the eyes of the international community as opposed to that which may be given the actions taken by a single country.

As with any partnership, coalitions are fraught with difficulties, pitfalls and frictions. Steve Bowman, Director of the United States Army Military History Institute at the U.S. Army War College, groups frictions into two types: cultural and historical.[10] Each must be considered in bringing together, and holding together, a coalition. Cultural points of friction include religion, class, tolerance, work ethic, standards of living, and national tradition. Historical points of friction include:

(1) Goals: they must be common, political goals driving the military ones, agreed upon from the start;

(2) Logistics: the most difficult as no two militaries have the same doctrine;

(3) Capabilities: they will range throughout the spectrum and require a sensitive approach to mission assignment; burdens are to be equitable, not necessarily equal;

(4) Training: quality and commitment to training will vary, affecting abilities;

(5) Equipment: quantity, quality and interoperability severely hamper a unified effort;

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[10] Thomas J. Marshall, Steve Bowman *et al*., *Problems and Solutions in Future Coalition Operations* (The Strategic Studies Institute of the US Army, Carlisle, Pennsylvania, Dec1997), 2-12.

(6) Doctrine: reflects a nation's character; after 50 years of NATO its members still have different doctrines;

(7) Intelligence: sharing one's intelligence with another country is never comfortable and can severely strain abilities and relationships;

(8) Language: misunderstandings can have disastrous effects; and

(9) Leadership: leaders must fully grasp the political nature of the coalition, always sensitive to national needs, being persuasive, not coercive.

Bowman maintains that the West thinks too often from its own perspective, of only western alliances such as NATO, or predominately western contributions to UN sponsored coalitions whereas "the world's rapidly changing geo-political posture makes it difficult to estimate who potential coalition members might be."[11] Coalitions do exist elsewhere in the world. In Africa there is the Organization for African Unity (OAU) and the Economic Community of West African States (ECOWAS) which have worked together to settle disputes throughout the continent. Forces organized by the Rio Protocol countries helped settled the 1995 Peru-Ecuador border dispute. ASEAN, the Association of South-Eastern Asian Nations, communicates often on coordinating interests of military importance. Future participation in coalition conflicts will move further and further from the traditional Euro-centric environment. Partners will become more and more diverse with respect to the historic and cultural frictions they bring to the coalition. We must be aware of these realities and be able to work through them, together.

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[11] *Ibid*., 39

In 1947, General Devers, Commander of the US 6th Army Group in World War II, suggested six problems one can expect to encounter and must be able to address when commanding an allied or coalition force:

1. Characteristic lack of clarity and firmness of directives received from the next superior combined headquarters or authority.
2. The conflicting political, economic, and military problems and objectives of each of the allied powers.
3. The logistical capabilities, organization, doctrines, and characteristics of each of [the] armed forces under command.
4. The armament, training, and tactical doctrines of each of the armed forces under command.
5. Personal intervention and exercise of a direct, personal influence to assure coordination and success in the initial phases of the mission assigned by the next higher combined authority.
6. The personalities of the senior commanders of each of the armed services of the allied powers under command, their capabilities, personal and professional habits, and their ambitions.[12]

As Sir Winston Churchill put it, "[I]n war it is not always possible to have everything go exactly as one likes. In working with *allies* it sometimes happens that they develop opinions of their own."[13]

Health Services in Coalition Warfare

As coalitions are inherently a group of *unequal* partners, then it would be reasonable to expect that the health service support that each nation brings to the table would be unequal as well, both in terms of quality and quantity. According to NATO doctrine, "[I]t is primarily a *national responsibility* to provide for an efficient medical

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[12] Jacob L. Devers, "Major Problems Confronting a Theater Commander in Combined Operations," *Military Review*, 27 (October 1997), 3-4

[13] Sir Winston Churchill, *The Second World War, The Hinge of Fate*, (Boston: 1950)

support system."[14] A contributing nation must consider the maintenance of health and the prevention of disease. It must have a system designed that addresses the treatment, holding and evacuation of patients such as to minimize the person-days lost due to injury and illness, and to return casualties to health and duty as soon as possible. With respect to logistics and supply, it is the individual nation that is responsible for the re-supply of blood and medical materiel to its HS elements. Both NATO and the UN address the standard of medical support to operations in near identical phrasing: "Support must meet standards acceptable to all participating nations…provide a standard of medical care as close as possible to prevailing [standards]."[15] UN documents go on to recognize that "[M]edical skills and experiences tend to vary significantly amongst medical personnel in peacekeeping missions. This is more so when there is a multi-national force, with medical units and personnel from different countries."[16] This can obviously create a dilemma. How can there exist a multinational coalition in which the expectation of participating countries is to contribute to the medical mission, to a standard of care that all can agree upon, when it is recognized that some have "significantly" different (lower) medical skills? Moreover, who will decide how "the standard" is set? And how low are countries willing to let the standard drop knowing that, in the heat of a conflict, their own soldiers may need to be treated by those at this lower standard?

This dilemma is not new. Sir Andrew MacPhail, a Medical Officer who served four years in World War I and was McGill's first Professor of the History of Medicine,

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[14] NATO *Allied Joint Logistic Publication-01 AJP-4(A)* (2003) 3-7.

[15] *Ibid.*, 3-7; in United Nations *Medical Support Manual for United Nations Peacekeeping Operations* 2 Ed (New York, 1999), 3, the UN uses "comparable" vs. "as close as possible" (1999), 3.

