Medical Support for UN Peace Operations in High-Risk Environments

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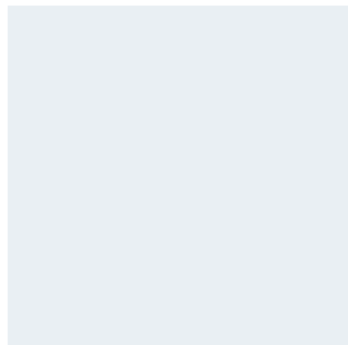
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CONTENTS

Abbreviations

CasEvac	Casualty evacuation
DFS	UN Department of Field Support
DPKO	UN Department of Peacekeeping Operations
HIPPO	High-Level Independent Panel on Peace Operations
IED	Improvised explosive device
MedEvac	Medical evacuation
MINUSCA	UN Multidimensional Integrated Stabilization Mission in the Central African Republic
MINUSMA	UN Multidimensional Integrated Stabilization Mission in Mali
MONUSCO	UN Organization Stabilization Mission in the Democratic Republic of the Congo
MSD	Medical Services Division
MSS	Medical Support Section
OMA	UN Office of Military Affairs
PET	UN Policy, Evaluation and Training
UNAMID	UN–African Union Mission in Darfur
UNMIL	UN Mission in Liberia
UNMISS	UN Mission in the Republic of South Sudan

Executive Summary

The UN is increasingly deploying peacekeepers to conflict theaters where there is no political agreement and little or no peace to keep. Such high-risk environments make it harder for the UN to keep its personnel safe, fit, and healthy. While current UN missions have adopted a number of measures to mitigate these dangers, these developments do not address the systemic challenges facing medical support to UN peace operations. Therefore, this paper asks the question: What are the challenges to providing medical support to UN peace operations in high-risk environments?

The purpose of medical support for peace operations is "to secure the health and well-being of members of United Nations [peacekeeping operations] in a timely and efficient manner."[1] At UN headquarters, this is managed by two central bodies: (1) the Medical Support Section (MSS), which oversees medical logistics for peace operations; and (2) the Medical Services Division (MSD), which oversees medical support across the UN system. However, both units have come to focus on peace operations, resulting in replication of work and a lack of clarity in planning and coordination. With an increase in the number of integrated missions, similar issues have arisen in the field between the military and civilian components of medical support.

As the landscape of peace operations continues to evolve, a number of initiatives have aimed to change UN medical support policies. Both the report of the High-Level Independent Panel on Peace Operations (HIPPO) and the secretary-general's follow-up report highlighted the need for a coherent policy, leading to efforts to develop a medical performance framework for UN peace operations. Despite such initiatives, the UN needs to address five core challenges in order to meet its duty to care for its personnel in high-risk environments:

- **Medical structures, planning, and coordination in UN headquarters:** Both MSS and MSD suffer from lack of clarity in lines of authority and inadequate planning, and there is insufficient coordination between the two units.

- **Standards of care:** Although in theory the UN guarantees the same standards of care to all personnel, it has no way to enforce these standards. As a result, many countries contribute low-quality medical personnel and equipment, and countries that can afford to often bypass UN medical support systems, fostering resentment.

- **Coordination in the field:** Overly restrictive procedures, especially regarding casualty evacuation (CasEvac) and medical evacuation (MedEvac) often prevent effective coordination of medical support.

- **Training and capacity building:** Although all UN personnel are supposed to receive pre-deployment medical training, including in basic first aid, levels of training vary from contingent to contingent.

- **Resources and capabilities:** UN missions are often forced to accept whatever equipment they can get, resulting in serious capability gaps, especially in terms of air assets.

Based on these challenges, the UN and its member states could take a number of actions to enhance the efficiency and effectiveness of medical support to peace operations in high-risk environments:

- MSD and MSS should coordinate better and create links with the Office of Military Affairs (OMA).

- Medical support planning should be included in every aspect of mission planning and be tailored to the context.

- Missions should shift away from Level II hospitals, which are expensive and underutilized, instead exploring alternatives such as mobile medical units with surgical capabilities.

- Missions should focus on in-mission training, including by improving mentoring of medical personnel.

- MedEvac and CasEvac procedures should be simplified, decentralized, and made more flexible.

- The UN should seek pledges of medical equipment and personnel from member states in a more targeted way.

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1 UN Departments of Peacekeeping Operations and Field Support (DPKO/DFS), *Medical Support Manual for United Nations Field Missions*, 3rd edition, 2015.

Introduction

On May 28, 2015, the force commander and police commander of the UN Multidimensional Integrated Stabilization Mission in Mali (MINUSMA) suffered an attack while conducting a visit to contingents in Ber, about sixty kilometers east of Timbuktu. The operation was kept top secret to ensure security. Nonetheless, on the route back the convoy was hit by an improvised explosive device (IED) and the lead vehicle was destroyed, resulting in the injury of a significant number of troops and the destruction of equipment. The high-level commanders were able to control the situation on the ground and immediately requested a helicopter for casualty evacuation (CasEvac) to Bamako.

The commanders requested the helicopter to get the convoy moving again quickly and to get those who were injured to the hospital as soon as possible. Considering the IED had been placed while the convoy was in Ber, there was considerable risk of a second attack or ambush, making it imperative to keep moving. There was no helicopter in Timbuktu at the time, but a helicopter en route back to Timbuktu from Kidal was flying directly over the attack site and would land back in Timbuktu in sixty minutes. Despite the proximity of an air asset, the request for CasEvac was denied, as the distance between the attack location and Timbuktu was said to be close enough to drive, and the injuries were not considered life-threatening. After seeing the empty helicopter fly directly over the attack site, the convoy called for an armed escort to the hospital, thus putting more troops in harm's way. It took sixty to ninety minutes longer for the injured to reach the hospital than it would have by helicopter. Luckily, no one died in the process.[2]

Such direct attacks on UN camps and convoys, seen most recently in Mali in Gao, Timbuktu, and Kidal, are an indication of the changing nature of conflict and the violent situations peacekeepers find themselves in (see Box 1). As a result, more peacekeepers are being killed in the field. In 2015, 129 military personnel, police, and civilians posthumously received the Dag Hammarskjöld Medal, awarded to those who lose their lives while in the service of the UN.[3] This generated concern from various UN member states, as well as from Secretary-General Ban Ki-moon. The report of the secretary-general on the implementation of the recommendations of the Special Committee on Peacekeeping Operations in December 2014 raised the concern that UN peacekeeping has become increasingly dangerous. UN peacekeepers are increasingly the targets of carjacking, kidnapping, and ambushes, and more are getting injured or killed by IEDs, suicide bombings, rocket-propelled grenades, helicopter crashes, artillery fire, and landmines.[4]

These new environments, where the UN sends peacekeepers without being able to guarantee their safety, challenge the foundational assumptions and doctrine of UN peacekeeping. Peacekeepers are increasingly losing their impartiality and deploying to conflict theaters where there is no political agreement and little or no peace to keep. These missions are commonly known as "stabilization" missions, a term that the UN has not defined. Stabilization missions "operate in the midst of on-going conflicts"[5] and therefore may have to maintain a cease-fire or support a peace process rather than support the implementation of a peace agreement.[6]

This incident in MINUSMA also demonstrates the challenge of keeping peacekeeping personnel safe, fit, and healthy, particularly in such difficult and dangerous environments. Some measures current UN missions have adopted to mitigate these dangers include: having liaison officers or language assistants from government forces or armed groups accompany patrols; coordinating with and getting approval from relevant host-

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2 Interview with Col. Peter Öberg, Permanent Mission of Sweden to the United Nations, 2017.

3 "Peacekeeping 'Flagship of the UN Enterprise,' Ban Says ahead of Day Honouring 'Blue Helmets,'" UN News Centre, May 19, 2016, available at www.un.org/apps/news/story.asp?NewsID=53976#.WOemn2e1uUl .

4 UN General Assembly, *Implementation of the Recommendations of the Special Committee on Peacekeeping Operations: Report of the Secretary-General*, UN Doc. A/69/642, December 9, 2014.

5 Cedric de Coning, "Do We Need a UN Stabilization Doctrine?" in *What Needs to Change in UN Peace Operations? An Expert Briefing Book Prepared for the High-Level Independent Panel on Peace Operations*, edited by Richard Gowan and Adam C. Smith (New York: Center on International Cooperation and International Peace Institute, 2014).

6 Arthur Boutellis, "Can the UN Stabilize Mali?" *Stability: International Journal of Security and Development* 4, no. 1 (2015).

