EMT-1 Trauma Stabilization Point for Mosul and Tal Afar

New York City Medics Sub-Contract
Global Response Management
Final Report 1: March 1, 2017 to October 31st, 2017

About the Project:

Global Response Management (GRM) volunteers began treating patients at the frontline of the conflict of Mosul in January 2017. We continued and strengthened already established relationships with the Iraqi Special Operations Forces (ISOF) medical teams.

Our EMT-1 TSP had the required certified staff experienced in the elements of initial trauma care: triage on a mass scale, wound and basic fracture management, pain management, fluid resuscitation, ATLS skills, basic emergency care of pediatric and adult trauma. We worked under the guidelines of the World Health Organization's 2013 publication *Classification and Minimum Standards for Foreign Medical Teams in Sudden Onset Disasters.*

During the conflicts of Mosul, Tal Afar, and Hawija, GRM provided 24-hour, front line trauma stabilization, contributed to referral pathways, coordinated the transport of patients to higher levels of care; assessed new TSP locations; collected patient medical and demographic data for affiliated NGOs; transported, distributed and maintained stocks of medical supplies; maintained TSP facility functionality, security, and working condition; and coordinated with other facilities and TSPs in the conflict.

Organizationally, we had full time employees including Country Director, Office Manager, Volunteer Coordinator and Communications Director in Erbil. While in the field, GRM kept a Team Lead, a local registered Doctor, Data Monitoring Officer and Translator at the TSP aside from the four or more paramedic or above, certified professionals volunteering there.

From January 19 through July 22, 2017, we operated two Trauma Stabilization Points (TSP) as the battle advanced throughout East and West Mosul, relocating as per needs assessment and security assessment. As required by our contract with NYCM, one of the two TSPs was an EMT-1 TSP since May 2017, staffing the facility with at least 1MD and 4 Paramedics or above.

Proceeding and throughout the conflict of Tal Afar, from August 4 to August 28 th , 2017, we operated one Trauma Stabilization Point (TSP) co-located with the Iraqi Special Forces Medics.

In addition to running a TSP during the Tel Afar offensive, prior to the battle's commencement GRM sent a team out to an IDP collection point in the weeks before the conflict in Tal Afar began. Although our original intent was to treat trauma patients fleeing ISIS controlled territories, we treated mainly exhaustion, dehydration, minor wounds, and medical cases that needed referral. The NGO Non-Violent Peace Force also dropped bottles of water at the collection point which GRM staff distributed to IDPs.

Project Expected Outcomes:

Outcome 1: GRM delivered high quality medical care and trauma stabilization in line with WHO Guidelines.

As of May 22, 2017, we had established an EMT-1 with qualified staff. We were never without the required 4 paramedics or above (nurse, nurse anesthetists) as well as accompanied by the ISOF medics, but a full-time doctor was more elusive. We had volunteer doctors (both internationally board certified and local Iraqi qualified doctors) but we did not have one doctor 24/7 until we hired a full time Iraqi doctor on 7-4-17. Since 7-4-17 we have had a full-time doctor whenever GRM had an operational TSP.

Our clinical protocols were developed with the working group of the following GRM and partner medical professionals: Dr. Azeez Alkasaab, Dr. Katrine Matisen , Dr. Jordan Wagner , RN Alex Potter, RN Jonah Pregulman, RN Helen Perry, NRP Eli Miller, NRP Carlo Hodil, NRP Walter Adler, EMT Pete Reed. They include the following scenarios encountered at Trauma Stabilization Points: 1.0 Basic Life Support, 2.0 Primary Care of IDPS, 3.0 Environmental Exposure, 4.0 Hemorrhage Control, 5.0 Airway and Respiratory Management, 6.0 Burn Management, 7.0 Head, Ear, Eye, Nose Throat Injuries, 8.0 Analgesia and Pain Management 9.0 Antibiotics and Sepsis Prevention, 10.0 Splinting Fractures/ Isolated Extremity Injuries, 11.0

Suturing of Minor Laceration in Stable Patients, 12.0 Prolonged Field Care. The protocols were based on TCCC Guidelines, PHTLS, ATLS and Prolonged Field Care Protocols, NYC EMS Protocols, Massachusetts EMS Protocols, and NYC Medics TSP Guidelines.