[16] United Nations *Medical Support Manual for United Nations Peacekeeping Operations* 2 Ed (New York, 1999), 38

wrote in 1925 words that still hold true today. In his book, *History of the Canadian Forces 1914-19, Medical Services*, MacPhail proposed that "there has always been a tradition in the Canadian mind, that Canadian medical schools, medical profession, and medical practice were the best in the world." Most western nations have this same opinion of their own medical profession. He suggested that due to this perceived high calibre of medical professionals in Canada, Canadians would have an Army medical service above all others and that "It was the natural assumption that Canadian soldiers would receive the full and exclusive benefit of this excellence." MacPhail goes on to express the public's negative perception of warfare and the perceived misuse of its national resources. Soon into the war, the public came to realize that the Canadian sick and wounded were being evacuated through *English* clearing stations, into *English* military hospitals and then scattered throughout *England's* general hospital system. It became further apparent that everybody except Canadian medical personnel was treating Canadian soldiers. The prized and lauded Canadian medical professionals were in fact being reassigned to areas of operations in France and the Mediterranean in which Canadian troops were not deployed and were employed providing medical care to non-Canadian casualties. MacPhail remarked that "the situation was beyond [the public's] comprehension, and caused a shock of bewilderment in the Canadian mind, unfamiliar as it was with the exigencies of war" and perhaps with the complexities, rationale and advantages of coalition warfare.[17]

This public perception of the inappropriate use of Canadian medical services and the perceived inappropriate care of Canadian soldiers within the coalition led the

[17] Sir Andrew MacPhail *Official History of the Canadian Forces in the Great War 1914-19: The Medical Services*. (Ottawa: Department of National Defence, 1925)

government of the day to appoint Col. Herbert A. Bruce as Inspector-General of the Canadian Army Medical Services Overseas. During his investigation, Bruce noted conflicting commentary on policy from the Canadian Director of Medical Services (DMS). With respect to keeping Canadian sick and wounded together in Canadian hospitals staffed by Canadian medical personnel, the DMS recommended in December 1915 that it would be "conducive to the patients' well-being and comfort to be under our own administrative control." He reversed this opinion (with no clear explanation) three months later and again in March 1916 stating, "that it is not now considered necessary, from a Canadian point of view, to make any special arrangements …for the collection of Canadian patients."[18]

Col. Bruce had strong and contradictory opinions on

Sir Andrew MacPhail suggested that the situation was not as simple as Col. Bruce had one to believe. On 27 October 1916, there were 20,256 Canadian sick and wounded of whom 9,272 were in Canadian hospitals, leaving only 1812 surplus beds in these hospitals. Obviously, not all of the remaining 10,984 Canadians could have been admitted to the remaining beds. Placing them in other-than-Canadian hospitals was a necessity and perhaps a fortunate benefit of the coalition relationship. MacPhail suggests that the shear number of patients and their evacuation from the divisional lines through casualty clearing stations, to the base on ambulance-trains and onto hospital ships to England created a situation in which they were bound to intermingle with others. Their segregation through the evacuation lines or the separating of them upon arrival in England would have been a logistical nightmare, slowing down their arrival to *any* hospital and therefore jeopardizing their early care.[20] He goes on to discuss the "Babtie Report" which looked into the allegations of Col Bruce, citing the segregation of Canadian patients as "not only impracticable but unwise, and impossible." The members of the "Babtie Report" were "abundantly satisfied that the Canadian sick and wounded have been thoroughly well cared for in the voluntary aid hospitals… comfortable, happy, and at home."[21] Despite the perception of the Canadian public or the opinions of either Col Bruce's investigation team, the Canadian soldier or health care provider, it does not appear the actual care provided by the English and the dispersion of Canadian troops throughout the Empire's health care architecture contributed to any improper or poor outcomes.

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[20] MacPhail, *Official History of the Canadian Forces in the Great War 1914-19: The Medical Services*, 162.

[21] *Ibid.,* 176.

Another example of coalition health services gone awry is Australia and New Zealand's horrific experiences as junior (and unequal) members of a coalition in Gallipoli. In *The Medical War*, Tyquin speaks to the breakdown in communication and medical management between the English and Australian medical services leading to catastrophic failures in hygiene and medical supply.[22] Compounding the problem was the lack of independence of the Australian Army Medical Services from that of England's, and the confusion as to what each would or should bring to the fight. The nature of the inequality when dealing with a difference of opinion was exemplified in 1906 when the Australian Director General Medical Services (D.G.M.S.), General Williams, recommended to his British counterpart the formation of a "Commonwealth Dental Services." His British "superiors" had imposed upon the Australians a medical service, "modelled on that of the Imperial Services." They refused Gen Williams' submission based solely on British precedents and a British Military Board decided that a Dental Services was simply, "not required."[23] At first light the resulting decision by the more senior coalition partner might have seem insignificant. Neither military, however, brought a dental officer to Gallipoli. Enlisted personnel (including a blacksmith) were asked to provide relief to those suffering from oral infections. This oversight or poor coordination between coalition members required the evacuation of some 600 soldiers of the Australian 1st Division suffering from toothaches. When considering non-combat

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[22] Michael B. Tyquin, *Gallipoli, The Medical War: The Australian Army Medical Services in the Dardanelles Campaign of 1915*, (Kensington, Australia: New South Wales University Press, 1993)

[23] Colonel A.G. Butler, *The Australian Army Medical Services in the War of 1914-1918*, Vol 1, (Melbourne: H.J. Green, Government Printer, 1930), 6.

casualties in Gallipoli, dental disease was a close second in magnitude to those suffering from dysentery.[24]

Recent Health Service Support Coalitions

Since its inception with United Nations Truce Supervision Organization (UNTSO) in 1948, the UN peacekeeping mission has been the model, good or bad, for a multinational coalition. Within most UN missions there is a health service support component. UN missions have grown in size and complexity (United Nations Protection Force (UNPROFOR) in March 1995 had a total military cohort of 38,599 troops whereas UNTSO initial establishment in 1948 was 70 military observers).[25] There has, therefore, been a need for the health service support to grow correspondingly and a greater need for coordination between contributing nations as well as with the UN Headquarters with respect to their deployed health service components.

Coordinating medical missions of UNPROFOR's size presents many problems, starting with common doctrine and lexicon. Most nations express their Health Service's mandates, to a greater or lesser extent, similarly to Canada: "to provide the HSS [Health Service Support] necessary to sustain a multi-purpose, deployable, combat capable force across the full spectrum of military scenarios."[26] They may not, however, accomplish this mandate under the same structure. Multinational medical missions require a commonly understood structure. Second only to a lack of a fully understood and agreed upon

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[24] Robert Rhodes James, *Gallipoli*, (London : B.T.Batsford Ltd, 1965)

[25] United Nations, *UN Peacekeeper Web*site: http://www.un.org/Depts/dpko/dpko/

[26] DND, CF Joint Doctrine: HSS to CF Ops, B-GJ-005-410/FP- 000, 1-15

common mission, a misunderstanding or total lack of a common structure appears to be the first line of departure and confusion within any HSS coalition.

