



## After Action Report

# CHILE 2010

Operation *Fuerza Chile!*

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## EXECUTIVE SUMMARY

On February 27th, a magnitude 8.8 earthquake struck the nation of Chile. The epicenter was near the Chilean coastline, close to the city of Constitucion, and 200 miles southwest of the capital city, Santiago. Within minutes of the earthquake, a tsunami struck coastal villages with varying degrees of magnitude, further complicating an already chaotic situation.

Within 8 hours of the earthquake, Team Rubicon began assessing the situation through reports being disseminated in various media outlets. Initially the Chilean government set the death toll at 100, with approximately the same number missing and 1,000 seriously injured. Despite Chile's public statements that matters were well in hand and outside aid was not needed, Team Rubicon began researching feasible options for providing medical relief to the Chilean people. Ultimately, Team Rubicon's Board of Directors felt that the sheer magnitude of the earthquake and subsequent tsunami would overwhelm Chile's robust emergency services; creating shortfalls of medical response in the rural areas outside the major population centers where assistance would be concentrated. For these and other reasons, including conflicting reports about the situation on the ground in the hours following the disaster, Team Rubicon voted to activate and deploy an advance medical team to Chile. This team was tasked with conducting field triage, treatment and transport operations (T3), in addition to helping coordinate the dissemination of care to the outlying rural communities.

On Monday, March 1<sup>st</sup>, Team Rubicon departed Los Angeles for Chile. After approximately 56 straight hours of travel, which included 4 flights, 3 countries and a 7 hour road trip, Team Rubicon arrived in Concepcion, Chile. TR immediately went to work, coordinating their efforts directly with Dr. Jorge Lastra, who was Director of Emergency Medical Response in Region 8. Some of the significant accomplishments achieved by Team Rubicon include:

- TR once again conducted T3 operations (triage, treatment, transport), rendering aid to rural communities affected by the disaster. Medical treatment included multiple surgical wound debridement, fractured bone reduction, infected wound care, and 2<sup>nd</sup> degree burn treatment.
- TR coordinated directly with the Chilean Army in Constitucion, which asked TR to provide medical reconnaissance of the outlying communities. Team Rubicon filed official reports directly to the Army's Chief Medical Officer, Captain Berger.

- TR helped reestablish communication between the rural *Postas* (clinics), which had suffered communication breakdowns following the disaster.
- TR identified numerous rural communities that had not received any aid since the quake; these communities were low on food, potable water and shelter. Reports sent to the Chilean government facilitated government air drops of supplies to these areas.
- TR was the *only* U.S. NGO operating directly for the Chilean Ministry of Health.

Because of differences in building code standards, national preparedness, and the result of the tsunami killing many of the injured in Chile, the number of patients seen by Team Rubicon in Chile comes nowhere near the volume treated in Haiti. However, this should in no way be seen as a sign of disappointment or failure. Team Rubicon exists to bridge the gap between natural disasters and conventional aid response; and the devastating effect of an 8.8 earthquake combined with a massive tsunami created requirements for rapidly deployable medical teams. In the immediate aftermath of the Chilean earthquake, TR identified the potential for multiple gaps in Chile's response capability- primarily getting care to the outlying communities and the communication 'black hole' that was a result of cell tower damage. Team Rubicon made its decision to deploy based off incomplete and imperfect information, because it knows that a clear picture only develops once it's too late for effective action.

In hindsight, Team Rubicon would likely not deploy itself to Chile again; not because it didn't accomplish anything, but rather because we have a fiduciary responsibility to our donors. This responsibility requires a certain "return on investment", calculated as lives saved per dollar expended. This number is nearly impossible to calculate (how does one determine when a life was legitimately saved), and even more difficult to implement. Who decides what an acceptable ROI is? What is the price of a human life? Or a person's ability to walk? While the incredible ROI seen in Haiti may never be achieved again, the ROI in Chile was probably not high enough to justify the operation. Of course, at the time the decision was made, TR expected to find many more injuries in need of critical care. I can only assure you that your money is treated as if it were our own, and the decision to spend it is never taken lightly.