Using social media, networking, and major media outlets that produced stories about GRM, our Country Director and Communications Director recruited EMT-1 qualified volunteers from international civilian job pools as well as other NGOs. We signed Memorandums of Understanding with two established medical relief NGO's who directed their qualified volunteers to us. We called for EMT-1 qualified volunteers and, using our Volunteer Coordinator, sourced and vetted proper candidates throughout our contract period and until now.

By the end of May we had hired a Volunteer Coordinator who established a Pre-deployment Handbook, procedures for processing, vetting, orientation and post-deployment evaluations, psycho-social care, a website survey, waivers for Press, Social Media, Liability Release, and Emergency Contact forms for all volunteers available electronically and in hard copies at the TSPs for Team Leads, Country Director and Business staff and if required, insurance carriers. Volunteer orientation includes in-depth briefings on International Humanitarian Law, medical

guidelines, protocols, and standards, operational procedures, security protocols, patient data forms, and incidents involving unknown toxic elements.

Our TSP worked within medical guidelines based on TCCC, ATLS, and PHTLS principles, medical protocols from the states of NY, Massachusetts, and guidelines from WHO and NYC Medics. Team members were oriented and versed on the chosen triage system. We established and implemented standard operating procedures, technical guidelines and indicators for successful prehospital care, patient transfer and referral pathway processes.

We had the equipment necessary to triage, stabilize, and transport severely injured patients, as we coordinated and traded with other NGOs, as the procurement process from NYCM/WHO was not successful - we did not receive a single full monthly supply from WHO. We picked up emergency resupply from WHO on 3-16, 3-20, 4-25, 5-3, 5-25, 6-14, 6-24, and NYCM supplies on 3-12-17. None of those pick ups was the complete list of what was requested, nor fulfilled the items predetermined in our contract with NYC Medics.

Throughout, team members and patients have operated in a safe and secure environment due to co-location with ISOF and security decisions made by experienced team leads. ISOF provides with a security perimeter and constant guards on multiple fronts, both where our teams operate, and where they sleep.

In co-locating with ISOF medics, and Iraqi trained doctors throughout, we were aware their training was not as sophisticated nor thorough as our own certified volunteers and staff overall. However, their presence and proficiency in certain skills added to our medical response as a whole.

Outcome 2: Transportation coordination and communications between GRM's TSP and all other NGO TSP's in the area expedited patient care and improved results of patient treatment.

During the Mosul offensive, GRM coordinated with all partners along the Trauma Referral Pathway to provide safe and expeditious transportation to higher levels of care, including the MSF Hamam al Alil Hospital, MSF Facility at al Nablus, Aspen Athba Hospital, Aspen Hamam al Alil Hospital, and Mosul General Hospital (in coordination with ICRC). GRM staff and volunteers communicated with team leads and medical team members at receiving facilities to ensure positive patient outcomes, timely and accurate patient transportation.

The Trauma Referral Pathway for Mosul was created to ensure that patients with different medical needs at different triage levels were sent to the appropriate facility, being formatted and

structured as the battle moved and as partner organizations were operational or no t. On paper, this was an ideal system.