For the most part, Health Services (HS) coordinate their treatment by escalating degrees of capacity. Depending on the organization or nation, they are referred to as "Levels, "Roles" or "Echelons." Within the UN they are referred to as Levels; within NATO there are Echelons and Roles; and the ABCA and Canada both refer to Roles of care. A specific Level of medical care does not necessarily equate to a specific Echelon of care, which does not necessarily equate to a specific Role. Nor are their responsibilities defined or understood to be the same from one nation's HS to another's; at times, Environmental Branches within a common military will differ in their nomenclature and definitions.[27] Within a typical mission (as no two missions are the same), whether it is a UN or NATO sponsored, an ad hoc group of countries led by one or all as equals, the contributing countries to the coalition will be expected to provide various levels of medical support. This can obviously lead to difficulties if the countries do not understand or agree upon the basic nomenclature or to what is defined by each Level, Role, or Echelon.

In 1996, the RAND Corporation, a non-profit global policy think tank first formed to offer research and analysis to the US armed forces, produced a report which directly addressed the issue of the confusion created by the various and varied doctrinal interpretations within an HS coalition.[28] Although the report is US Army centric (the US

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[27] See appendix I.

[28] L.M.Davis, S.D. Hosek, M.G. Tate, M. Perry, G. Hepler, P. Steinberg. *Army Medical Support for Operations Other Than War*, MR-773-A (Santa Monica, California: RAND Corporation, 1996). http://www.rand.org/pubs/monograph_reports/MR773/index.html

has been and will likely continue to be the largest contributor of medical resources to any coalition operation), and deals specifically with "operations other than war" (OOTW), it represents perhaps the most comprehensive study of modern HS support to coalition operations and its findings can be easily extrapolated to any future coalition mission, OOTW or otherwise. It concluded that in dealing with coalition partners, the "problems centered around differing medical policies, differing levels of assets, differing standards of care, and differing levels of physical readiness."[29]

The report cites examples of HS support to coalition operations in Haiti, Somalia and the UN sponsored mission UNPROFOR in the former Yugoslavia. With respect to the latter, the US medical mission was to provide an Echelon III health care facility. This was accomplished through the rotational manning of a hospital in Zagreb, Croatia by all three US services. It was *understood* by the Americans that Echelon I was to be the responsibility of the individual contingents and Echelon II was to be initially given to the British. The Americans' understanding was that the individual contingents would provide, for themselves, an Echelon I level of HSS to include battalion aid stations, combat medics, combat lifesavers, combat stress support, and buddy aid, and that the British would include within their role, liaison between Echelons I and III, intratheatre medevac and a significant preventive medicine capability. Most contingents provided their own forward surgical teams (FST); however, they varied greatly in size, composition and professional capabilities and standards. Further, the FSTs were not uniformly distributed throughout the area of operations. What the Americans found was that their interpretation of the Echelon system and how each Echelon supports or fits into

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[29] *Ibid*., 47

the next was not the same as what was understood by all contingents. There were, at times, severe gaps due to a lack of capacity or capability of one Echelon as it approached that of the next. Patients often arrived at the US Echelon III hospital for care that they should have been able to receive at a much lower Echelon of care. Due to certain contingent's interpretation of their own medical responsibilities, or perhaps due to their lack of capacity to provide a higher degree of care, the lower medical Echelons would at times move patients on to the hospital in what the US interpreted as prematurely. This was particularly evident in the lack of Echelon I combat stress support and lack of some contingent's dental resources all of which placed an undue burden upon the US hospital. The dental burden was such that the Navy, during the fourth rotation, found it necessary to deploy two additional general dentists and an extra oral maxillofacial surgeon.[30]

The RAND report also commented on how the Echelon system becomes dysfunctional when, due to national interests, a coalition-contributing nation withdraws its support or resources. According to a RAND interview with Col. Lietch, a British Medical Liaison Officer in the US Army Office of the Surgeon General (OTSG), the British had only agreed to provide Echelon II support to the first rotation. They only reluctantly continued to provide it to the second rotation when the UN could not find a replacement. By the third rotation, with no signs of the UN being able to fill the role, for political reasons, the British withdrew.[31] This left an enormous gap not only in patient evacuation, but also in preventive medicine. The severely strained and already fragile system was left to the US to fill until such time as the Norwegians assumed the role

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[30] *Ibid*.
[31] *Ibid*., Interview by RAND Corp with Col Robert Lietch, British medical Liaison Officer, in the Office of the Surgeon General

during the fourth rotation. The Norwegian resources, however, were not located near the site where most of the casualties were taking place, and therefore they were less effective.

Mission identification, understanding and agreement are vitally important to the success of a coalition operation. Davies suggests that they must be clearly "delimited" with the various levels of government and the strategic levels of militaries, properly considering and weighing the various options: "[national] objectives in providing health care; the desired end-state for medical support; eligible patient population; and relations with the host nation and other health care providers in theatre."[32] They must be communicated to all parties, and the distribution of the work load must be negotiated at the tactical and interagency levels by an experienced and authoritative senior medical officer. Without all parties (both within the national medical commands and at the political level) agreeing on a common mission and goals, mission creep will ensue as some nations move from providing health care only to coalition soldiers, to treating employees from all governmental agencies or even the NGOs. Combat support can easily drift into the realm of a humanitarian mission where military health service resources from some contingents are consumed with treating host nation civilians.[33] All these circumstance arose in UNPROFOR (as they will in most missions), leading to a degradation of the original mission of Combat Service Support and the potential of outstripping the capacity to perform "mission-one."[34]

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[32] Lois M Davis, "Growing Pains, The Challenge of Medical Support for Operations Other Than War," *Armed Forces Journal*, (Dec 1998), 25

[33] Ibid p25

[34] L.M.Davis, *et al, Army Medical Support for Operations Other Than War,* 105-106.