What Team Rubicon lacked in ROI it more than made up for in lessons learned. The operation in Chile differed entirely from TR's operation in Haiti; and, while Team Rubicon never wants to use its donors funds for response 'experiments', we nonetheless gained invaluable experience and knowledge which will make future operations even more effective. These lessons range in scale

from how to establish a working relationship with high level foreign government officials to the importance of changing USD into local currency in countries which have a robust economy (USD was not accepted as payment in Chile).

Ultimately, Team Rubicon's mission to Chile was a success. While Team Rubicon did not save countless lives as it did in Haiti, it identified and successfully bridged multiple gaps in Chile's response. In doing so, we further developed and refined our model for disaster relief, and along the way earned the respect and gratitude of officials at multiple levels of the Chilean government and military. Team Rubicon is still an evolving model, and we hope that you continue to follow and support our progress as we add to the paradigm in disaster relief.

**Jake Wood**

**William McNulty**

**Bob Thomann**

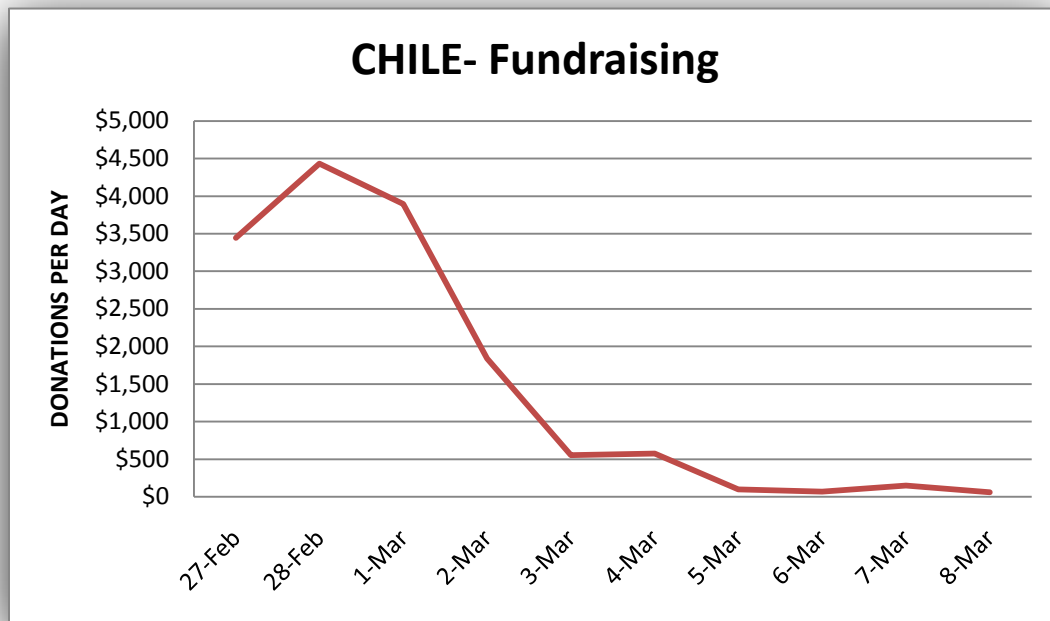
President, Team Rubicon

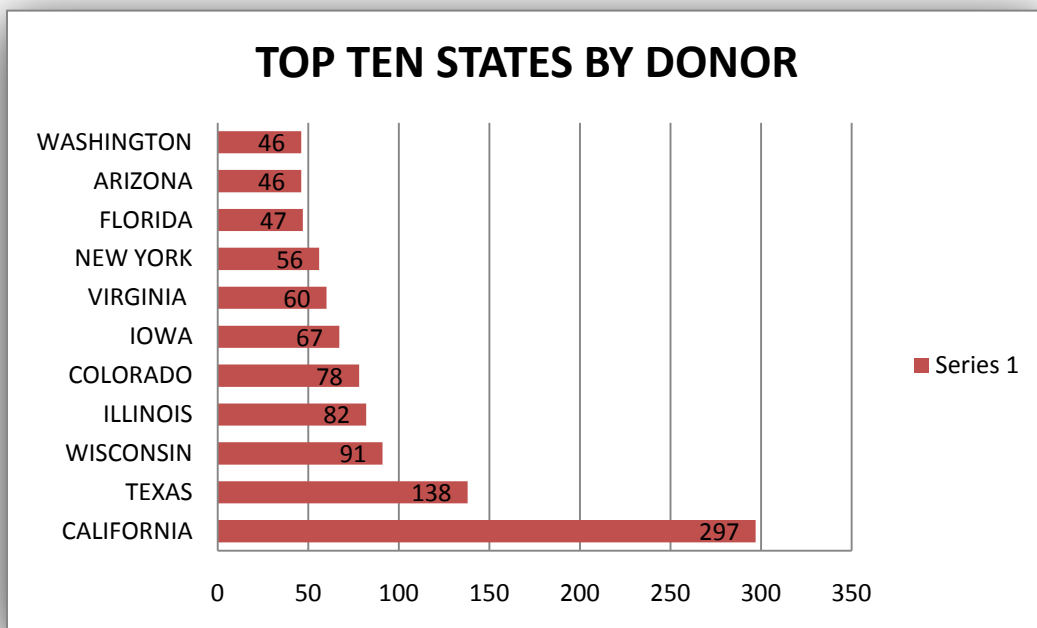
Co-Founder, Board of Directors

Regional Coordinator

## OPERATION OVERVIEW

<b>OPERATION NAME:</b>	<b>Fuerza Chile</b>
<b>DURATION:</b>	<b>11 days</b>
<b>OPERATION DATES:</b>	<b>February 27, 2010 – March 9, 2010</b>
<b>OPERATION TYPE:</b>	<b>Field Triage (T3); Medical Reconnaissance</b>