The situation in Tal Afar was quite different as there was only one hospital near our TSP and also we only treated military casualties. For this referral pathway we kept in constant communication with the receiving hospital, rode with patients en-route, and reported off to receiving staff.
Ideally in Mosul, each patient would have gone through the phone referral system set up by NYCM. This worked a majority of the time, but we, as well as other TSPs, had challenges with ambulance drivers. Numerous ambulances were given by WHO specifically to be used for civilians. Ambulance drivers, working under Nineva Department of Health, had not been paid since the beginning of the operation, and often refused to transport patients further afield because 1) they sometimes considered all the ambulances military (despite multiple explanations), and 2) because of the poor quality of the road: The road toward Aspen Athba had nearly one hundred large holes in the road, which could lead to negative patient outcomes. In future all operating partners should take out the cash salaries for the drivers to pay them each day in order to increase the effectiveness of ambulance operations. Daily payout would give the team lead the ability to not pay someone for either taking the patient to the wrong location, not listening to the team lead, or not being at the TSP full time. It is difficult to track so many drivers on a weekly basis, as they were not being paid and had no DOH manager controlling a solidified schedule.
In Tal Afar there was only one hospital. The facility was run by Ministry of Health Iraq staff, and controlled by PMU forces. The facility did not turn patients away nor refuse treatment to anyone, as was feared at the onset of the operation. The facility was only 15 mins away, and we had no issues with transport.
Depending on the status of the offensive in Mosul, GRM had varying degrees of control over where patients went on the referral pathway. At one point a TSP could refer a patient to Aspen HAA, Aspen Athba, Mosul General, MSF-B HAA, or QRC HAA. The GRM Country Director worked with WHO staff to make a referral pathway map for ISF medical teams and ambulance drivers. The map contained the local names for each facility, the capacity, contact details, and which facility was appropriate for each patient (although they were told repeatedly where to go by Team Leads). After the map was widely distributed to TSPs and ISF medical teams, an overall understanding was reached in regards to referrals. There were still issues when ISF medical commanders would refuse to listen to the referral system. When surgical facilities became available at MSF Nablus and Mosul General, this exponentially increased the accuracy and timeliness of patient transfer. Surgical care was available within a 10-minute (or less) transfer time, and the ambulance drivers felt like their concerns were being considered.

In Mosul internal communications were maximized by hiring two translators, one since the outset of the project, and one since the first week of April. Both previously worked with foreign forces, so they worked well with our teams, took on additional tasks, and aided in relations between GRM volunteers and Iraqi medics.
In Tal Afar we had only one translator. Three of our medical staff speak Arabic fluently which overcame the challenge of non-medically trained translators not understanding the medical terminology they were translating.
External communications and transport coordination were done by our Country Director, who dealt with future site assessments, relocation, inter-NGO and Coalition communication on the ground, transportation of supplies, and reporting on inner workings or failures of current referral pathways in Mosul.
Upon entering the country, each volunteer was given a phone for their use. Phones came with calling credit, data, GRM and pertinent partner contact names and numbers, maps, protocols, processes, forms, and the Volunteer Handbook. Mentioned earlier, we bought a SAT phone for Tal Afar and also installed an inverter into one of the vehicles for charging devices.
Outcome 3: Data Collection: Daily data collection will provide immediate

information for partnering organizations allowing them to make decisions affecting future actions.

Throughout Mosul we had one Data Monitoring Officer at each TSP. Our Data Monitoring Officer is also one of the translators when the data can only be collected in Kurdish or Arabic. A GRM volunteer nurse and NYCM created the Data Collection Form which they revised together in May. When filled out, the form produces three copies; one stays in the TSP upon transfer of the patient, and two copies travel with the patient. All forms we keep are then given to NYCM.

We did not have a Data Monitoring Officer during the Tal Afar operation. The data sheets were filled out either by team lead or one of the medics who was working on the patient. Our doctor filled out the Controlled Substance Log as required. We did not have Tal Afar data sheets for a few days into the operation as NYCM stated we would receive new ones identified as Tal Afar vs. Mosul. On August 24 we were told to use the Mosul data sheets and that is when we began to do so. We were also told to fill out a Controlled Substance Log which we filled out from that point forward if Controlled Substances were used.

We had challenges regarding the patient data forms in Mosul. In regard to our team, we controlled what was documented, but because the nature of our relationship with ISOF, our

team's work plan could be overruled occasionally. Some challenges we faced included: ISOF not wanting patient sheets done for military due to operational security concerns, ISOF pushing out civilian mass casualties before we were able to document everyone, because they feared there would "not be enough room" or staff in the case of a military mass casualty, and in some mass casualty events, our medically qualified data officer had to step in to treat patients, and hand the documentation off to someone less versed in the process.

