

International Medical Corps Current Logistics Challenges

As a world renowned international consulting firm your organization has supported the United Nations on multiple crisis situations over the past ten years. The logistics team of your institution has been approached by the International Medical Corps to assist with determining an optimal site(s) for warehousing supplies in areas a great distance from the vendor donors. The staff of the International Medical Corps is currently stretched across the globe in a variety of crisis situations. Not only does the organization need to become more efficient with a strong supply network, an impending disaster is within days of occurring in Latin America where the organization's experience is limited. Your organization has been asked to assist in the creating the relief strategy for Nicaragua that is in the direct path of monster Hurricane Harold.

Since 1984 the International Medical Corps has been serving people around the globe impacted by natural disasters, disease, and war. Beyond the initial period of crisis, the International Medical Corps works to build confidence and self-reliance with health care and development. The six priorities defined by the organization are:

1. Emergency response and preparedness;
2. Training local health care workers;
3. Providing lifesaving care to women and children;
4. Integrating mental health into primary health care settings;
5. Promoting the use of clean water, sanitation and hygiene;
6. Nutrition services.

An essential aspect of effectively providing the needed services in the least amount of time and as needed is reliant on a well-developed logistics network. Currently the International Medical Corps Logistics team is led by Marin Tomas who joined IMC in 1993 during the crisis in Bosnia and Herzegovina. As Global Director of Logistics he has led teams all around the world. His efforts are supported by the Deputy Manager Global Logistics Jacquie Gavin who served 18 years with the British Armed Forces retiring as Major. At the current time, the Logistics team is partnered with three organizations; the Humanitarian Logistics Association, Fritz Institution, and CIV-MIL Solutions.

When emergencies occur, the team has to react on a multitude of fronts. Supplies for medical care, equipment for performing surgical operations as well as temporary shelter for the injured, homeless and incoming medical staff, clean water supplies, and personnel need to be dispatched to the area as efficiently as possible. In most cases, infrastructure is damaged, utilities are out of service and communication systems are disrupted. Coordination with local officials, customs, ports of entry, and available volunteers is a key to success for an emergency operation.

After the crisis is over, ongoing development is often necessary to rebuild the communities affected. These programs may be necessary for many years, even decades. Such has been the reality of ongoing projects in the war-torn Middle East and turmoil-ridden areas of Africa.

Logistical Network Assessment

For the most part, the International Medical Corps has to order supplies as needed utilizing financial resources previously donated. This is especially true for medications that have a limited shelf life and require very specific storage facilities. While there is no centralized distribution center for holding supplies that can be purchased on quantity discounts or from donations listed below, small warehouses are set up at each field site. These are needed to make sure operations have a minimum level of safety stock on hand to maintain operations.

The International Medical Corps is dependent on the warehouse inventories or the availability of the items from suppliers to the third party providers for donated supplies. Currently, the organization has only three avenues for receiving donated supplies.

1. When an emergency happens, requests are made to the third party partners who then communicate with direct suppliers or determine availability of goods in the provider's warehouse locations.
2. For on-going needs, requests are sent to the third party partners to determine what is available.
3. Finally, companies or the providers sometimes have extra inventory which is offered to non-profit groups. However, without facilities for warehousing such goods, often the International Medical Corps has to pass on these opportunities.

However, the long term commitment for development along with ongoing crisis situations in Africa and the Middle East has created awareness among administrators for the need to gain more control of supply inventory. It also has been aware of lost savings available through quantity discounts and donation opportunities due to a lack of distribution warehousing.

Hurricane Harold

The International Weather Service has just indicated that the tropical storm Harold intensified and changed its course. Forecasters formerly believed the storm would fizzle out in the eastern Caribbean Sea with minimal disruption to the island countries. The sudden intensification of winds and the change to a western path has put Nicaragua right into the rage of what will be one of the most devastating hurricanes in the nation's history. In 1998 the region was hit by Hurricane Mitch that dumped almost 50 inches of rain over just a few days in some regions. Most of the mountains in the area have not been reforested from years of slash and burn agriculture. When Mitch hit Honduras 14 years ago, the rain caused the soils on the bare mountainsides to slide into the valleys burying whole villages. Raging rivers washed out bridges and roads made rescue attempts difficult at best. Communication systems and electrical power were non-existent for weeks in past hurricanes. This scenario will surely be played out in Nicaragua with this storm. Recent blogs from the floods in South Sudan indicated that in flooded regions, curious children often had

Escalating violence in Syria and northern Africa has stretched the International Medical Corps staff across the globe. Hurricane Harold has presented a major disaster situation with a limited amount of human resources and supplies available.