Command and Control (C2) is directly linked to the ability of all medical assets in a coalition force to work in a supportive, interlinked structural entity towards a common goal. Each sponsoring type of coalition (UN, NATO, ABCD, or other) addresses C2 differently and individual missions create their own tailored C2 structure. In a coalition it is essential that there be some coordination at the highest theatre level to ensure connectivity between contributing nation's capabilities. Unfortunately, as in UNPROFOR, this can soon become "disjointed" as the promises of providing specific Echelons of care either fall through or are misinterpreted, or as national interests pull their HS assets away from theatre in mid-stream.

The "Standard of Care" from a coalition Health Service Support perspective is a delicate topic to broach. Just as in Canada, each developed country will likely profess that their "medical schools, medical profession, and medical practice were the best in the world."[35] As countries contribute their nations' greatest resource, their people, to battle in a coalition, who decides if they are "good enough" to fight alongside, or in the case being addressed here, "good enough" to treat the coalition's soldiers? Which countries does a medical advisor group into the "good enough for my country's soldier" category? The World Health Organization (WHO) has ratings for various aspects of healthcare, but nowhere does it rate a country's competence in military medicine, or state to what height the bar should be set in differentiating "acceptable standard of care" versus "unacceptable standard of care."[36] Are the decisions on "good enough" then based on prejudices?

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[35]MacPhail , *Official History of the Canadian Forces in the Great War 1914-19: The Medical Services*, 170.

[36] World Health Organization Website. *World Health Organization, Data and Statistics*. http://www.who.int/research/en/

The Rand report makes some broad statements based on healthcare as seen through the eyes of predominantly US health care professionals.[37] It addresses the subject at two levels; that of readiness and of in-theatre competence. In the case of UNPROFOR, soldiers from some countries arrived into theatre in such poor health that they were clearly unfit to participate. This was attributed to poor screening procedures and or a lower standard of health care in their country of origin. Troops, particularly from the former Soviet republics, arrived with such infectious diseases as tuberculosis, malaria, HIV, hepatitis, and chicken pox, sometimes in epidemic proportions (it was estimated the troops from the former Soviet republics had a 40% rate of TB infection).[38] The soldiers from the lesser-developed countries in Africa and parts of Asia were considered to have an even lower medical readiness, and virtually no dental readiness. In a coalition, this puts an unexpected strain on the higher Echelons of care (hospitals), from a personnel perspective, holding-capacity perspective and medicine perspective.

RAND did recognize that during UNPROFOR Canada, Australia and western European countries had readiness levels comparable to the US. In WWI, however, Canada was guilty of sending soldiers overseas who were unfit medically. Statistics produced in October 1916, showed 16 percent or a total of 1367 soldiers from the most recently arrived 12 battalions were medically unfit. Perhaps due to a wanting to contribute more men to the war effort, it was recognized 80 years prior to the RAND

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[37] L.M.Davis, *et al, Army Medical Support for Operations Other Than War,* 1996.

[38] *Ibid.,* 26

report that a contributing nation's (Canada's) poor enlistment standards of medical readiness created a heavy strain on the overseas medical services.[39]

With respect to the clinical competency of some contributing nations, it becomes more difficult to judge, as the standard of care they can provide may simply be an economic issue with respect to the assets they can afford to purchase and bring into theatre. It may well be a human resource issue as described in the RAND report, where countries like Norway, Canada and England, due to their long history of participation in OOTW, now have an HS recruitment and retention problem.[40] Col Smerz, the USSOCOM Surgeon has suggested that certain countries are considered to have a lower standard of care with respect to surgery, simply because they tend not to be as aggressive as their US counterparts.[41]

A second RAND report, "What the Army Needs to Know to Align Its Operational and Institutional Activities," describes and summarizes the difficulties of HSS in a coalition from a lead nation perspective that is not significantly different from and could easily translate into Canada's experience in Kandahar:

> the number of multinational coalitions is increasing, and they involve many more foreign countries that are not traditional U.S. [or Canadian] allies and generally do not have robust military medical services. As a result, coalition forces frequently demand more medical support than do U.S. [or Canadian] soldiers because they tend to have lower levels of predeployment medical screening, preventive medical support, and medical and dental readiness. They might also lack their own combat medical support in theater or evacuation assets… Consequently, medical support for coalition forces often goes beyond immediate trauma care…Their ill and injured also stay at OF-Medical facilities, such as the combat support hospital (CSH) [Role III

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[39] Herbert A. Bruce, *Politics and the Canadian Army Medical Corps,* 107.

[40] *Ibid.,* 48-49.

[41] Interview with Col Smerz, USSOCOM Surgeon; Health Care Operations Confernece, San Antonio, TX, June 1995, from L.M.Davis, *et al*, *Army Medical Support for Operations Other Than War*, 129.

> facility], longer than U.S. [or Canadian] soldiers with similar conditions because they have a lower level of medical readiness to begin with, and their own forces have no capability to evacuate them or provide care for them… All this adds a significant load to the combat medical force and to the RCC [regional combatant command] as a whole.[42]

Coping with and Overcoming a Coalition

As affirmed in the CF policy paper "Future Army Capabilities 2001," "[F]uture operations, other than domestic, will most likely be within a coalition context."[43] Despite all the trials and tribulations associated with coalitions, it is highly unlikely that Canada, or for that matter, any other Western nation (to include the United States) would engage in an expeditionary conflict without a coalition's backing. The military risks and more significantly, the political risks, would be considered far too great. In the 20th and 21st centuries, perhaps the only expeditionary operations mounted without a solid coalition were the US invasions into Granada and Panama, the Russian invasion/occupation of Afghanistan, and perhaps the 6-day war waged by Israel (though it might be suggested that the Israelis were aided by "friends," if not directly with troops, with equipment). The two World Wars, the Korean conflict and even the Vietnam War all started with coalitions, as did the latest conflicts in the Balkans, Afghanistan and the two recent wars against Iraq.