> **Box 1. Changing conflict environments[7]**
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> The new conflict environments facing UN peace operations can have a number of characteristics, including an increase in:
>
> - Lack of freedom of movement for UN peacekeepers, despite status of forces agreements granting this right (UNMISS, UNAMID, UNIFIL);
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> - Sophisticated and well-coordinated IED attacks by terrorists, causing more casualties and damage (MINUSMA);
>
> - Indirect attacks on UN installations by mortar, artillery, and rocket (UNMISS, MINUSCA, MINUSMA);
>
> - Direct attacks on UN patrols and convoys (MINUSMA, MINUSCA);
>
> - Violent demonstrations against UN troops (UNMISS, MONUSCO, MINUSCA); and
>
> - Attacks on camps for internally displaced persons and protection-of-civilian sites by government forces or armed groups, causing death and injury of civilians (UNMISS, UNAMID, MINUSCA).

country authorities early on; putting in place fortified defenses and conducting domination patrols around the outer perimeters of camps; liaising with local security agencies to provide additional protection and information; and increasing the number of armored vehicles for UN police patrolling high-risk areas. In addition, MINUSMA and the UN Multidimensional Integrated Stabilization Mission in the Central African Republic (MINUSCA) both regularly equip their camps with overhead bunkers, trenches inside the camps, personal protective equipment against indirect fire, and radar to detect incoming mortars and rockets.[8]

However, these developments do not address the systemic challenges facing medical support to UN peace operations, including the need for more paramedics trained in pre-hospital trauma life support, greater capacity for casualty evacuation (CasEvac) and medical evacuation (MedEvac), and more trauma-level hospitals.[9]

Previous reports from the International Peace Institute have focused on health and illness in UN peace operations. Sara Davies and Simon Rushton have explored the complex relationship between

UN peacekeeping and health. They find a need for greater attention to conducting medical checks and providing healthcare for peacekeepers both before and during deployment. They also shed light on the dilemmas raised by peacekeepers delivering health assistance, which is sometimes used to "win hearts and minds" but often is not in line with UN mandates or coordinated with humanitarian agencies.[10] In another report, Marina Henke argues that illness is still the prevalent cause of fatalities in UN peace operations and that illness-related fatalities are on the rise.[11]

Research by Haidi Wilmot, Scott Sheeran, and Lisa Sharland has focused on confronting the safety and security challenges facing peace operations. Among other things, their report recommends ensuring that all peace operations have adequate medical support and evacuation capabilities, establishing a surge of security and medical personnel at mission start-up and during crises, and considering private service providers when rapidly deploying medical support.[12]

Rather than focusing just on health or safety, this paper looks at the challenges of medical support to peace operations in high-risk environments. It is

7   UN Policy Evaluation and Training (PET) Division and Office of Military Affairs (OMA), briefing to the Special Committee on Peacekeeping Operations, November 22, 2016.

8   UN PET Division and OMA, briefing to the Special Committee on Peacekeeping Operations, November 22, 2016.

9   Interview with Jillann Farmer, Director of MSD, 2017.

10 Sara E. Davies and Simon Rushton, "Healing or Harming? United Nations Peacekeeping and Health," New York: International Peace Institute, March 2015, available at www.ipinst.org/2015/03/healing-or-harming-united-nations-peacekeeping-and-health .

11 Marina E. Henke, "Has UN Peacekeeping Become More Deadly? Analyzing Trends in UN Fatalities," New York: International Peace Institute, December 2016, available at www.ipinst.org/2016/12/has-un-peacekeeping-become-more-deadly-analyzing-trends-in-un-fatalities .

12 Haidi Wilmot, Scott Sheeran, and Lisa Sharland, "Safety and Security Challenges in UN Peace Operations," International Peace Institute, July 2015, available at www.ipinst.org/2015/07/safety-and-security-challenges-in-un-peace-operations .

concerned with the growing risk that troops, police, and civilians face when deployed to high-risk environments. While illness and accidents will remain a prevalent cause of fatalities in UN peace operations, medical facilities need to adapt to the operational realities of high-risk, asymmetric-threat environments where peacekeepers are the direct target of attacks.

The central question this paper asks is: What are the challenges to providing medical support to UN peace operations in high-risk environments? In answering this question, the paper draws on interviews the authors conducted in New York, Oslo, Bangui, Bamako, and Gao with more than fifty experts working on medical support, planning, command and control, MedEvac and CasEvac, and other areas intrinsic to healthcare, safety, and security in peace operations, especially in high-risk environments. The authors conducted field research in Mali and the Central African Republic, visiting contingents and field hospitals in the UN missions in both countries. The paper also draws on insights from past research, evaluations, and reports on medical challenges in peace operations.

Structures for Medical Support to UN Peace Operations

The purpose of medical support for peace operations is "to secure the health and well-being of members of United Nations [peacekeeping operations] in a timely and efficient manner."[13] The medical aspects of a UN mission's work fall into two categories: (1) providing medical support to mission personnel under the command of a chief medical officer, who oversees the provision of medical care in the mission hospital or clinic and oversees the care provided to troops, police, and civilian personnel; and (2) ensuring the health of peacekeepers and civilian personnel prior to their deployment in the mission.[14]

MEDICAL SUPPORT STRUCTURES IN HEADQUARTERS

Medical support for UN peace operations is managed by two central bodies in New York: (1) the Medical Support Section (MSS) of the Department of Field Support; and (2) the Medical Services Division (MSD) of the Department of Management. MSD oversees medical support across the UN system, while MSS oversees medical logistics for peace operations. However, as peacekeeping has evolved to become an increasingly core function of the UN, both MSS and MSD have come to focus on peace operations, resulting in replication of work and a lack of clarity in planning and coordination.[15]

In theory, the roles and functions of both medical divisions are clear. The *Medical Support Manual for United Nations Field Missions* lays out the divisions between the two departments (see Figure 1). MSD, under the Department of Management, is responsible for medical policymaking and standards for UN subsidiary organs. This involves formulating and reviewing UN medical standards, policies, and guidelines; ensuring coordination and monitoring of system-wide implementation; and providing professional and technical oversight to medical personnel in the missions, including credentialing UN medical personnel.[16]

MSS, seated in the Department of Field Support, is responsible for facilitating medical operational and logistical activities in UN field missions (both peacekeeping operations and special political missions). This involves developing the medical support component of mission concepts of operations and support plans; developing and reviewing the medical component of issue papers the Secretariat submits to the General Assembly's Contingent-Owned Equipment Working Group and reviewing the medical component of the UN manual on contingent-owned equipment; supporting planning and execution of medical logistics and procurement; and coordinating the

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13 UN DPKO/DFS, *Medical Support Manual for United Nations Field Missions*, 3rd edition, 2015.

14 Ibid.

15 Interview with Jillann Farmer.

16 UN DPKO/DFS, *Medical Support Manual for United Nations Field Missions*, 3rd edition, 2015.

Figure 1. Medical support structure in headquarters

Source: United Nations Department of Peacekeeping Operations and Department of Field Support, *Medical Support Manual for United Nations Field Missions*
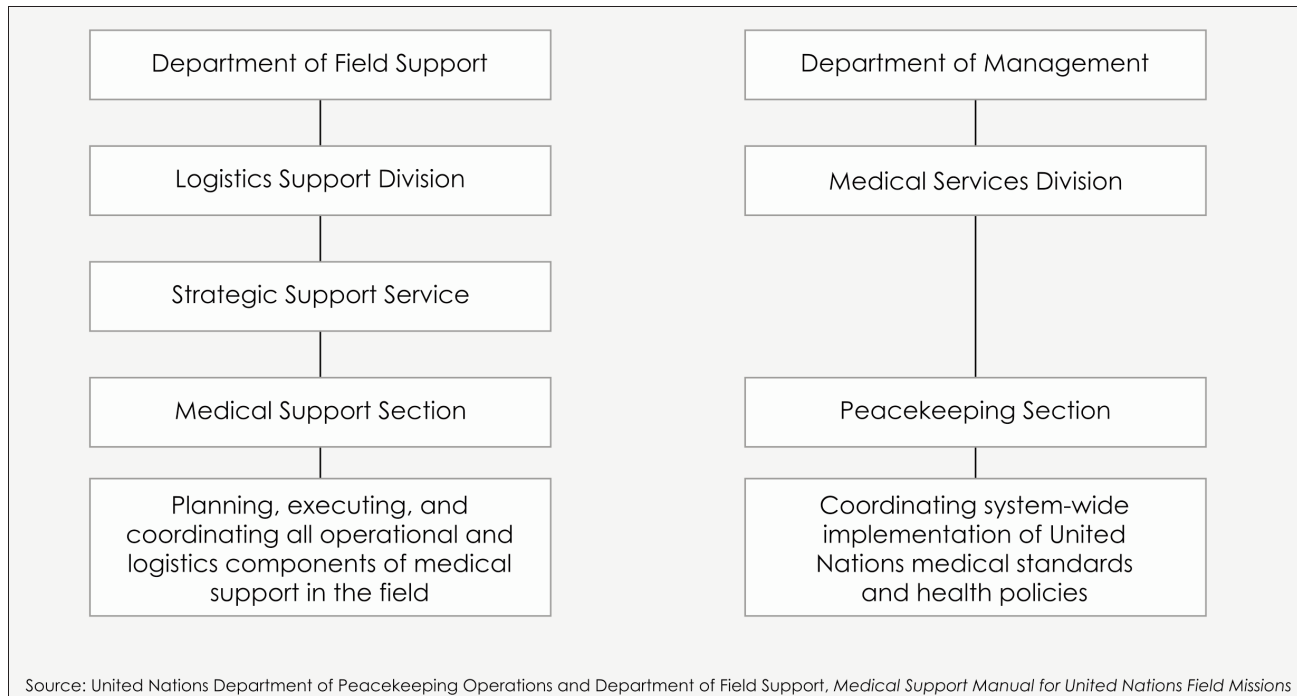
medical aspects of projects to identify and rectify shortfalls in the capacities and capabilities of medical support deployed by troop- and police-contributing countries.[17]