Most vehicles are purchased from Toyota Gibraltar Stockholding or from local dealerships in the host country (that way it's easy to maintain warranty for the vehicles and ensure access to spare parts).

Generators are mainly procured in the host country the International Medical Corps is working. The support service available is very important when purchasing a generator. A preferred brand is called Perkins (it's a UK brand but can be found in many countries). Otherwise suitable local alternatives are sought. However, it really depends usually on the budget and availability in country.

Depending of the severity of a situation the International Medical Corps enters each emergency with a staff team consisting of:

- 1 Emergency Response Team Coordinator,
- 1 Logistics coordinator,
- 1 Finance officer,
- 1 Health Technical Unit Representative,
- 1 Monitoring Evaluation Specialist,
- 1 communications officer.

Standard hospital tents used are packed very compactly to facilitate fast shipping and air shipping. Recently purchased Basic hospital tents without furniture or equipment are approximately 82 meters square. These accommodate between 18 – 50 people. This depends on the type of equipment and type of facility it is going to be used as (clinic or housing). Each tent comes in 2 boxes – each L227 x W73 x H 50cm. These weigh approximately 524 kg. About 24 tents will fit into a 20 ft. container (*Standard Pallets are usually 40"X 48" or 4 feet long. 5 pallets equals 20 feet. So approximately 10 standard pallets fit a 20 ft. container or fill one TEU.*)

Medical supplies (disposable gloves, tongue depressors, syringes etc.) and basic medicines are bought recurrently. International Medical Corps programs use these up pretty fast and are constantly being replenished. These products are often listed as renewables or consumables.

The Interagency Emergency Health Kit (IEHK) was designed by the World Health Organization (WHO) principally to meet the primary health care needs of a displaced population without any medical facilities. It contains essential medicines and medical devices (renewables and equipment) for a population of 10,000 persons for a period of 3 months.

The IEHK consists of two different sets of medicines and medical devices: a Basic unit and a Supplementary unit. In addition, optional modules are available.

Basic Unit: The Basic unit contains essential oral and topical medicines and medical devices that can even be used by primary health care workers who have had limited training. To facilitate distribution to smaller health facilities on site, the quantities of medicines and medical devices in the Basic unit have been divided into 10 identical units for 1,000 people each. (I've attached a sample of the basic kit contents)

Supplementary Unit: The Supplementary unit contains medicines and medical devices for a population of 10,000 people and is to be used only by professional health workers or physicians. The Supplementary unit itself is made up by a Drugs, Renewables and Equipment module. As the name clearly implies, the Supplementary unit and the Basic unit complement each other and can therefore best be used at the same time.

Optional Modules:

- Malaria Module,
- PEP Module (Post-Exposure Prophylaxis),
- Wound Module,
- Burn Kits,
- Cholera Module.

Doctor Travel Packs (DTPs) from IHPUK are used by response teams. About 500 of these fit into a 20' container.

The Ready Relief Box is a portable pharmacy designed by Heart to Heart in partnership with Becton Dickerson & Company, made for short term medical teams, disaster response and even for clinics and hospitals that are operating on an ongoing basis. The Ready Relief Box contains such items as over-the-counter pain relievers, antibiotics, topical creams, vitamins, oral rehydration salts, antacids, allergy medications and first aid supplies. A doctor's bag with a stethoscope, otoscope and blood-pressure cuff can be optional upon request. Each Ready Relief Box can treat as many as 500 people and its contents remain largely consistent throughout the year. Approximately 430 – 500 of the RRBs fill a 20' container.

Hygiene kits are needed in both disasters and for ongoing programs. 200 kits fit into a box and 1300 boxes fill a 20' intermodal container.