We still had the similar problem once in Tal Afar with large groups of casualties when all staff were needed in a mass casualty. The problem of no data sheets filled for military casualties only exists at ISOF 2: Tal Afar operation we worked with the 16th and ISOF 1-3.

Nearly each week, our Country Director or his representative, attended the Trauma Working Group in Erbil and reported on the TSP operations, numbers, what was going well and what was not. We consistently enacted a plan to counter challenges faced at the TSP level, and worked with leadership on the NGO and military sides to better our level of patient care.

Outcome 4: Quality Assessment: GRM will consistently assess and evaluate the activities of the TSP to identify issues and improve on the care given.

Until May 1, our prior Quality Assessment Officer sent patient numbers and daily narratives to NYCM Coordinator RB via text message. The numbers were broken down so they could be easily entered into Korbo or Dharma (the chosen data systems of the WHO) by NYCM partner staff in Erbil. The prior Data Monitoring Officer's daily narratives included patient flow, common injuries, likely movements of population or the battle, issues that came up and what was solved.

We had a full-time volunteer Team Lead at each TSP in Mosul and Tal Afar u ntil they were hired

on staff May 1, 2017. The Team Lead was responsible for evaluating what was going well, what could go better, what systems were failing, and what we could do to improve. Team Leads coordinated with others in the given specialty (medical issues with highest qualified provider available, coordination issues with the ISOF high ranking officer present, transport issues with receiving medical facilities and ambulance drivers) to consistently provide high quality patient care and the data that goes along with it.

The Team Leads reported daily to the Country Director, who, if necessary, took issues to a higher level to solve them. For example, ambulance drivers not wanting to follow the referral pathway. They communicated daily by phone, email, and text, as well as held weekly meetings to discuss strategy for fixing issues and anticipate likely challenges in the coming week.

In Mosul, in the budget from NYCM, we were not given a budget line for Quality Assessment Officer, and those duties were relegated to Team Leads. We had occasional challenges

continuing the daily reports, data, and reporting it off to NYCM partners.
In Tal Afar, we completed data sheets for all patients. With a low casualty rate and a full-time doctor in Tal Afar, we could create a Log Sheet and complete Controlled Substance Logs daily and proof that Data Sheets, Daily narrative log, and Controlled Substance Logs were consistent.
In Tal Afar, we came up with a better system to keep track of and pay ambulance drivers. With cash in the field, we would paid ambulance drivers on duty each day, at the end of the day, from 8-20 to 8-28-17 for which we are to be reimbursed by NYCM at $20 a driver a day up to 7 drivers a day. Paying the drivers each day assures that they are paid as many do not appear daily, or again.

Risk Analysis and Mitigation Measures:

GRM kept a security perimeter around all TSPs in coordination with Iraqi military partners. We moved the locations of our TSPs multiple times as we moved forward with the military partners, but we did not have to relocate our team for security purposes.
Insurance 3-1-17
• Travel/Personal Accident – with CHUBB
• Professional/General/Auto Liability – Lloyds of London
• Accidental Death and Dismemberment
• Malpractice
• Kidnap & Ransom (K&R) – also Lloyds of London led by Travelers
o $1 Million limit of liability – per occurrence and in the annual aggregate
o $5,000 deductible Each and Every Claim
CHUBB has an Emergency Response Helpline (24/7/365 line).
We laminated Cards with CHUBB's emergency contact information for Medical and Security fvc Evacuations. Each Team Member carries the card on their person. They are also displayed at TSPs.
Following discussions with CHUBB, we created a Face Page for each team member that is electronically available to Team Leads, Country Director and Office Manager. The Face Page form includes all information that will be required by CHUBB if we should ever have to call them in an emergency. We have had not filed a claim with our insurance companies.

We also established Security and Medical Evacuation Emergencies procedure sheets for all team members, and available to them electronically.