MSD and MSS work together in a number of areas. MSD works with MSS in planning integrated missions, which have become more common as peace operations face increasingly high-risk environments. MSS, as part of the mission teams of the Departments of Field Support and Peacekeeping Operations, participates in pre-deployment visits, and MSD conducts advisory and assessment visits to countries that have pledged equipment to missions to ensure standards are met; sometimes these missions are conducted jointly or simultaneously.[18] The two departments also work together to ensure military and police units are trained and other personnel are effective and up-to-date.[19]

However, as UN peace operations are increasingly deployed to high-risk environments, the division of roles and responsibilities between MSD

and MSS has become more complicated. To ensure that all those involved prioritize medical support in every aspect of mission planning, UN personnel working on medical issues need to coordinate better. Further, drawing on the High-Level Independent Panel on Peace Operations' (HIPPO) recommendation for more tailored peace operations, there is a need to make missions more flexible and better able to adapt to emergencies in the field.[20]

MEDICAL SUPPORT STRUCTURES IN FIELD MISSIONS

In a multidimensional peace operation, medical support is usually provided by both the civilian and the military/police components of the mission (see Figure 2). The chief medical officer is responsible for the overall civilian medical support operations in a field mission. The chief medical officer reports directly to the director of mission support or chief of mission support for operational matters, including issues related to life-threatening emergencies and MedEvac.[21] The military compo-

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17 Ibid.

18 Interview with Jillann Farmer; UN DPKO/DFS, *Medical Support Manual for United Nations Field Missions*, 3rd edition, 2015.

19 UN DPKO/DFS, *Medical Support Manual for United Nations Field Missions*, 3rd edition, 2015.

20 United Nations, *Uniting Our Strengths for Peace—Politics, Partnership and People: Report of the High-Level Independent Panel on United Nations Peace Operations*, June 16, 2015.

21 UN DPKO/DFS, *Medical Support Manual for United Nations Field Missions*, 3rd edition, 2015.

nent of medical support consists of the force medical cell, which is headed by the force medical officer. The force medical officer reports to the force commander and is central to all issues related to medical support for military personnel.[22]

As a result, the civilian and military structures for medical support are separate. This has worked well in the past when missions were either predominantly civilian or predominantly military. However, in missions such as MINUSMA and MINUSCA, which have large numbers of civilian and military personnel placed together in high-risk areas, these two streams have become more intertwined, leading to replication of roles and challenges related to authority. This highlights the need for a more integrated system for communication between the force medical officer and the chief medical officer.

To facilitate cooperation, the civilian and military components of medical support are supposed to be incorporated under the mission medical cell to form a single office. Where possible, the offices of the chief medical officer and force medical officer are also supposed to be co-located to maximize collaboration.[23] However, this is not always the case. In MINUSCA, for example, the

Figure 2. Medical support structure in integrated missions

Source: United Nations Department of Peacekeeping Operations and Department of Field Support, *Medical Support Manual for United Nations Field Missions*
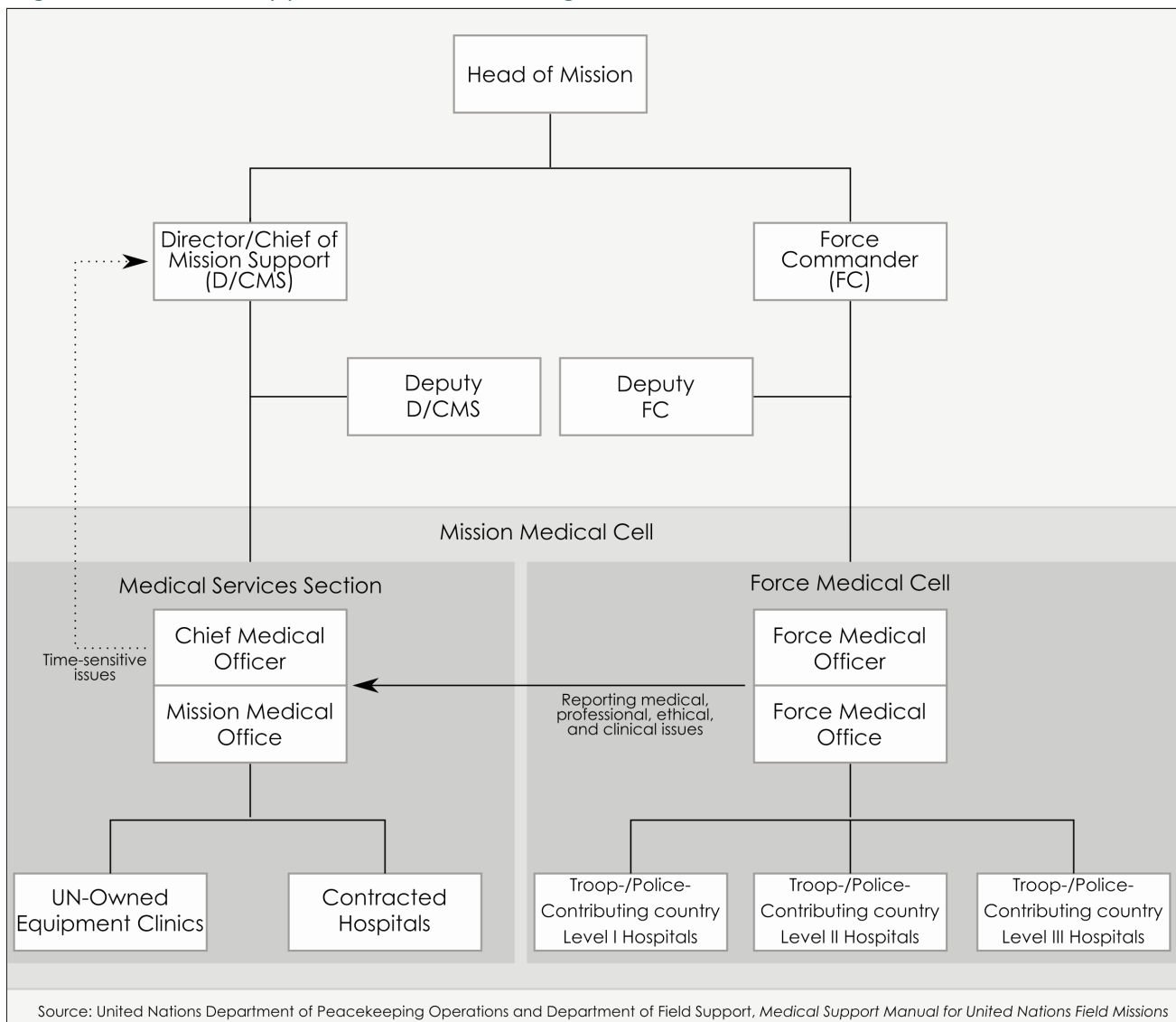
22 Ibid.
23 Ibid.

chief medical officer is based in the log camp and the force medical officer in the main camp. In MINUSMA's "super camp," on the other hand, the two officers are located in offices directly opposite each other. MINUSMA has also created a seat for its MedEvac coordinator in its Joint Operations Centre to give this person a dedicated space during times of emergency.[24]

Another example of a structure to coordinate medical support is NATO's Patient Evacuation Coordination Cell in Afghanistan, which is a permanent duty station in the Joint Operations Centre and can be scaled up or down according to threat levels. This cell was created because of the challenging operating environment and the need for innovative initiatives to improve coordination, transfer of information, and reaction times.[25] While the UN operates differently than NATO, if it is to operate in high-risk environments it could consider similar approaches to improve coordination.