Past disasters in the region provided insight into the level of government agency corruption for donated funding. Most external government and non-government agencies chose to provide the relief and restructuring services directly instead of allowing the government to handle the funds and coordinate efforts.

For reference on the scale of product typically needed in a disaster realize that in the in Libya response 94.58 tons of supplies with approximate volume of 70 m³ (Cubic meters) were delivered in the first three months alone. These were mainly medicines, medical supplies and different type of medical kits (including surgical kits) with some smaller quantity of food items for health facilities. These items were shipped from abroad through procurement and GIK by a mix of air freight and ocean freight.

In some cases a large amount of supplies are shipped within a country. During the Ethiopia emergency, just in Dolo region the International Medical Corps stored and distributed an average 124 tons of food received from World Food Program (WFP) every month. This food gets delivered through the Corps resources utilizing a donor for secondary warehousing near served camps. From there the International Medical Corps distributes the food to nearby camps the organization is serving.

NOTE: Do not refer to International Medical Corps with an acronym.

Team Deliverables:

Your consulting firm has been asked to advise the International Medical Corps Logistics team in developing an optimum distribution network to serve the development needs in Africa and the Middle East. Having the warehouse(s) in place would allow for more direct relationships with companies such as Johnson & Johnson instead of having to work through the Third Party Provider organizations to get donations and supplies. Eliminating one tier in the supply chain can result in faster response times in emergency and make the general operation more efficient. Staffing requirements must also be considered. It may or may not work to place the site near a current country office to utilize present staff and office resources.

The International Medical Corps has determined that cost and staffing requirements dictates a ***maximum*** of three sites be set up to maintain inventory of items needed on a regular basis. So your team needs to determine the number and placement of sites best suited from a global perspective to serve the populations in the area. Take into account the preferred vendor list and locations of supply depots for those products. Consider the aspect of ownership or leasing facilities. What infrastructure exists to support the site for ingress and egress? What government regulations might impact the choice? How easy is it to move supplies through customs?

Your consulting group must plan for two months of immediate relief work and one year of restructuring support for the eastern half of Nicaragua. Unfortunately, it is the region of the country with the poorest infrastructure.

Since your firm has become familiar with the organization's supply chain and staff, your team has been asked to assist in developing a strategy to assist the soon- to- be devastated area by developing a logistics plan of action.

Appendix A: On-going projects sites

Country	Medical Kits used monthly	Hygiene Kits needed monthly	Nutritional Support items	Medicine (in KG)
Afghanistan	65	n/a	n/a	689
Burundi	n/a	1145	10 beneficiaries in 2011	n/a
Cameroon	62	n/a	253 beneficiaries in 2011	65
Central African Republic	70	n/a	127 beneficiaries in 2011	73
Chad	176	32	427 beneficiaries in 2011	185
Darfur	343	n/a	82 beneficiaries in 2011	360
Democratic Republic of Congo	210	n/a	69 beneficiaries in 2011	220
Ethiopia	25	107	1010 beneficiaries in 2011	26
Gaza	n/a	n/a	n/a	1.26
Iraq	N/A	328	n/a	n/a
Jordan	29	n/a	n/a	
Kenya	211	25	1268 beneficiaries in 2011	221
Lebanon	n/a	n/a	n/a	34
Libya	68	n/a	n/a	72
Pakistan	1144	397	473 beneficiaries in 2011	1201
Sierra Leone	9	n/a	1260 beneficiaries in 2011	10
Somalia	0	50	n/a	n/a
South Sudan	2	n/a	37 beneficiaries in 2011	171
Turkey	249	350	n/a	165
Yemen	12	n/a	n/a	70