In addressing Germany's ability (or lack there of) to work with coalition partners in WW I, Dinardo, of the US Marine Corps Command and Staff College summarizes well,

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[42] Frank Camm, Cynthia R. Cook, Ralph Masi, Anny Wong. *What the Army Needs to Know to Align Its Operational and Institutional Activities*, Appendix E (Santa Monica, California: Rand Corporation, 2007), 254.

[43] Department of National Defence. *Future Army Capabilities 2001* Report 01/01 (Kingston, Ontario: Director of Land Strategic Concepts, 2001), 11.

> coalitions may have approximately equal or greatly unequal partners. Coalition partners may have inconsistent or even contradictory war aims, and may find that a protracted war causes or intensifies divergence in goals. Coalition warfare may increase or diminish a country's flexibility in military options, and may restrict the partners' abilities to extricate themselves from the conflict. At a lower level, the conduct of coalition warfare may be made more difficult by various factors, including command structures, cultural or linguistic barriers, parochialism, public opinion and, of course, the personalities of leaders on both sides. To some extent, a nation's *ability to cope* with these factors determines much of its ability to master the problems of coalition warfare.[44]

How is it, then, that despite the overwhelming problems created by coalitions, they still manage to function? It could be argued that in the past, they simply overcame the problems through good training, good leadership, and the sheer determination of those at the tactical level. Col. Bruce, though critical of the administration within the Canadian Medical Services and its use of English medical resources rather than its own, paid tribute in his book to the British medical staff and emphasized his admiration for "the untiring devotion duty spirit of self sacrifice" at the tactical level of the Canadian service.[45] The investigation into the US Medical Department and its medical planning with the French that ultimately led to US casualties being without hospitals, suggested that they were in fact as efficient as one could expect. Gen. Pershing insisted that the French coalition partners "without question …did their best." He went on to write that although there arose health service support problems throughout the rest of the campaign "they were all met in such a way to reflect credit upon our Medical Department."[46]

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[44]R.L. DiNardo, D.J. Hughes. "War in History. Germany and Coalition Warfare in the World Wars: A Comparative Study" *War in History*. Vol. 8, Iss. 2 (Apr 2001): 166

[45] Herbert A. Bruce. *Politics and the Canadian Army Medical Corps*. (Toronto: William Briggs, 1919), 321

[46] John J. Pershing, My Experience in World War I, Vol 2 (Blue Ridge Summit, 1931), 127-128

The experience of the US forces in the former Yugoslavia would suggest that one way to overcome the problems of HSS in a coalition is to not rely on partners performing to a particular standard, and to simply plan to fill the gaps left by their lack of abilities or commitment. As one JTF commander put it, "the US hospital saw part of its job to be to identify and fill those gaps."[47] As the expression goes, they simply "soldiered on."

Succeeding within a Coalition

The 2001 CF report, "Future Army Capabilities," offers more detailed advice: "successful coalition command will depend on bridging both the *human* and *technical* gaps. Army commanders must have a broad understanding of both domains."[48] Successful Health Service Support within a coalition is no different; it starts with the leadership and their ability to navigate and contend with what LCol (Ret) Wayne Skillet, a former Associate Director of Military Strategy at the US Army War College, refers to as the "ambiguous environment" set up by "operational realities." Skillet goes on to suggest that the success of a coalition operation will be determined by how well a coalition, and more particularly its leaders, can apply the "proper blend of vision, determination, patience, tolerance, and flexibility" towards the operational realities. [49] Bowmen refers to these realities as historical friction.[50]

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[47] Comments by a JTF Commander in L.M.Davis, *et al, Army Medical Support for Operations Other Than War,* 49

[48] DND. *Future Army Capabilities 2001* Report 01/01 (Kingston, Ontario: DLCS, 2001), 11

[49] W.A.Skillet, "Alliances and Coalition Warfare", *Paramters* (Summer 1993); 79-83

[50] Thomas J Marshall, Steve Bowman *et al*., "Problems and Solutions in Future Coalition Operations" (The Strategic Studies Institute of the US Army, Carlisle, Pennsylvania, December 1997) 2-12

The key to successful Health Service Support to an operation is that all partners start with a common, agreed-to mission, and perhaps even more importantly an interoperability created through a common structure of the levels of health support. Without a common structure, in a multinational operation where each country's level of responsibility needs to synchronize with the next, gaps in patient care and evacuation arise quickly. Countries need to agree on what specifically is entailed in each Level, or Echelon, or Role of care, from personnel (their competencies and professional service capabilities) to physical assets (diagnostics, operating rooms, ICU, beds/holding) to responsibility to the higher and lower echelons of care. As noted in Annex I, the key players with whom Canada "normally" becomes involved with in coalition operations (UN, NATO, ABCA), use different terminology than the Canadian Forces Health Service (CFHS). How then, can the CFHS ever be expected to work in harmony with countries with which it does not normally associate when it cannot agree amongst its closest allies? This needs to be corrected if we are ever to understand each other, and a single system, explicitly defined, needs to be agreed upon before the start of any mission.

Before accepting the participation of a country into a coalition, the subject of medical and dental readiness needs to be addressed. Coalition partners cannot afford to send their health care professionals into what is initially a combat support role only to have them overwhelmed (and improperly resourced) as they are later burdened with having to treat a developing country's soldiers arriving in theatre with pre-existing health issues.

To ensure a successful HSS coalition operation, the question of a standard of professional competency and credentialing also needs to be properly addressed. Should it

be expected, as an example, that an Eastern European or African surgeon at a Role II facility could provide appropriate surgery on patients prior to evacuating them to a "Western" Role III? Can the Western partners feel comfortable in providing a Role II service to their troops and then evacuating them on to an Eastern European or African Role III facility? Some would say no. In a multinational Role III facility where the lead country is Canada, if the US is tasked with providing anaesthesia support and it deploys a Certified Registered Nurse Anaesthetist (CRNA), as opposed to an Anaesthesiologist, will Canada, a country that does not recognize CRNA credentialing, employ him or her to provide general anaesthesia?[51] Lead nations in multinational centres need guidance from their own government, governing bodies, and strategic military leaders on the credentialing requirements, and then must be explicit from the start as to the qualifications required from other countries in support of their team, while being cognizant of the political impact of possibly refusing the services of another country.