Changing Medical Support Policies

The 2015 HIPPO report made several recommendations related to medical support, which were seen to give much-needed momentum to efforts to reform and to provide more resources to medical support structures.[26] The three main recommendations were to:

1. Establish a system "to enable Member States to contribute short- or medium-term specialist capabilities," including for medical support;

2. Prioritize "timely and reliable medical evacuation and casualty evacuation" in mission start-ups and continuously maintain this throughout the mission, including the capability to fly at night, and not to assess any mission "to have reached an initial operating capability unless these arrangements are in place"; and

3. Develop a medical performance framework, "including through the introduction of standards for the quality of care provided and practitioner, hospital and medical evacuation capabilities."[27]

Many of these recommendations were repeated in Secretary-General Ban's follow-up report, in which he urged a focus on "ensuring the safety and security of United Nations personnel."[28] The General Assembly's Special Committee on Peacekeeping Operations (C34) has also made significant commitments to improve medical support on the ground. It emphasized the need for "clear minimum standards for all UN medical capabilities," as well as "clear capability standards [for CasEvac and MedEvac] that ease the facilitation of rapid responses, especially during life-or-death situations." The committee further urged "the Secretariat and troop- and police-contributing countries to strengthen their efforts to harmonize pre-deployment and in-country awareness programmes and to ensure the strict application of United Nations guidelines on medical clearance and medical conditions that preclude deployment."[29]

These reports brought much-needed attention to the challenges of medical support to UN peace operations in high-risk environments and highlighted the need for a coherent policy. The rise of fatalities in MINUSMA also demonstrated the need to make medical planning central to mission planning, and this was clearly supported by UN member states.

In response to these reports and high numbers of fatalities in some missions, there have been significant efforts to establish the foundations of a medical performance framework for UN peace operations, which will apply to all healthcare facilities, both civilian and military.[30] In addition, the Medical Services Division (MSD) has developed an initial plan to establish and manage the healthcare standards for this framework.[31] MSD, in partner-

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24 Interview with chief of the Joint Operations Centre in MINUSMA, 2017.

25 Mariah Best, "Medical Operations in Afghanistan: Continued Success as ANSF Takes the Lead," Defense Video Imagery Distribution System, May 1, 2014, available at www.dvidshub.net/news/119046/medical-operations-afghanistan-continued-success-ansf-takes-lead .

26 Interview with staff from the UN Medical Services Division (MSD), 2016.

27 United Nations, *Uniting Our Strengths for Peace*.

28 UN Secretary-General, *The Future of United Nations Peace Operations: Implementation of the Recommendations of the High-Level Independent Panel on Peace Operations*, UN Doc. A/70/357–S/2015/682, September 2, 2015.

29 UN General Assembly, *Report of the Special Committee on Peacekeeping Operations: 2016 Substantive Session*, UN Doc. A/70/19, 2016.

30 Interview with staff from OMA, 2016.

31 Interview with staff from MSD, 2016.

ship with the Medical Support Section (MSS) and the Office of Military Affairs, also identified several work streams to evaluate and potentially reform:

- Buddy first-aid training;
- Training of first responders/trauma medics;
- CasEvac/MedEvac policy development and implementation; and
- Standardization of Level I, Level II, and Level III care (see Box 2).[32]

In line with these plans, MSD is developing a standardized basic life-support curriculum and a competency framework, which are being implemented throughout the UN peacekeeping system. The second stage of this project involves developing and implementing a training-of-trainers program to standardize training of peacekeeping personnel across all troop- and police-contributing countries. To standardize and improve the safety and quality of treatment provided in Level II and III hospitals, MSD is developing a *United Nations Manual for Healthcare Quality and Patient Safety Standards*, including an implementation guide and

associated tools.[33]

Linked to these efforts, and to ensure safe and timely healthcare for UN personnel who rely on UN-operated clinics and hospitals, the Department of Management's Office of Human Resources Management has commenced a program to improve oversight and governance of health services. This program will work to improve screening of the qualifications and experience of personnel recruited to work in UN healthcare facilities, establish a standards and accreditation scheme for health operations, and provide enhanced independent medical support to the Board of Inquiry. The office will also support all peace operations in implementing mission-specific emergency response plans and ensuring compliance with medical emergency and mass-casualty incident management plans.[34]

In terms of CasEvac and MedEvac, MSD and MSS are developing and promulgating a new policy on evacuation procedures (see Box 3). The currently endorsed 10-1-2 framework requires access to advanced life support from medical

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Box 2. Healthcare facilities in peacekeeping missions[35]

Level I: First line or "battalion level"

- Trained medical personnel (including a doctor), with support usually provided by organic medical teams of the field units
- 69 (civilian) Level I or Level I+ clinics operated by the UN
- 293 Level I or Level I+ clinics operated by troop-/police-contributing countries
- 1 Level I+ hospital operated by the UN

Level II: Second line or "brigade/sector" level surgical facility

- Limited specialist expertise and limited surgical capabilities, including life-, limb-, and organ-saving surgery
- 18 Level II hospitals operated by troop-/police-contributing countries
- 1 Level II+ hospital operated by troop-/police-contributing countries
- 1 Level II hospital operated by the UN

Level III: Third line "field hospital"

- Fully equipped and staffed multidisciplinary field hospital, with all major medical and surgical specialties provided for
- 2 Level III hospitals operated by troop-/police-contributing countries

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32 Ibid.

33 Interview with staff from MSD, 2016.

34 MSD, presentation to the field support seminar, IPI, February 16, 2017.

35 UN DPKO/DFS, *UNMEM Manual: Selection, Deployment, Rotation, Extension, Transfer and Repatriation of United Nations Military Experts on Missions in United Nations Peacekeeping Operations*, December 2012; MSD, presentation to the field support seminar, IPI, February 16, 2017.

professionals within one hour of injury (see Box 4). This target cannot be met without equipment, infrastructure, trained personnel, and the highest levels of integrated teamwork throughout the process.[36] The new policy will aim to:

- Provide for the establishment, operation, and governing of standardized CasEvac/MedEvac procedures across UN peace operations;

- Define the critical and complex elements of CasEvac as distinct from but aligned with MedEvac in the end-to-end chain of care;

- Clearly define roles and responsibilities at headquarters and in field missions; and

- Put in place standard operating procedures that underpin the overarching policy.[37]

This policy is being drafted collaboratively by relevant service officers from MSD, the Departments of Peacekeeping Operations and Field Support, including the Office of Military Affairs (OMA), the Police Division, and the Logistics Support Division. As of April 2017, the first draft has been finished and has been circulated to missions for comment. The paramount importance of this policy is regularly demonstrated in field missions, which will each develop standard operating procedures in line with it. Some missions have already started this process. The UN Organization Stabilization Mission in the Democratic Republic of the Congo (MONUSCO) was the first, developing procedures that allowed the force commander to deploy air assets during a MedEvac emergency.[38] MINUSMA also revised its standard operating procedures to focus on MedEvac.[39]

Box 3. Definition of CasEvac and MedEvac[40]

Casualty evacuation (CasEvac) is the transportation of a patient from the site of injury where only limited treatment can be administered. Medical evacuation (MedEvac) is the transportation of a patient who has been administered treatment by medical professionals to another medical facility, such as from a Level I to a Level II hospital. The actual transportation can be conducted by air, sea, or land. CasEvac is the more complex of the two processes to implement effectively, as it involves medical, aviation, and logistics elements from civilian and military components and must be cognizant of environmental and operational dynamics.

Box 4. 10-1-2 principle

The *Medical Support Manual* defines the 10-1-2 principle as "ensuring access to skilled first aid within 10 minutes of the point of injury or the onset of symptoms; advanced life support as soon as possible, and no later than 60 minutes; and access to limb- and life-saving surgery, no later than two hours."[41]

The 10-1-2 principle is not unique to UN peacekeeping operations. In the *Allied Command Operations Directive 83-1 on Medical Support to Operations*, the principle is defined as:

- Within 10 minutes of wounding: enhanced first aid (immediate lifesaving measures applied by personnel trained in tactical combat casualty care, including bleeding and airway control for severely injured casualties);

- Within 1 hour of wounding: damage-control resuscitation (initiated by emergency medical personnel); and

- Within 2 hours of wounding: damage-control resuscitation (depending on the specific and individual requirement, the aim is to be able to provide damage-control resuscitation within 1 hour but no later than 2 hours of wounding).[42]

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36 Ibid.

37 OMA, MSD, and MSS, *CasEvac/MedEvac Project: A Project to Develop and Implement Policy for CasEvac/MedEvac across UN Peace Operations*, October 2016.

38 Interview with staff from MSS, 2016.

39 MINUSMA Standing Operating Procedures.

40 OMA, MSD, and MSS, *CasEvac/MedEvac Project*.

41 UN DPKO/DFS, Medical Support Manual for United Nations Field Missions, 3rd edition, 2015.

42 Col Homer Tien et al., "Advances in Damage Control Resuscitation and Surgery: Implications on the Organization of Future Military Field Forces," Canadian Journal of Surgery 58, no. 3 (2015).

In addition to the processes above, MSD has launched a process to evaluate the skills and level of care provided in contributing countries before accepting their deployment of a hospital. This process would not allow the deployment of hospitals that fail to meet the standards established. MSD has also started to campaign against countries where there have been significant healthcare challenges. For example, after an evaluation of countries providing hospitals to the UN Mission in the Republic of South Sudan (UNMISS), those not meeting the standards were asked to leave the country.[43]

Main Challenges

The above-mentioned initiatives are addressing serious gaps in medical support in the field, especially in terms of policy guidance on how to adapt to high-risk environments. However, there are still significant challenges to medical support to peace operations. We have identified five core challenges that the UN needs to address in order to meet its duty to care for its personnel in high-risk environments.