Loss of Patient Data:

Patient data was also lost in the early stages of Mosul as ISOF often threw away the sheets, especially from military patients, and ambulance drivers often did not pass them off to the receiving facility. They were informed of the need to keep data on patients repeatedly, and eventually they no longer threw them out. This has not been an issue since, including Tal Afar.

Financial Report Narrative:

Our financials run from March 1, 2017 to October 31, 2017 the period of our contract as understood throughout by the World Health Organization. GRM runs on an accrual basis in accordance with GAAP. All GRM's operations and expenses are directly related to our work under this contract. We had no operations or expenses that were outside of the contract. Petty cash books, receipts, bank statements and PayPal records are entered and maintained on QuickBooks by our accountant in Erbil and approved by our CPA in the US. We have hard copy and/or electronic copies of all receipts. A detailed final project budget is attached. It was prepared by GRM management and is certified as true and accurate by GRM's Accountants as we have no Chief Financial Officer.
Despite the late contract payments from NYCM and partner organization, GRM operated successfully throughout the contract time, fulfilling our deliverables, ensuring patient safety and high quality of care, recording patient data, and coordinating the referral pathway to the best of our ability. However, the lack of payment from NYCM until *7-24-17* had been extremely

detrimental to our ability to operate without undue financial stress on our staff, and our ability to bring on high level providers without some sort of financial commitment. Our international staff were not paid for months to be able to continue providing high levels of patient care in the field.
Our Accounts Payable as of our 6-22-17 was $161,450.33, with total costs incurred totaling $293,555.42. By 8-15-17, we had paid off all debts, repaid staff salaries and as of this writing have incurred more expenses than our Contract Award amount of $517,393.76.
We calculated, that to continue operating through Tel Afar, pending the outstanding payment due, we would need a non-costed extension of one to two months. This was granted on October 10 2017. The Tel Afar operation in total lasted less than two weeks.

Staff:

At the onset of our contract negotiations GRM was responsible for medical trauma care in Mosul without a EMT-1 as that had not initially been required by the Iraq WHO, and we were running two clinics. As of May 22, 2017, we had established an EMT-1 with qualified staff. We were never without the required 4 paramedics or above (nurse, nurse anesthetists, physician assistants) as well as accompanied by the ISOF medics, but a full-time doctor was more elusive. We had volunteer doctors (both internationally board certified and local Iraqi qualified doctors) but we did not hire one doctor on staff until we hired Iraqi doctor, *Dr. Azeez al Kassab* on 7-4-17. Since 7-4-17 we have had a full-time doctor whenever GRM had an operational TSP Type 1.
We hired a Team Lead as of 6-1-17, one for our TSP Type -1 and he had been volunteering up to that point. During the Mosul, Tal Afar and Hawija operations we employed one Team Lead for our TSP. Organizationally, for the conflicts of Mosul, Tal Afar and Hawija we had full time employees including Country Director, Office Manager, Volunteer Coordinator, Communications Director in Erbil and, a Team Lead, a Doctor, Translator at the TSP aside from the four plus paramedic or above certified professionals volunteering there.
All EMT-1 Volunteers and Staff were vetted assuring they had the necessary licensure and qualifications to perform in a EMT-1. We have all their credentials, CV's and certifications on file electronically. No medical volunteer was accepted without a paramedic or above medical certification.
Our clinical protocols were developed with the working group of the following GRM and partner medical professionals: Dr. Azeez Alkasaab, Dr. Katrine Matisen, Dr. Jordan Wagner, RN Alex Potter, RN Jonah Pregulman, RN Helen Perry, NRP Eli Miller, NRP Carlo Hodil, NRP Walter Adler, EMT Pete Reed.

Country Director:

Pete Reed served as the Country Director for the duration of the project, excluding two pay periods he was absent, and *Eli Miller* took over his position. The Country Director was responsible for overseeing the entire GRM team, confirming decisions made at a lower level, engaging with heads of mission and other country directors in the NGO community, going to strategy and planning meetings, and enacting all decisions discussed with the GRM board on the direction GRM should take. The Country Director is ultimately responsible for ensuring GRM is fulfilling its mission.