Conclusions

Health Service Support presents many of the same frictions as found with other facets of coalition operations, from cultural to historical. Differences in goals, logistics, capabilities and doctrine will exist within all coalitions. Recognizing their existence and dealing with each at the earliest stage of planning is paramount to the HSS mission success. Opportunities to train together and discuss "lessons-learned" bring great value in future operations, their planning and execution.

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[51] Presently US CRNAs deploy and provide general anaesthesia to US Forward Surgical Teams, working independent of Anaesthesiologist. In Canada, presently, only MDs with residencies in Anaesthesia can provide general anaesthetics.

A military's HSS needs to develop leaders that can navigate and negotiate the complexities of coalition operations, at the strategic and tactical level, but most importantly at the operational levels. Despite the doctrine and political commitment to a coalition, and despite the talents that exist from the buddy-aid or casualty collecting station or the field hospital, it is the operational level HSS commanders or command surgeons that need to be fully engaged as the advisor to the Coalition Commander. In providing sound advice on HSS deployment throughout the coalition AOR they must have direct access to the commander and must be able to assess all HSS assets within the coalition, their capacities and capabilities.[52] Moreover, they must have the personal and professional character that will allow them to cope with the various cultural and historical frictions of the partnering nations, using a blend of understanding, persuasion, influence, tact and sensitivity.

The fear of the CF and CFHS falling behind and becoming a greater burden to coalition partners (i.e. the US) or being disillusioned by the degree and quality of less-developed partners and their contribution to the mission has been expressed in its own vision for its Army's future:

> In the field of medicine, the gap between the most advanced nations and those with limited research and development resources will continue to grow. Coalition operations will continue to include varying degrees of medical capability. Adequate resources must be devoted to having a Canadian capability, or to ensure agreement with an equally advanced coalition partner.[53]

As it cannot guarantee control over coalition partners and their abilities, the CF and CFHS must put their energies into the former route and ensure they devote adequate

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[52] ABCA *Coalition Operations Handbook* Chpt 1, (2005), 1-25

[53] DND. *Future Army Capabilities 2001* Report 01/01 (Kingston, Ontario: DLCS, 2001), 40

resources to their own HS. Col David Salisbury, former Commanding Officer of the CF Environmental Medicine Establishment, warns that Canada cannot continue to rely on its allies for HSS, and "if Canada wishes to put its military personnel in harm's way, then it must be prepared to sustain them medically with appropriate Canadian military health care support."[54] This does not preclude nations like Canada from participating in coalition operations; rather, it emphasizes the need for each partner to support the coalition equitably.

[54] David Salisbury and Allan English, "Prognosis 2020: A military Medical Strategy for the Canadian Forces," *Canadian Military Journal*, (Summer, 2003): 53

Appendix I

Levels, Roles and Echelons of Care

CF Medical Roles of Care[55]

Role 1 Medical Care. The minimum capabilities of this Role include locating sick and injured, providing them with first aid and emergency medical treatment, evacuating them from the site of injury/onset of illness to a safer location, sorting them according to treatment precedence, and stabilizing and preparing them for evacuation to the next Role of care, if required. Role 1 medical treatment facilities may be enhanced to include limited casualty holding, dental Role 1 care, diagnostic services, preventive medicine services, and operational stress reaction management.

Role 2 Medical Care. The minimum capabilities of this Role emphasize efficient and rapid MEDEVAC of stabilized casualties from supported elements, and en route sustaining care. "Damage control" emergency surgery may be performed. Sick and injured requiring minor care may be held for short periods and returned to duty. Medical and dental materiel re-supply may be provided to supported Role 1 medical and dental treatment facilities. Role 2 medical treatment facilities may be enhanced to include intensive care, essential postoperative care, blood replacement, diagnostic services, and operational stress reaction and mental health management.

Role 3 Medical Care. The minimum capabilities of this Role emphasize resuscitation, initial surgery, post-operative care, and short-term surgical and medical patient care. Diagnostic services such as x-ray and laboratory, and limited scope internal medicine and psychiatric services are available. Reception and storage of medical and dental materiel and blood in the area of operations (AO), and distribution to supported units is provided, as well as repair of medical and dental equipment within the AO. Other ancillary capabilities include liaison teams for tracking Canadian casualties/patients in allied or Host Nation facilities, teams providing assistance with operational stress reaction and mental health management, and co-ordination of preventive medicine activities in the AO. Role 3 medical care may be enhanced to include specialist surgical (neuro-surgery, maxillofacial, burns, etc.) capabilities, advanced and specialist diagnostic capabilities (CT scan, arthroscopy, sophisticated laboratory tests, etc.), major medical, surgical, dental, and nursing specialities, and environmental health and industrial hygiene capabilities.

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[55] DND, *Canadian Forces Joint Doctrine: Health Services Support to Canadian Forces Operations*, B-GJ-005-410/FP-000 (Kingston: Canada 2007), Chpt 1, section II, 107.3(a)4

Role 4 Medical Care. This Role includes definitive-care hospitalization, re-constructive surgery, rehabilitation, storage and distribution of national medical and dental materiel/stocks inclusive of blood, blood products and intravenous fluids, and major repair or replacement of medical and dental equipment.

ABCA Roles of Medical Care[56]

Role 1. Role 1 care is that which is integral to the unit and includes the acquisition, treatment, and evacuation of wounded, injured, or sick soldiers from forward areas of the battlefield. First-aid (self and buddy aid) and enhanced first-aid (combat lifesaver skills) are provided by the soldier, his buddy, or a nonmedical soldier trained in enhanced first-aid skills in the field, and by medically trained soldiers, physicians, and physician assistants (PAs) at unit-level MTFs.

Role 2. Role 2 HSS exists between the unit level and hospitals at Role 3. It provides collection, triage, treatment, and evacuation or return to duty (RTD) of casualties and routine sick call on an area support basis.

Role 3. Role 3 care includes the provision of initial wound surgery (IWS) and hospitalization for medical treatment and nursing care.

Role 4. Role 4 care includes providing specialized surgery, hospitalization, and rehabilitation.