MEDICAL STRUCTURES, PLANNING, AND COORDINATION IN UN HEADQUARTERS

While the Medical Services Division (MSD) should be considered a nucleus linked to all aspects of medical support, there is a clear disconnect in its lines of authority and accountability. The majority of UN healthcare personnel that MSD oversees (doctors, nurses, and paramedical personnel) actually work for different organizations or in different departments. For example, physicians deployed to UN peace operations have contracts with the Department of Field Support, while physicians in UN dispensaries have contracts with the UN Development Programme (UNDP). MSD has no input into the budgets and work plans of these organizations or departments and is not involved in managing the performance of their personnel. As a result, lines of supervision and authority are often unclear. When doctors are deployed to a UN mission, it should be clear that they are under the authority and supervision of the UN. Otherwise, it is difficult for MSD to exercise authority over or hold accountable the personnel it supervises.[44]

The Medical Support Section (MSS) suffers from a similar problem, as it is composed of seconded officers who often end their rotations around the same time. This creates challenges of institutional memory, transfer of responsibility, and stability in planning.[45]

Furthermore, medical planning, which should be an integral part of mission planning, has been disregarded in the past. The best form of protection is adequate planning to match resources and tasks. Medical support should be seen as preventive, aiming to keep the body intact and not exposed to medical threats such as hostile action or tropical diseases.[46] However, it is often not viewed in this way. For example, in the Central African Republic, which has a high incidence of malaria, MINUSCA's hospitals are run by contingents not experienced with the disease.[47] Assets should be deployed in line with needs, leading to more flexible, focused field missions.

High-risk peace operations also require better coordination. These operations have greater need for the military and greater demand for logistical support, making the roles of the Office of Military Affairs and MSS vital. At the same time, there is a need to update the UN's policies and procedures on medical support to meet the demands of high-risk environments. Despite questions over who should hold this responsibility, it ultimately falls to MSD, whose role in peace operations has also grown.

Better coordination between MSD, MSS, and the Office of Military Affairs is needed to ensure that peacekeepers are healthy when deployed and trained for the conditions on the ground. However, the only common reporting line between MSD and MSS is the secretary-general, creating a disconnect between the departments. This has caused a

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43   Interview with staff from MSD, 2016.

44   Nikolay Chulkov, *Review of the Medical Service in the United Nations System*, UN Joint Inspection Unit, 2011, available at www.unjiu.org/en/reports-notes/JIU%20Products/JIU_REP_2011_1_English.pdf .

45   Interview with Jillann Farmer.

46   Interview with the chief medical officer of MINUSCA, 2017.

47   Mirjam Donath, "Malaria Is the Leading Killer in Central African Republic: Aid Group," Reuters, July 24, 2014, available at www.reuters.com/article/us-centralafrica-malaria-un-idUSKBN0FT2R020140724 .

bifurcation of the roles of MSD and MSS, leading to different practices and guidelines in the same mission. There is a need to prioritize direct emergency care in high-risk missions, which requires better coordination among all elements involved, as well as a better understanding of responsibilities.

STANDARDS OF CARE

Standards of care are a core pillar of modern healthcare management. As the *Medical Support Manual* stipulates, "medical support extended to UN peacekeeping personnel must meet standards that are acceptable to all participating nations, with the aim of providing clinical outcomes comparable to prevailing peacetime medical care."[48] This means that UN personnel suffering the same injury in Juba and in New York should have the same medical outcome; if that injury is survivable, they should survive regardless of where it occurs. Such support requires a "high state of readiness and availability, providing timely, responsive and continuous care to any patient or casualty within the medical system."[49] If standards of care are not implemented, the quality of care delivered can be seen as "luck of the draw."

Despite this principle, the UN has no metrics to assess the quality of medical personnel and equipment provided by troop-contributing countries and there is no requirement for reporting errors. As a result, many countries contribute low-quality personnel and equipment, forcing the UN to outsource medical support (e.g., in the case of MINUSMA, to a commercial aero medical evacuation team), which is expensive and comes with its own set of challenges. If troop-contributing countries took it upon themselves to meet adequate standards and the UN enforced these standards, the process of providing medical support to peace operations would be much smoother.

The Medical Services Division (MSD) is responsible for setting medical standards for the UN and conducting pre-deployment visits to ensure the standards are implemented. Within a mission, the chief medical officer sets up systems to verify safety and hygiene standards for buildings and accommodations. In collaboration with the chief medical officer, the force medical officer ensures that medical facilities adhere to these standards and that uniformed peacekeepers being deployed to remote locations receive regular first-aid training. The Level I medical unit commander and the Level II and III hospital commanders are responsible for ensuring medical services provided by the unit meet the standards for self-sustainment set out in the UN manual for contingent-owned equipment.[50]

Hospitals in UN peacekeeping missions are pledged by member states. In Mali, the Level I hospital was provided by Togo and the Level II hospital by Nigeria and China; the Level III hospital is a preexisting hospital in Dakar, Senegal.

Chinese Level II field hospital in Gao, Mali.

Egyptian Level I field hospital in Bangui, Central African Republic.

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48 UN DPKO/DFS, Medical Support Manual for United Nations Peacekeeping Operations, 2nd edition, 19.

49 UN DPKO/DFS, Medical Support Manual for United Nations Field Missions, 3rd edition, 2015.

50 Ibid.

These hospitals are evaluated and pre-checked by MSS during a pre-deployment visit and by MSD during an assessment and advisory visit. Where gaps are seen, MSS and MSD provide a list of criteria to be filled.

There is, however, a disconnect between the minimum standards set by the UN and the implementation of these standards. This disconnect highlights the inability of both MSD and MSS to monitor the implementation of all standards, and there has been speculation that member states are evaluated by different standards. This leads to resentment among member states and a lack of trust in, and dissatisfaction with, the UN's ability to guarantee quality healthcare. These challenges are even greater in "deep field" locations.[51] These areas have limited access to medical facilities yet are most in need of such assistance.

This failure to meet standards raises the issue of whether there is a need for Level II hospitals in high-risk peace operations. The cost of Level II hospitals is very high and their utility quite low. They are best-suited for large-scale battles like those of World Wars I and II. It appears many are left empty except when there are mass casualties, and even then they only serve to stabilize patients until they can be evacuated to a Level III hospital or their home country.

The perceived low quality of Level II hospitals creates an atmosphere of mistrust that is counter-productive to any successful patient-provider relationship.[52] This results in efforts to bypass Level II hospitals. Many European countries CasEvac or MedEvac patients to a Level I or Level I+ hospital and, when they are stable, MedEvac them to a neighboring country or, if possible, to their home country. Some even bring their own medical facilities rather than using UN facilities. Arrangements for care at facilities that are not integrated into the mission's medical support plan are made through personal relationships and individual efforts. These efforts do not provide systemic solutions and undermine the entire UN medical support operation.[53]

Consideration should be given to whether high-risk operations should move away from the World War II system of Level I, II, and III hospitals. Instead, there could be more flexibility to deploy Level I+ hospitals (e.g., rotational mobile medical units with surgical capabilities) while improving MedEvac. This ultimately connects to the need for flexible and context-specific missions, where hospitals and resources are deployed in line with the needs on the ground. Regardless of the model, all hospitals should meet the standards of all troop-contributing countries. This could reduce the desire to evacuate patients to home countries for treatment, permit better use of resources, and reduce tension among states.

Cultural and linguistic differences also contribute to mistrust. It can be difficult for personnel to trust medication they do not understand or medical personnel they cannot communicate with. The UN is a multinational organization with personnel from all over the world. This can result, for example, in a French-speaking soldier being evacuated by a Dutch team to a Chinese hospital, which can work as long as procedures and standards are in place. However, without these, it can lead to confusion and mistakes.

The fundamental challenge is that troop-contributing countries do not meet the standards set by the UN, and the UN is unable to hold them accountable. When this happens, countries that can afford it will use their own medical facilities, or the UN will outsource to more expensive private services to bridge the gap. This challenges the authority of the UN in its medical support role.

COORDINATION IN THE FIELD

The term "command and control," as defined by the US military, encompasses "the exercise of authority and direction by a properly designated commander over assigned forces in the accomplishment of the mission."[54] Any large and complex organization that operates in the field, such as a UN peace operation, requires an effective system for organizing and managing resources and personnel. In recent years, discussions about command and control have emphasized that effective coordination among uniformed and non-

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51 Expression originally used by the UN Refugee Agency (UNHCR) and that has now obtained widespread acceptance and usage within the UN system.