Chief Operations Officer:

Derek Coleman served as Chief Operations Officer for the first two months of the project. After his departure in May, *Justine Bakker* was hired to take over his duties. The Chief Operations Officer was responsible for ensuring decisions, policies, and plans made at the top level were

implemented down the line, both for the medical team and the office staff. The COO was responsible for working out any operational issues that came up, assisting the Country Director with their duties, and assisting to manage relationships with partners and vendors.

Medical Director:

Dr. Azeez al Kassab, Head of Surgery at Mosul General Hospital, served as our Medical Director, as well as the Team Doctor for our TSP. The Medical Director was responsible for overseeing the development of and ensuring adherence to medical protocols, leading the medical team in the field, checking medical credentials of incoming team members, and ensuring adherence to controlled substance protocols.
We had volunteer doctors (both internationally board certified and local Iraqi qualified doctors) but we did not hire one doctor 24/7 until we hired Iraqi Dr. Azeez al Kassab on 7-4-17. Since 7-4-17 we have had a full-time doctor whenever GRM had an operational TSP.

Team Lead:

Chris Lindt served as the Team Lead for the onset of the project. After his departure in August, *Anthony Burton* was appointed as Team Lead for the remainder of projects in Tel Afar and Hawija. We had two team leads for 2.5 months of the conflict in Mosul as the WHO required us to record data and provide quality assurance at both our TSPs. The Team Lead is responsible for ensuring the TSP runs smoothly, liaises with the Country Director and Chief Operations Officer on the equipment needs at the TSP, conducting all referral pathway communications, ensuring that team members follow the Team Doctor's lead regarding triage and treatment decisions, resolving any challenges and reporting any incidents, and sending in a daily report with numbers provided by the Data Monitoring Officer. The Team Lead took over the responsibilities of the Quality Assessment Officer when that position was eliminated.

Quality Assessment Officer:

Alex Potter served as the Quality Assessment Officer for the first two months of the project in March and April at one TSP and Jonathan Reith for the second TSP. The position was then eliminated in a later developed budget that was confirmed by NYC Medics. The Quality Assessment Officer was tasked with ensuring the TSP adhered to protocols, identifying operational issues and reporting to the Team Lead or COO, identifying and addressing medical team performance issues and implementing re-training programs. The Team Leads took over this responsibility in later months.

Data Monitoring Officer:

Fareed Issa Mousa served as the Data Monitoring Officer for the duration of the project through
Mosul, after which Hassan Azeez, our Translator, took on the Data Monitoring Officer role too. The Data Monitoring Officer was responsible for gathering and maintaining all patient data (on

the pink sheets) and handing over daily patient numbers to the Team Lead to add to the daily narrative.

Office Manager:

Candace Peck Reed served as the Office Manager for the duration of the project. The Office Manager is responsible for all administrative and property components of GRM: insurance, bookkeeping, report preparation, contracts, protocols, databases, waivers, records, 501c3 and NGO applications, residency and visas, files, liaising with business partners, HR, and special projects as they arise.

Volunteer Coordinator:

Jonathan Reith served as the Volunteer Coordinator from June until August, paid at full rate while in country and at 30% of full rate while in the states. *Chris Lindt* served as the Volunteer coordinator at a 30% rate for the remainder of the project in September and October. The VC is responsible for volunteer communications and data, transportation, creating and maintaining the volunteer handbook, post-deployment psychosocial support connections, and resolving any pre-and post deployment issues and all transportation coordination.
By the end of May we had hired a Volunteer Coordinator who established a Pre-deployment Handbook, procedures for processing, vetting, orientation and post-deployment evaluations, psycho-social care, developed a website survey, waivers for Press, Social Media, Liability

Release, and Emergency Contact forms for all volunteers, Volunteer orientation includes in-depth briefings on International Humanitarian Law, medical guidelines, protocols, and standards, operational procedures, security protocols, patient data forms, and incidents involving unknown toxic elements.