[56] American, British, Canadian and Australian Armies. *Coalition Health Interoperability Handbook*, QAP 256, Chap. 1, (Arlington, Virginia: ABCA Primary Standardization Office, 2003), 2-3

NATO Medical Roles and Echelons of Care[57]

Land/Air Medical Treatment Facilities

Role 1 The Role 1 medical treatment facility provides first aid, triage, resuscitation and stabilization. It is an essential element of every national contingent and it must be readily and easily available to all force personnel. Normally included within the basic Role 1 capabilities are: routine sick call and the management of minor sick and injured personnel for immediate return to duty, as well as casualty collection from the point of wounding and preparation of casualties for evacuation to the rear.. Whenever a national contingent is unable to meet these criteria an increase in capability or medical support from another contingent's medical resources should be negotiated.

Augmented Role 1 (Role 1+) In accordance with the mission, Role 1 medical capabilities can be augmented by one or more of the following:

a. Very limited patient holding capacity.
b. Primary dental care.
c. Basic laboratory testing.
d. Preventive medicine.
e. Operational stress management.

Role 2. A Role 2 medical facility is an intermediate structure capable of receiving casualties, providing triage and stabilization for further evacuation, treatment and holding of patients until they can be returned to duty or evacuated. In addition to Role 1, Role 2 minimum capability includes :

a. Re-supply to Role 1.
b. Evacuation from Role 1.
c. Limited holding capacity.
d. Personnel reinforcement to Role 1.
e. Patient record maintenance.
f. Tracking of evacuated patients.
g. Operational stress management.

The deployment of Role 2 units is mission-dependent, especially when:

a. There are large numbers of personnel or when there is a risk of high numbers of casualties.
b. Geographic, topographic, climatic or operational factors may limit evacuation capability.
c. The overall medical capability of the force at Role 1 might require additional support or reinforcement (such as during

[57] NATO, *AJP-4.10; Allied Joint Medical Support Doctrine*, Chpt 1 Sec II, (2002), 24-28

realignment of troops, or during retrograde operations and training exercises in theatre).

Augmented Role 2 (Role 2+) Augmented Role 2 (Role 2+) medical facilities consist of Role 2 minimum capability augmented by any or all the following:

a. Emergency surgery.
b. Intensive care.
c. Essential post operative care.
d. Blood replacement.
e. Laboratory capability.
f. Basic imaging capability (e.g., radiology, ultrasound).

It must be understood that the addition of ancillary services reduces the mobility of the medical facility, by increasing the requirements for medical personnel and equipment. A balance between medical capabilities and tactical mobility should be met in the light of operational circumstances.

Role 3. Role 3 medical facilities include the capability of Role 2 extended by surgery, intensive and post-operative care, medical, dental and nursing care, and relevant diagnostics. Role 3 units can provide lower level units medical personnel replacement. Resupply of Role 2 facilities and either control of or ready access to patient evacuation assets are included within the minimum capability. In addition to beds required for the seriously ill, the holding capacity will be sufficient to allow diagnosis, treatment and holding of those patients who can receive adequate treatment and be returned to duty within the evacuation policy. It is important to note that the mobility of Role 3 facilities depends significantly on the operational scenario. Many need only to be deployable into theatre and will not. NATO subsequently require redeployment. However, in a highly mobile conflict some will also require to be redeployable in order to be able to continue supporting the maneuvering formations.

Augmented Role 3 (Role 3+). Augmented Role 3 (Role 3+) medical facilities include one or more of the following :

a. Specialist surgery (neuro-surgery, maxillo-facial, burns, etc.).
b. Advanced and specialist diagnostic capabilities (CT scan, arthroscopy, sophisticated lab tests, etc.).
c. Major medical, dental and nursing specialties.
d. Preventive medicine.
e. Environmental health capability.

Role 4. A Role 4 medical facility provides definitive care of patients for whom the treatment required is longer than that dictated by the theatre evacuation policy or for whom the capability usually found at Role 3 is inadequate. This would normally include definitive care specialist surgical and medical procedures, reconstruction and rehabilitation. This care is usually highly specialized, time consuming and normally provided in the casualty's country of origin. Under very unusual circumstances, a Role 4 medical facility may be established in the Theatre of Operations (TOO).

Maritime Medical Treatment Facilities

Echelon 1. Echelon 1 medical facilities provide the basic integral medical support of individual units. Capabilities are limited to resuscitation, stabilization and those described for Role 1. Such support extends from small war vessels where no medical staff is carried and where care is limited to self and buddy care, through ships with medical personnel but no physician, to ships with a number of medical officers and staff. In a maritime force trained medical personnel will staff the medical departments on small ships and provide emergency care independent of a medical officer, whilst on ships with a medical officer assigned, the capability for a more advanced level of emergency care exists.

Echelon 2 Echelon 2 medical facilities provide emergency surgery. There is limited post-operative holding capacity and therefore evacuation is essential to sustain the recovery of patients. They are essentially equivalent to the land forces Role 2+ capability. This capability is available either afloat in some major combat or logistic vessels, or ashore at the Forward Logistic Site (FLS).

Echelon 3 Echelon 3 medical facilities provide specialist surgical teams and more advanced medical support in which the major medical, dental and nursing specialties are represented. These capabilities can be provided afloat, by Primary Casualty Receiving Ships (PCRS), which can be either hospital or major amphibious ships[1] and ashore at the FLS and Advanced Logistic Support Sites (ALSS).

Echelon 4. Echelon 4 medical facilities provide full and definitive medical treatment. They will be shore based, either in Host Nation (HN) hospitals or in the home country.

United Nations Medical Levels of Care[58]

Basic Level. This effectively refers to basic First Aid and preventive medicine practiced at the smallest sub-unit level. As there is no doctor present, care is provided by the peacekeeper, or by a trained paramedic or nurse, using basic medical equipment and supplies.

Level One Medical Support. This is the first level where a doctor is available. It provides first line primary health care, emergency resuscitation, stabilization and evacuation of casualties to the next level of medical care within a peacekeeping mission.