52 Interview with staff from MSD, 2016.

53 Chulkov, *Review of the Medical Service in the United Nations System*.

54 US Department of Defense, *Dictionary of Military and Associated Terms*, March 2017, available at www.dtic.mil/doctrine/new_pubs/dictionary.pdf .

uniformed personnel is vital to a mission achieving its goals and objectives. Coordination is especially important when it comes to medical support.[55]

A challenge, however, is that the nature of the chief medical officer and force medical officer positions in missions does not always permit for smooth communication, command, and control. For example, MINUSCA does not have a dedicated medical command structure. While attempting to develop a more integrated strategy for responding to alerts, the chief medical officer and force medical officer operate from separate offices in Bangui—the chief medical officer in the log camp and the force medical officer in the main camp. The resulting disconnect creates challenges when emergencies erupt.[56]

In high-risk missions, there is a need to prioritize an effective medical support plan to ensure that there is an adequate communication and information management system in place, that facilitates CasEvac and MedEvac, emergency response, and mass-casualty response.[57] In order to ensure that casualties survive in the event of attack, the procedures for high-risk missions should be organized, structured, and underpinned by a practiced and fully understood command, control, and coordination mechanism. To meet the 10-1-2 principle, these procedures should be supported by well-trained operators and the necessary equipment for transportation by air, road, or sea.

However, there have been cases where procedures are too restrictive, resulting in ineffective evacuations. This has been a particular challenge in tasking air assets in MedEvac and CaseEvac situations. Currently, air assets are authorized by the director of mission support. However, there have been times when force commanders believe they should have the power to deploy air assets if military personnel have been attacked. The central challenge is that there are a limited number of helicopters and a limited budget, and if helicopters are authorized where there is less of a need, this could pose a risk if an emergency arises. In addition, if a helicopter is deployed when there is not an emergency, it wastes flight hours, which are stipulated by the budget of a mission.

There may be a need to refine communication and reporting lines for deployment of air assets for MedEvac and CasEvac in high-risk missions. Missions could put in place a set of criteria, including those related to the security situation and types of injuries, for transferring authority for deploying helicopters from the director of mission support to the force commander. Moreover, the Joint Operations Centre, chief medical officer, and director of mission support could be jointly made aware of incidents. This delegation of authority and increased coordination would permit faster authorization of evacuations.

In addition, innovative approaches to information sharing should be considered. In MINUSMA the Joint Operations Centre has developed an integrated information management system that is used to share information and coordinate processes. The Joint Operations Centre has a database registering all MedEvacs and CasEvacs and linking them to the incident registered in the system. This database is accessible to all key personnel involved, including those in the sectors, as a way of ensuring information is shared and personnel are up-to-date on what is happening.[58] This system was developed in response to increasing hostilities against the mission and the need for integrated information sharing in order to improve the effectiveness of evacuations. It has been seen to reduce the response time.[59] Such innovative processes around the sharing of information could also lead other missions to respond more effectively in times of crisis.

TRAINING AND CAPACITY BUILDING

Effective training is essential to addressing challenges related to medical support on the ground. Training of all personnel, including medical personnel, is the responsibility of the member state that deployed them. This training takes place in accordance with requirements set out at the national level and reflects criteria established

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55 UN DPKO/DFS, *Medical Support Manual for United Nations Field Missions*, 3rd edition, 2015.

56 Interview with the chief medical officer of MINUSCA, 2017.

57 UN DPKO/DFS, *Medical Support Manual for United Nations Field Missions*, 3rd edition, 2015.

58 El Hadji Ibrahima Diene, presentation at the MINUSMA Joint Operations Centre headquarters, 2017.

59 Ibid.

in the UN's Medical Support Manual. This training should involve pre-deployment training as well as in-mission training. All personnel are supposed to be deployed with basic first-aid training, while medical personnel such as doctors and nurses are supposed to be deployed with training in areas such as trauma life support.[60]

However, levels of pre-deployment medical training vary from contingent to contingent. This becomes even more challenging in multinational force with medical units and personnel from different countries. Furthermore, over time these skills deteriorate if not used. There is a vital need to ensure that there is both thorough pre-deployment training and regular in-mission training based on a targeted training plan reflecting the needs of those in the field. Fundamental to all training is ensuring the maintenance and standardization of core skills and procedures, with regular evaluations to ensure skills are learned.[61]

Several forms of training are necessary for personnel being deployed to missions, especially those being deployed to high-risk environments. The first stage of training, based on the 10-1-2 principle, is the "buddy system," whereby in the event a person is injured, his or her "buddy" secures the wound within the vital first ten minutes while assistance is on the way. This requires basic first aid, and each peacekeeper is supposed to be provided with an individual first-aid kit.

While contributing countries are responsible for providing first-aid training, and this is supposed to be verified before deployment, there has been criticism that some contingents arrive to missions lacking basic lifesaving skills.[62] To address this problem, the UN should focus on providing in-mission first-aid training and trauma-bag training during orientation. For example, the UN Mine Action Service (UNMAS) has been working to improve first-aid training in MINUSMA. While MINUSMA's contingents have bought into the training, much more is still needed to standardize their skill levels.[63]

In addition, not all peacekeepers have individual first-aid kits because, it is said, they are not always handed over during personnel rotations.[64] The UN needs to ensure that every peacekeeper has an individual first-aid kit and to hold contributing countries accountable if they do not. This should be included in the Medical Support Section's (MSS) pre-deployment visits and in the Medical Services Division's (MSD) assessments of contingency-owned equipment.

Peacekeeping personnel also need to be trained on the "nine-liner" template (see Table 1). When an incident takes place, they need to call it in with the geographic coordinates and types of injuries to permit the CasEvac and MedEvac procedure to begin. However, the "nine-liner" template used to do this is complex and requires training, which not all contingents receive prior to deployment. This must be included as part of the pre-deployment training and addressed in orientation training to ensure that contingents can provide basic information to facilitate CasEvac and MedEvac.

After the ten minutes of support under the buddy system, the next level of support needed under the 10-1-2 principle comes from first responders, who stabilize the patient within one hour of wounding during the evacuation. However, some mission personnel, including some aeromedical evacuation teams and medical personnel, are too poorly trained to follow standard operating procedures. This results in a discrepancy in the level of care that UN personnel receive and explains why some contingents are reluctant to engage in high-risk operations.[65]

Moreover, many hospitals do not have capabilities, and many doctors do not have the training, to deal with mass-casualty events. Doctors trained in their home country often do not know how to operate in a high-risk zone. There is a need for more trauma medics, paramedics, and doctors trained to operate in challenging environments. The UN should consider developing a medical certification to ensure that doctors have the same standard of qualifications. Currently, while MSD is able to veto doctors put forward by contributing

60 UN DPKO/DFS, *Medical Support Manual for United Nations Field Missions,* 3rd edition, 2015.

61 Ibid.

62 US Army Peacekeeping and Stability Operations Institute, UN MedEvac/CasEvac Assessment, 2015.

63 Interview with staff from the UN Mine Action Service in MINUSMA, 2017.

64 Ibid.

65 Contingent-Owned Equipment Working Group, "Outsourced Medical Operational Support and the Issue of Reimbursement," France Issue Paper no. 1, 2017.

Table 1. Example of a generic air MedEvac "nine-liner" template

Line 1: Location of the pick-up sight
Line 2: Radio frequency and call sign
Line 3: Number, priority, and name of patients A. Urgent B. Urgent surgical C. Priority D. Routine E. Convenience
Line 4: Special equipment required A. None B. Hoist/winch C. Extraction equipment D. Ventilator
Line 5: Number and type of casualties A. Stretcher B. Walking C. Escorted (children)
Line 6: Security at pick-up site A. No enemy in area B. Possible enemy in area C. Enemy in area D. Hot pick-up zone (armed escort required)
Line 7: Method of marking pick-up site A. Panels/Cyalume B. Pyrotechnic signal/flares C. Smoke D. None E. Other (explain)
Line 8: Number of casualties by status A. Mission: military/police B. Mission: civilian C. Local army D. Civilians E. Prisoners F. Children
Line 9: Description of pick-up site and terrain/obstacles

countries, this veto can easily be overturned, making it impossible to ensure quality standards. Pre-deployment training and certification in advanced trauma life support should be provided to all medical contingents. Ideally, this would be done at a training center and implemented by the UN. However, there are limited resources for training within the UN, so the onus would likely be put on contributing countries.

As part of training, there should be an element of capacity building. For example, in 2013 the US African Deployment Partnership Training (ADAPT) program conducted a training-of-trainers for twenty-nine members of the Togolese Armed Forces. This program trained participants to train other soldiers as unit movement officers.[66] Although this was not a UN program, the UN should explore how it could implement similar initiatives to develop partnerships around medical training, especially since doctors sent to missions are often underutilized.

One option could be to establish a center for pre-deployment training closer to high-risk missions, such as in Entebbe, Uganda. Alternatively, the UN could use links with existing training centers in the region. For example, the Kofi Annan International Peacekeeping Training Centre in Ghana conducts pre-deployment training for African police officers selected for deployment to multidimensional peace operations in Darfur, Somalia, Mali, and Liberia. Since 2009, it has trained more than 2,000 police officers, about 581 of whom are women.[67] These examples of capacity building and collaboration should initiate the process of establishing a system whereby UN member states that are not able to contribute troops assist in training the troops of other countries.