Communication and Media:

Alex Potter served as the Director of Communications from June till the end of the project. The Director of Communications was responsible for the public face of GRM, it's connection to and vision for engaging with the public, and managing all social media channels to increase online engagement, visibility, and impact of GRM, creating targeted online campaigns and a detailed communications plan for the duration of the project.

Translator:

Hassan Azeez served our main translator for the duration of the project. We only one translator,
as one staff member and one long-term volunteer also spoke Arabic. He was responsible for providing a clear line of communication between GRM's team, the Iraqi medics, and patients we treated to ensure all team members were on the same page, to resolve cultural or operational difficulties, and to liaise with the local community in which we were located. The translator was on hand always to deliver clear and concise dialogue between English and Arabic speakers

within GRM and those who interacted with us. Hassan served as our Data Monitoring Officer with Dr. Azeez for TSPs in Hawija and Tal Afar.

Accountant:

We retain an accountant (CPA) in the US and another in Erbil (Masters in Finance and Costing) maintains our QuickBooks accounts and local accounting issues.

Lawyer:

We retain a lawyer in the US. With the NYCM contract, Waivers and two Memorandums of Understandings with established medical relief NGO's who directed their qualified volunteers to us, we had legal fees that were larger than anticipated.

Drivers:

Drivers paid were either ambulance drivers, to ensure that patients were transferred to the location required, as they were not being paid by DOH, or private drivers for GRM to bring team members or supplies to and from the field in the case that our Team Lead, Chief Operating Officer, or Country Director was not available to facilitate transport. Ambulance drivers pay is as per Excel Ambulance Sheets.

We added ambulance drivers as of 6/1/29, by 6/29/17 we had 29 of them who we were paying $50 a week after an initial payment of $200/ea. to eight of them on Eid. This was outside the budget but gave us necessary results of patients transferred along referral pathways. This increased our costs to $1450 a week for a total of $7690 vs. $3600 budgeted. In Tal Afar, we had 7 ambulance drivers for the few days they were needed from 8-20-17 to 8-27-17. The ambulance drivers were to be paid $720, $20 per day, and this money is to be reimbursed to us by NYCM. Hawija ambulance drivers totaled 8 at 25,000ID a day. They were paid in full in the field unlike previous drivers to whom we still owe salaries. With varied drivers on and off duty at varied times, it was very difficult find them to distribute their pay even when we had it. Many drivers are owed salaries for Mosul and Tal Afar, but we have not seen them again to distribute.

TSP Cook:

Younis Mohammad, the TSP Cook was responsible for providing the GRM teams with meals throughout the project. He and his family were located near the TSP, and the funds provided him went toward purchasing food and cooking equipment, as well as a wage for his services.

Fixers, Temp Employees, Day Laborers:

This new category not included in the original budget includes day fixers for ensuring a smooth processing of registration paperwork, temporary nurses to work at the TSP for days our team

members were sick or absent to ensure adherence to an EMT-1 standard, day laborers to help move equipment to and from storage, and maintenance. These are factors we had not anticipated when creating the budget with Tim Tan.

Supplies, Commodities, Materials:

Medical Supplies:

NYCM and WHO did not deliver ordered monthly procurement and necessary supplies until 7-16-17. We picked up small emergency resupplies from WHO on 3-16, 3-20, 4-25, 5-3, 5-25, 6-14, 6-24, and NYCM supplies on 3-12-17. Receipts for these supply pickups show the items received and they appear on the in-kind portion of the Final Budget. We received only between $20-30000 of the $281,000+ contracted although the amount is unknown for sure as several items we received had no cost associated with them. We should state that the Coalition donated supplies to ISOF with whom we shared treatment space thus providing us necessary supplies for treatment.

As of the final report, many NYCM in-kind supplies were never delivered as contracted. The attached budget section Supplies, Commodities, Materials displays what we did receive, and costs known if shown on procurement receipts.