Tasks of Level One Medical Unit:

1. Provide primary health care to a peacekeeping force of up to 700 in strength, with at least 20 ambulatory patients per day.
2. Conduct entry medical examination for peacekeepers if this has not already been done, and arrange for any necessary investigations.
3. Perform minor surgical procedures under local anaesthesia, e.g. toilet and suture of wounds, excision of lumps.
4. Perform emergency resuscitation procedures such as maintenance of airway and breathing, control of hemorrhage and treatment of shock.
5. Triage, stabilize and evacuate a casualty to the next level of medical care.
6. Ward up to 5 patients for up to 2 days each, for monitoring and inpatient treatment.
7. Administer vaccinations and other disease prophylaxis measures required in the mission area.
8. Perform basic field diagnostic and laboratory tests.
9. Maintain the capability to split into separate Forward Medical Teams (FMTs) to provide medical support simultaneously in two locations.
10. Oversees implementation of preventive medicine measures for the contingents and personnel under their care. A Level One medical unit is to have adequate medical supplies and consumables for up to 60 days.

Level Two Medical Support. This is the next level of medical care and the first level where surgical expertise and facilities are available. The mission of a Level Two medical facility is to provide second line health care,

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[58] United Nations, *Medical Support Manual for United Nations Peacekeeping Operations,* 2nd ed., Chap. 3, (New York, 1999), 19-28

emergency resuscitation and stabilization, limb and life-saving surgical interventions, basic dental care and casualty evacuation to the next echelon.

Tasks of Level Two Medical Unit:

1. Provide primary health care to a peacekeeping force of up to 1000 in strength, with the capacity of treating up to 40 ambulatory patients per day.
2. Conduct entry and routine medical examination for peacekeepers if this is required, including any necessary investigations.
3. Perform limb and life saving surgery such as laparotomy, appendectomy, thoracocentesis, wound exploration and debridement, fracture fixation and amputation. This must have the capacity to perform 3-4 major surgical procedures under general anesthesia per day.
4. Perform emergency resuscitation procedures such as maintenance of airway, breathing and circulation and advanced life support, hemorrhage control, and other life and limb saving emergency procedures.
5. Triage, stabilize and evacuate casualties to the next echelon of medical care.
6. Hospitalize up to 20 patients for up to seven days each for in-patient treatment and care, including intensive care monitoring for 1-2 patients.
7. Perform up to 10 basic radiological (x-ray) examinations per day.
8. Treat up to 10 dental cases per day, including pain relief, extractions, fillings and infection control.
9. Administer vaccinations and other disease prophylaxis measures as required in the mission area.
10. Perform up to 20 diagnostic laboratory tests per day, including basic hematology, blood biochemistry and urinalysis.
11. Constitute and deploy at least 2 FMTs (comprising 1 x doctor and 2 x paramedics) to provide medical care at secondary locations or medical support during land and air evacuation.
12. Maintain adequate medical supplies and consumables for up to 60 days, and the capability to resupply Level One units in the Mission area, if required.

Level Three Medical Support. This is the highest level of medical care provided by a deployed UN medical unit. It combines the capabilities of Level One and Two units, with the additional capability of providing specialized in-patient treatment and surgery, as well as extensive diagnostic services. It is important to note that a Level Three unit is rarely deployed, and that this level of support is generally obtained from existing

civilian or military hospitals within the Mission area or in a neighboring country.

Tasks of Level Three Medical Unit:

1. Provide primary health care to a peacekeeping force of up to 5000 in strength, with the capacity to treat up to 60 ambulatory patients per day.
2. Provide specialist medical consultation services, particularly in areas like Internal Medicine, Infectious Diseases, Tropical Medicine, Dermatology, Psychiatry and Gynaecology.
3. Perform up to 10 major general and orthopedic surgical procedures under general anesthesia per day. Availability of specialist surgical disciplines (e.g. neurosurgery, cardiothoracic surgery, trauma surgery, urology, burns unit) is an advantage.
4. Perform emergency resuscitation procedures such as maintenance of airway, breathing and circulation and advanced life support.
5. Stabilize casualties for long-haul air evacuation to a Level 4 facility, which may be located in another country.
6. Hospitalize up to 50 patients for up to 30 days each for inpatient treatment and care, and up to 4 patients for intensive care and monitoring.
7. Perform up to 20 basic radiological (x-ray) examinations per day. Availability of ultra-sonography or CT scan capability is an advantage.
8. Treat 10-20 dental cases per day, including pain relief, extractions, fillings and infection control, as well as limited oral surgery.
9. Administer vaccination and other preventive medicine measures, including vector control in the mission area.
10. Perform up to 40 diagnostic laboratory tests per day.
11. Constitute and deploy at least two FMTs (comprising 1 x doctor and 2 x paramedics) to provide medical care at secondary locations or medical support during casualty evacuation by land, rotary and fixed-wing aircraft.
12. Maintain adequate medical supplies and consumables for up to 60 days, and the capability of limited resupply Level One and Level Two medical units, if required

Level Four Medical Support. A Level Four medical facility provides definitive medical care and specialist medical treatment unavailable or impractical to provide for within a Mission area. This includes specialist surgical and medical procedures, reconstruction, rehabilitation and convalescence. Such treatment is highly specialized and costly, and may be required for a long duration. It is neither practical nor cost-effective for the UN to deploy such a unit within the Mission area. Such services are generally sought in the host country, a neighboring country, or in the

troop-contributing country itself. The UN can arrange transfer of a patient or casualty to such a facility, and for reasons of cost, compensation and pension, continues to monitor the patient's progress.

Indications for UN medical staff to utilize Level 4 facilities include:

1. When the distance from Mission area to the country of origin is too far, and the patient or casualty is in urgent need of specialist medical treatment.
2. When the patient requires only short-term specialist treatment and is expected to return to duty within 30 days.
3. When the troop-contributing country is unable to provide appropriate definitive treatment (this excludes chronic medical conditions diagnosed prior to the peacekeepers deployment into the Mission area, or for which he is already receiving treatment).
4. When the UN receives an offer from a specific nation to provide definitive care, an arrangement requiring a contract or Letter of Assist (LOA) with the respective country and allocation of the appropriate funds.

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