Appendix B: Preferred Vendors

Company	Products purchased	Quantities	Shipping site
Dell	Laptop Computers	Deliveries within USA	USA
Rubhall W. Giertsen	RubHall Storage Tents		Africa
Blackberry	Phones	N/A	Worldwide
Rofi	tents	Stockholding	Molde, Norway
Staples	Office Supplies	Domestic deliveries	USA
Galaxy 1	Satphones, BGANs	Small parcel shipments	USA
Danimex	HF and VHF radios, other communication equipment	Average 300 kg / 0.5 m3	Sondenborg, Denmark
BluMed	Complete Field Hospital for Trauma and Surgical interventions	57,831lb (26,231kg) and 5,913 cubic ft. – airfreight ready	Santa Clara, USA
IMRES	IEHK, other medical kits, medicines, medical Supplies	As needed with addition of stockholding for 2 IEHKS and medicines (9,325 kg, 21 m3)	Amsterdam, Netherlands
IDA Foundation (International Dispensary Association)	IEHK, other medical kits, medicines, medical supplies	As needed, average shipment size 2,000 kg / 6 m3	Amsterdam, Netherlands
Medical Export Group (MEG)	IEHK, other medical kits, medicines, medical supplies	As needed, average shipment size 2,000 kg / 6 m3	Amsterdam, Netherlands
Missionpharma	Medicines and medical kits	As needed, average shipment size 1,000 kg / 3 m3	Lynge, Denmark
CHMP Kenya	Medicines and medical supplies	As needed, average shipment size 1,000 kg / 3 m3	Nairobi, Kenya
UNICEF Supply Division	IEHK, other medical kits, medicines, medical supplies	As needed, average shipment size 1,000 kg / 3	Copenhagen, Denmark

		m3	
WesternAuto	Vehicles and vehicle spare parts	As needed, one vehicle with spare parts per 20 foot container, 2 vehicles per 40 foot container	Dubai, UAE
Toyota Rwanda	Vehicles and vehicle spare parts	As needed, delivery on own wheels	Kigali, Rwanda
Kjaer Group	Vehicles and vehicle spare parts	As needed, one vehicle with spare parts per 20 foot container, 2 vehicles per 40 foot container	Svendborg, Denmark
Toyota Gibraltar Stockholdings	Vehicles and vehicle spare parts	As needed, one vehicle with spare parts per 20 foot container, 2 vehicles per 40 foot container	Gibraltar, UK

Appendix C: GIFT in KIND suppliers

Organization	Port of Departure	Contents	How much available
Wings of Meds/Wings of Help	Frankfurt, Germany	Medicine	4 pallets
International Aid	Spring Lake, MI- USA	Medical supplies and medicines	Based on needs (3) 20' or 40' containers annually-
IMRES Medical Solutions	Amsterdam, Netherlands	Medicine	6 pallets if procured and donated
Medical Teams Int'l	Portland, OR- USA	Disposable Medical Supplies	(2 to 3) 40' containers per year
International Health Partners UK	London, UK	Medicine	3 pallets
Americares	Stamford, CT- USA	Medicine	4 to 5 shipments yearly (air and ocean) approximately (4) 40 ft. containers
Wings of Meds	Frankfurt, Germany	Nutritional Supplements	90 Metric Tons
IOCC	Rochester, NY- USA	Hygiene kits	20' container
MAP International	Amsterdam, Netherlands	InterAgency Emergency Health Kits	(4) 40' containers annually
Heart to Heart	Olathe KS- USA	Surgical Kits, Hygiene kits	(3) 20' containers annually

Team Rubicon, Inc. is the non-profit organization that utilizes the "best practice" skills of veterans in disaster relief and emergency situations. First utilized during the recent Haiti earthquake, founders realized the valuable application of military skills in disaster emergencies. The organization is located in Inglewood, CA and has partnered with the International Medical Corps in areas such as South Sudan. Typically the organization supplies 4 to 6 volunteers to a project at any particular time.

Appendix D: Nicaragua



Nicaragua is a Spanish speaking country that is ranked second poorest in the western hemisphere after Haiti. The average level of education completed is 5th grade. Tourism and Coffee are two very important sources of revenue to the country. The young democracy emerged following a devastating civil war in the 1980s. The transportation and communication systems in the country are still in the development stage with many areas not being adequately served. The main international airport is located in the capital of Managua.