Equipment:

Until 7-24, 17, we had gotten by with used and borrowed items and equipment but had not spent money on what was really needed because of lack of payment by NYCM partner organization. Our priority for expenses was items necessary for providing high quality medical care and trauma stabilization and salaries for locals. After 7-24-17 we acquired much needed household and office furnishings – most second hand and many donated.

Prior to the Tal Afar and Hawija operations we had to buy unexpected medical supplies, automotive and communication equipment not initially considered when the budget was written and when our operation was housed in structures in Mosul; now the operations were on the move. The last line item under Equipment accounts for automotive expenses, and said communications equipment for Tal Afar and Hawija appears under General Operating as the line item Tracking GPS. We were most grateful to a partner organization for lending us a $40000 tent for these operations.

Contractual Services

Transportation in Iraq:

This includes fuel and taxis. Lease on vehicles is under General Operating. The contract with the leasing company should have appeared here but was not set up like this on the original budget. The further distance from Erbil to Tal Afar and Hawija raised our fuel costs recorded under this line item.

Travel:

International Duty Travel:

This line item was low in the interim report because we needed to reimburse many volunteers for their flights when cash flow allowed. Once we received our contracted funds, we reimbursed volunteers and increased spending on volunteer flights necessary for Tal Afar. As the conflict in Tal Afar and Hawija were very short, we have also incurred cancellation fees for volunteers' flights. The closing of the Erbil airspace for international flights also caused us to cancel and incur change fees for all booked flights.

Regional Duty Travel:

There have been three intra-Iraq trips so far associated with Federal Registry. In Erbil we hired a local driver for Project Manager meetings and volunteer transportation so that increased costs in this line item.

General Operating and Other Direct Costs:

House:
House expenses included rent, association fees, and utilities. Our house lease remained consistent for the project. Utility costs rose during the latter months due to the increased number of volunteers and staff living in our house for longer, hotter, summer periods after the Mosul conflict.

Vehicle Hilux:
We continued our rental of 4 Hilux trucks throughout the Mosul, Tal Afar and Hawija conflicts, never needing additional vehicles. Normal maintenance costs were included in the rental price. We reduced to one vehicle in the second half of October.

Vehicle Van:
We used and repaired a Mercedes Van for Erbil transport, but it was loaned to us at no fee. We no longer had use of this vehicle after Mosul.

Communications:
We hired a Communications Director on 7-7-17 as explained above in Staff. With the hiring of a Communications Director our communications costs rose due to social media, software, and print costs incurred to recruit volunteers. Communications costs also rose with the number of volunteers and staff who needed Korek and Zain.

Insurance:
Insurance costs were $50397, $15397 above budget, but are coverage is extensive and provides a

level of security necessary for all team members working on the front lines. It took months for insurance agents to procure our specialized insurance and so no quotes were available at the preparation of the contract budget.

Tracking Software:
Tracking software had not been a priority due to lack of payment from NYCM partner organization. While in Mosul at the TSPs, pertinent members of the Iraqi military and Coalition partners were constantly informed of our location and provided security. Due to unreliable mobile phone reception around Tal Afar and Hawija, a SAT phone and radios were purchased to keep lines of communication open with relevant partners. An inverter was installed in one Hilux to keep electronic communication systems charged. This communication's equipment appears under this line item.

Legal and Residency Fees:
KRG Residencies were needed for six staff members and long-term volunteers incurring residency fees, translation fees, and bloods. Entry visas were also required for a Lebanese volunteer from his country of origin. The process to acquire KRG NGO Registration and thus exemption for our NGO from residency fees was a complicated and lengthy process but was completed July 5, 2017. Our Iraqi NGO Registration is in process.

Project Summary:

The GRM Trauma Stabilization Point project has been successful. We have met our outcomes via the target indicators, and continued to operate our TSPs in the battles for Mosul, Tal Afar and Hawija. Positive outcomes were high quality patient triage, stabilization, and transport, leading to decreased morbidity and mortality for our patients.