The UN could also establish a mentorship program whereby member states with greater capacity in certain areas mentor those with less experience. For example, multinational teams could be put in place in medical establishments. Medical directors with little operational experience could also be mentored before being deployed.

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66 Rich Bartell, "U.S. Army Africa Sponsors African Deployment Partnership Training in Togo," US Army, July 3, 2013, available at www.army.mil/article/106843/U_S__Army_Africa_sponsors_African_Deployment_Partnership_Training_in_Togo .

67 Kofi Annan International Peacekeeping Training Centre, "An Assessment of Police Pre-deployment Training: Ghana Study," March 2015, available at www.kaiptc.org/Publications/Occasional-Papers/Documents/AN-ASSESSMENT-OF-POLICE-PRE-DEPLOYMENT-TRAINING-GH.aspx .

RESOURCES AND CAPABILITIES

Based on a recommendation in the HIPPO report, the Department of Peacekeeping Operations created a Strategic Force Generation and Capability Planning Cell in 2015. This cell was created in tandem with other reforms recommended by HIPPO, including replacing the old UN Standby Arrangements System with the UN Peacekeeping Capability Readiness System. The Strategic Force Generation Cell's central goal is to move the UN away from a supply-based deployment system to one that can anticipate and meet the demands of effective field missions. The cell places particular emphasis on generating key enablers such as aviation and medical assets from member states. These assets are essential not only for supporting contingents deployed on the ground but also for meeting the preconditions that certain contributing countries request before providing troops.[68]

Currently, there is no publicized data specifically on what the Strategic Force Generation and Capability Planning Cell has generated, making it difficult to determine the extent to which the cell has been effective. What can be said, however, is that the UN does not yet have the capacity to choose the best equipment and resources from the most "desirable" contributing countries and is still accepting whatever it can get. This leads to questionable capability standards within peacekeeping forces and contributes to the inability of missions to complete their mandates and to guarantee the safety of personnel.[69]

Further, vast pledges of air assets from member states at both the 2015 and 2016 peacekeeping summits have not yet materialized (see Table 2). The UN's air assets are limited, and it is rare to find helicopter units dedicated solely to CasEvac and MedEvac. In MINUSCA, for example, there are no dedicated medical helicopters, creating challenges when the helicopter is being used for transporting goods when a medical emergency arises. Furthermore, not all of the mission's helicopters have combat or night-flying capabilities.

Table 2. Helicopter providers (March 2017)[70]

Mission	Utility	Attack	Total
MINUSCA	9	2	**11**
MINURSO	2	0	**2**
MINUSMA	17	7	**24**
MINUSTHA	5	0	**5**
MONUSCO	43	7	**50**
ONUCI	5	0	**5**
UNAMA	3	0	**3**
UNAMID	17	0	**17**
UNFICYP	3	0	**3**
UNIFIL	7	0	**7**
UNMIL	6	0	**6**
UNISFA	4	0	**4**
UNMISS[71]	16	0	**16**
UNSOS	10	3	**13**

Western countries often complain about the quality of equipment, but many are unwilling to deploy further assets to the field. One approach to address this challenge has been the agreement among Belgium, Denmark, Norway, Portugal, and Sweden for a two-year rotation of military transport aircraft deployed to MINUSMA. The rotation will run until the end of 2018. The cooperation will provide air transport services based on

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68 International Forum for the Challenges of Peace Operations, "Institution- and Capacity-Building for Peace: Implications of the UN's Review Panels' Recommendations for Future Missions," 2015, pp. 18–19, available at www.un.org/pga/70/wp-content/uploads/sites/10/2016/01/Challenges-Annual-Forum-Report-2015.pdf ; Adam C. Smith, "European Military Capabilities and UN Peace Operations: Strengthening the Partnership," International Peace Institute and Center for International Peace Operations, October 2014, p. 4, available at www.zif-berlin.org/fileadmin/uploads/analyse/dokumente/veroeffentlichungen/ZIF_Policy_Briefing_Adam_Smith_October_2014_ENG.pdf ; UN Force Link, "FAQ PCRS," available at https://cc.unlb.org/Lists/FAQ/AllItems.aspx .

69 Ibid.

70 Data from UN DFS.

71 UNMISS has only two cargo aircraft.

six-month rotations. Norway's rotation ended in November 2016, with Portugal taking over, to be followed by Denmark, Sweden, and finally Belgium. Norway will sustain the camp facilities and camp services in Bamako for the entire two-year period. The rotation is a pilot project for the UN as part of peacekeeping reform efforts. It can be an example for other UN missions of how small countries can cooperate and coordinate in joint peacekeeping efforts.[72]

A similarly innovative approach could be a mobile medical surgical unit deployed under a rotational agreement. This Level I+ unit could be quickly moved to where troops deploy. Under a rotational scheme, it would be shared by a group of countries that join together to provide the resources to construct the hospital and rotate personnel. While long-term permanent arrangements are ideal, if these are not possible, such schemes could be considered.

What is further needed is the means to hold countries accountable for deploying substandard equipment. Secretary-General António Guterres's recent move to withhold reimbursements from countries that fail to investigate claims of sexual exploitation or abuse committed by their peacekeepers could be a model.[73] A policy along these lines could ensure that troop-contributing countries take standards and protocols seriously and adequately equip and train their personnel for providing medical support.

OTHER CHALLENGES

Political Challenges and Host-State Consent

One of the foundational principles of peacekeeping is the need for host-state consent. There have been cases where host states have asked missions to leave (e.g., the UN Mission in the Central African Republic and Chad) and where host states have made it very difficult for missions to function (e.g., the UN-AU Mission in Darfur). After six months, the new UN Mission in Colombia still has no agreement with the government on using its

medical resources for UN staff, meaning it has been working without any form of medical cover for those deployed. This has partly been attributed to questions over who is and who should be in charge of seeking this consent, and when they should seek it.[74]

Another recent challenge has been lack of host-state consent for use of airspace, which can prevent proper MedEvac and CasEvac. In South Sudan, for example, UNMISS has had difficulty getting the government to sign a memorandum of understanding permitting MedEvac and CasEvac.

Healthcare Waste Management

The proper management of medical waste is a major challenge faced by UN missions and troop- and police-contributing countries. Medical waste (e.g., expired medical products, pharmaceuticals, medicines, sharp products, infected wastes) is hazardous. If improperly released into the environment, it can cause pollution, disease, and other serious harm. The current management of medical waste needs to be improved in order to meet environmental standards. There have been cases where expired medicines are buried in holes in the ground, medical waste materials are disposed of as non-hazardous solid waste, and incinerators are not burning at a temperature high enough to safely destroy hazardous substances or lack air filters to prevent toxic emissions.[75]

This is highlighted as a major area of concern in both the Environmental Policy and the Waste Management Policy for UN field missions. However, the UN manual on contingent-owned equipment does not specify how medical waste should be disposed of. While many medical units already deploy with incinerators, making an incinerator a standard piece of equipment for all medical units deployed to UN missions could help make medical waste management more secure and environmentally compliant.[76]

Responding to Epidemics

In addition to the rise in hostile acts against UN peacekeepers, the cholera epidemic in Haiti and

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72 "New Norwegian Led Rotation in Mali for Transport Aircraft," Norwegian Ministry of Defence, June 20, 2016, available at www.regjeringen.no/en/aktuelt/new-norwegian-led-rotation-in-mali-for-transport-aircraft/id2505238/ .

73 Somini Sengupta, "U.N. Plans Reforms to Stamp Out Sexual Abuse by Peacekeepers," *New York Times*, March 8, 2017.

74 Informal discussion with senior mission planners for the UN Mission in Colombia, Oslo, Norway, 2017.

75   Contingent-Owned Equipment Working Group, "Healthcare Waste Management: Secretariat Issue Paper 12," 2017.

76 Ibid.

Ebola epidemic in West Africa highlighted the need for flexible and responsive missions. The outbreak of cholera in Haiti in 2012 has been linked back to Nepalese troops in the UN Stabilization Mission in Haiti (MINUSTAH). The UN response to the crisis was inadequate, and the fact that the mission failed so notably in its safety and environmental protection standards highlighted a serious challenge in terms of mission planning, waste management, and medical care. The outbreak also complicated the mission's mandate, which did not include responding to the outbreak.[77]

As in Haiti, the initial response of the UN to the Ebola outbreak in West Africa was inadequate. In Liberia, the UN already had potential resources on the ground in the form of the UN Mission in Liberia (UNMIL), and this mission may have been able to do more within the terms of its mandate.[78] Ultimately, the UN responded to the crisis by deploying its first-ever emergency health mission, the UN Mission for Ebola Emergency Response (UNMEER). This mission is an important case study of how the UN, with member-state support, can provide a whole-of-system response through coordination, partnership, and creative use of existing tools. It highlighted how the UN can better respond to multidimensional crises by, among other things, giving missions flexible mandates, providing flexible and predictable funding for rapidly scaling up responses, putting in place a system-wide communications strategy, and engaging in high-level of coordination.[79]

UN personnel being deployed to an area affected by an outbreak, particularly medical personnel, should receive adequate training before arrival. For medical personnel, this should include specialized training in healthcare protocols, while other personnel deployed to the mission should receive prevention and awareness training. For those already in the mission, including national personnel, special training should be provided as early as possible to ensure that all personnel, particularly those with medical functions, know how to minimize their exposure.