Appendix E: Third Party Providers (Warehousing)

Organization	Country	Area serving
Agility Logistics (Donated Service)	Dubai, UAE	Middle East, North Africa
Agility Logistics (Donated Service)	Jakarta	Asia
WFP – Humanitarian Response Deport	Ghana	Africa
WFP – Humanitarian Response Deport	Dubai	North Africa – Middle East
WFP – Humanitarian Response Deport	Jakarta	Asia
WFP – Humanitarian Response Deport	Panama	South America

Humanitarian Response Deport (HRD) facilities are not used often. Eighty percent of transportable goods are controlled medicines purchased directly when needed and are not warehoused. These are utilized in emergency situations when quick action is required and other warehousing is not available in the region.

Appendix F: International Medical Corps Network and Staff

Los Angeles based operations:

- Chief Executive Officer
- Hosts Communications team
- Finance and Resource Development
- Human Resources

Washington, DC based operations:

- Hosts all Operations Senior and Junior staff
 - Program/Desk officers,
 - Regional Coordinators who liaise between field programs and donors (USAID/OFDA etc.),
 - Health Technical Unit,
 - Mental Health Unit,
 - Monitoring and Evaluation team,
- Nutrition department;
- Finance/Logistics support staff;
- Human Resource and recruiting;
- Resource Development (+ Gifts in Kind);
- Public Policy and Advocacy, Domestic and Int'l Affairs

Split, Croatia office:

- Finance Staff (Regional finance, Roving finance, internal auditors, etc.)
- Logistics Staff (regional logistics, trainers, systems and inventory tracking and monitoring etc.)

Each country with on-going operations has a main office and possible sub-offices based on how large programs are or how far apart the projects in that country are located. Some of these offices are in the capital cities but many are in remote areas. Location is based on the need and infrastructure in each country. Currently the 25 country offices each have a country director, medical director, finance director, and logistics coordinator on staff. Sub-offices are staffed as needed.

Globally the International Medical Corps has approximately 4500 staff members. The majority of the staff is from the local countries being served. Approximately 500 staff are actually expatriates serving outside their home country.

Appendix G: Medical Volunteers

In addition to the large, well-trained staff of the International Medical Corps, volunteers are a tremendous asset for the organization.

There are approximately 109 doctor and 60 nurse volunteers on an ongoing roster. Over 80% are United States citizens with the rest from Canada and Haiti. Medical volunteers generally are in country for an average of fourteen days. This requires coordination of individuals in such a way that important services are not fully staffed at any time.

Others can volunteer for support or non-medical service with a minimum of 2 months availability. Job opportunities and volunteer registration are listed on the organizations website.

International Medical Corps UK

The UK organization is a separate entity from the United States International Medical Corps. The UK office deals with all EU based donors and grants as more of a "sister" organization not directly part of the U.S. organization. However, the UK organization can assist in securing various supplies.

Appendix H: Global Financial Information



Ninety-two percent of resources (products and services) are used directly by program activities. This reflects the International Medical Corps deep devotion to fiscal responsibility. Information on the past two years financial activities are indicated in this appendix. It should provide a guideline for future financial budgets. Using an average of these items should be a conservative method of forecasting revenues for the coming two years.

	2011	2010
SUPPORT AND REVENUE		
International Medical Corps-UK	43,855,644	30,289,741
International Medical Corps	100,760,980	88,413,808
TOTAL contract and grant support	144,616,624	118,703,549
International Medical Corps-UK	6,206,483	4,071,726
International Medical Corps	32,714,294	43,876,864
TOTAL donated services and supplies	38,920,777	47,948,590
Total Support and Revenue	183,537,401	166,652,139
EXPENSES		
Program		
International Medical Corps-UK <i>program expenses</i>	47,659,229	32,908,633
International Medical Corps <i>program expenses</i>	121,533,675	113,506,013
Support Services		
International Medical Corps-UK <i>management and general</i>	2,172,677	1,577,453
International Medical Corps <i>management and general</i>	11,756,188	8,898,908
International Medical Corps-UK <i>fundraising</i>	15,987	46,217
International Medical Corps <i>fundraising</i>	1,366,493	794,614
Total Expenses	184,504,249	157,631,838
Change in Net Assets	(966,848)	9,020,301
Net assets are beginning of year	13,381,112	4,360,811
Net assets at year end	12,414,264	13,381,112