During outbreaks of infectious diseases, the UN needs to consider medical evacuation as a preventive measure. Further, when UN personnel fall ill, the mission has a duty to ensure they have access to appropriate medical care, irrespective of nationality. Where a highly infectious disease is present, the mission should have triage and patient-holding facilities to minimize contact while providing an appropriate standard of medical care. Rapid-testing facilities should also be in place or readily accessible.[80]

Conclusion and Recommendations

The preamble of the UN Charter states, "We the peoples of the United Nations determined to reaffirm faith in fundamental human rights, in the dignity and worth of the human person, in the equal rights of men and women and of nations large and small."[81] This sentiment applies not only to civilians the UN aims to protect but also to the personnel it deploys to the field. Given the rise of violent extremism and complex attacks targeting peacekeepers in some missions, the UN faces a more challenging job in protecting those it deploys. As this paper has shown, existing medical plans and procedures are not meeting the needs of those on the ground and need to be adapted to high-risk missions. The following recommendations are intended to enhance the efficiency and effectiveness of medical support to UN peace operations in high-risk environments.

RESTRUCTURE MEDICAL SUPPORT IN UN HEADQUARTERS

Although at least in theory there is clarity on the roles and responsibilities of the Medical Services Division (MSD) and Medical Support Section (MSS), too often mission planners are not clear on whom to liaise with within these units. To address this, MSD and MSS need to coordinate better and

77 Arthur Boutellis, "Cholera, Haiti and MINUSTAH: What Implications for Peacekeeping," International Peace Institute, January 11, 2011, available at www.ipinst.org/2011/01/cholera-haiti-and-minustah-what-implications-for-peacekeeping .

78 Sara E. Davies and Simon Rushton, "Public Health Emergencies: A New Peacekeeping Mission? Insights from UNMIL's Role in the Liberia Ebola Outbreak," *Third World Quarterly* 27, no. 3 (2016).

79 Adam Lupel and Michael Snyder, "The Mission to Stop Ebola: Lessons for UN Crisis Response," International Peace Institute, February 15, 2017, available at www.ipinst.org/2017/02/un-crisis-response-ebola .

80 Interview with Karin Landgren, 2016.

81 United Nations, Charter, Preamble, 1945.

to create links with the Office of Military Affairs.

- MSS and MSD should co-locate to permit better coordination.

- MSS should have more permanent staff and rely less on seconded officers.

INCREASE THE IMPORTANCE OF MEDICAL SUPPORT PLANNING

There is no one-size-fits-all model for medical support. With more peace operations deploying to high-risk environments, there is a need to ensure that medical aspects of mission planning are taken seriously during the planning process.

- Medical support planning should be included in every aspect of mission planning.

- Medical support planning should be tailored to the context and be flexible to respond to emergency situations, whether related to health or to hostilities.

- In high-risk environments, the status of MSD in planning processes should be elevated to ensure that the medical support model is adequate.

- A full-time officer with medical planning expertise should be seconded to the Office of Military Affairs to work closely with MSD and MSS in each mission.[82]

REVISIT THE USE OF LEVEL II HOSPITALS

The cost of Level II hospitals is very high and their utility quite low. Except in the case of mass-casualty events, these hospitals usually sit empty. Even when they are used, it is generally to stabilize patients until they can be evacuated to a Level III hospital or to their home country. The notion of Level II hospitals is better-suited to the large-scale battles of World Wars I and II than to the realities of modern peace operations.

- Mobile medical units with surgical capabilities (Level I+) could be used in place of Level II hospitals.

- Contributing countries could adopt a rotational scheme for medical support, whereby medical units would be shared by a group of countries that join together to provide the resources to construct the hospital and rotate personnel.

- Contributing countries could put in place more

multinational medical arrangements, such as where one country deploys a hospital and another a doctor, or where many countries work together in one location.

These changes could incentivize smaller countries to work together in providing high-quality medical facilities with dedicated medical teams.

IMPROVE PRE-DEPLOYMENT AND IN-MISSION TRAINING

Although contributing countries are responsible for providing pre-deployment first-aid training, and this is supposed to be verified, this is not always the case. As a result, there is a need to focus on in-mission training, including through capacity building of key personnel involved in medical support. A valuable component of capacity building is mentoring, which can help build and strengthen partnerships between the UN and local communities and among peacekeeping contingents.

- The Integrated Training Service (ITS), as the body within the UN responsible for developing training modules, should work with MSD and MSS to develop and institute standardized pre-deployment training to be conducted by contributing countries. This should include training in first aid and pre-hospital trauma life support for all UN personnel deployed to missions.

- In order to monitor adherence to training standards, ITS, in consultation with MSD and MSS, should develop a standardized skills test to evaluate pre-deployment trainings by contributing countries.

- ITS, in collaboration with MSD and MSS, should set up a training-of-trainers center in Entebbe, Uganda, and increase the number of mobile training teams.

- MSD should use the training center and training teams to commission pre-deployment training of medical personnel to ensure they have standardized and up-to-date trauma-response skills.

- MSD should consider developing a medical certification to ensure all doctors deployed to missions have the same standard of qualification.

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82 Currently there is a seconded officer to MSD with both military and medical experience.

- Contributing countries should consider deploying multinational hospitals where they work together and train each other.

- UN-deployed hospitals should engage in humanitarian outreach by providing medical services to local populations to ensure they are fully utilized while on rotation. This should be done in partnership with local communities.

## ALIGN UN CASEVAC AND MEDEVAC PROCEDURES WITH BEST PRACTICES

Simplification, decentralization, and flexibility are needed to shorten the chain of command for MedEvac and CasEvac in high-risk environments.

- MSD and troop-contributing countries should develop a set of criteria for when authority to deploy air assets for CasEvac or MedEvac can be transferred to the force commander. These criteria should be based on the level of risk and types of injuries.

- Joint Operations Centres should be empowered to facilitate integration, improve situational awareness, and make decisions during CasEvac and MedEvac. A patient evacuation coordination cell could also be imbedded in the Joint Operations Centre.

- The working group on medical support reform (MSD, MSS, and the Office of Military Affairs) should evaluate NATO, the EU, and other multinational organizations' CasEvac and MedEvac doctrine and procedural guidance for

best practices and preferred tactics, techniques, and procedures to consider how these could be implemented in UN missions.

- UN missions should put in place dedicated CaseEvac and MedEvac resources, specifically helicopters, for the most high-risk areas and operations.

GENERATE RESOURCES AND FORCES IN A TARGETED WAY

To address critical gaps in the ability of high-risk UN peace operations to ensure the safety and security of their personnel, the UN should seek pledges from member states in a targeted way.

- The UN Strategic Force Generation and Capability Planning Cell should target countries to pledge specific medical resources to missions in order to meet the needs of high-risk environments.

- Reimbursements should be used to penalize countries that deploy substandard medical equipment or personnel without adequate pre-deployment medical training.

- The UN Strategic Force Generation and Capability Planning Cell should be more selective in what resources it accepts in peace operations and logically place resources within missions. This should include ensuring that medical personnel speak, and medications have instructions in, the languages spoken in the missions to which they are deployed.
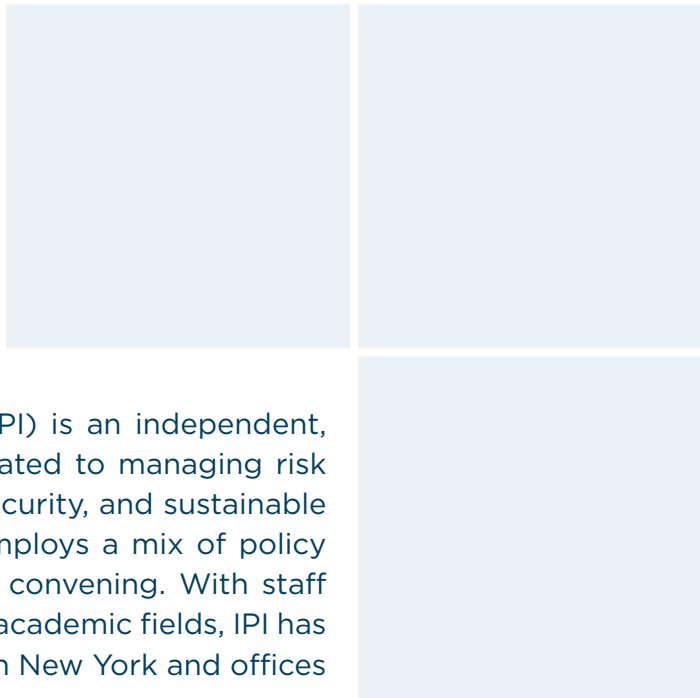
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