<b>LOCATION:</b>	<b>Region VII and Region VIII, Chile</b>
<b>ELEMENTS:</b>	<b>TR Advance Team, TR HQ</b>
<b>TOTAL CASH RAISED:</b>	<b>\$15,114</b>
<b>TOTAL PYPAL FEES:</b>	<b>(\$557.57)</b>
<b>NET CASH RAISED:</b>	<b>\$14,556.43</b>
<b>TOTAL EXPENSES:</b>	<b><u>(\$19,933)</u></b>
<b>NET:</b>	<b>(\$5,376.57)</b>
<b>IN-KIND DONATIONS:</b>	<b>In excess of \$4,000</b>





(JAN 17 TO MAR 17)

## Operation Summary

### **PRE-DEPLOYMENT**

On February 27<sup>th</sup>, Team Rubicon's Board of Directors voted 3-0 in favor of deploying an initial Advance Element to the nation of Chile to conduct T3 operations and medical reconnaissance of the coastal areas affected by the 8.1 earthquake that had taken place that morning.

Within hours of the earthquake, members of Team Rubicon were at the Chilean Embassy seeking government approval for TR's entry into the country. Simultaneously, Team Rubicon's 90 volunteers across the country were placed on high alert, and a request was sent out for volunteers capable to go to rally in Los Angeles, California. Immediately approximately 10 volunteers were capable of deploying, of which five were flown to LA to pre-stage for movement to Chile. The remaining five, who were centered in the Chicago area, were tasked with coordinating a more robust follow-on medical element.

While the Advance Team (TR-LA) rallied in LA, Team Rubicon rallied its TR Nation via Facebook, Twitter, and the TR website; additionally Team Rubicon contacted its newsletter roster of over 2,000 names, notifying all of its pending deployment to Chile. TR opted to conduct a "\$10 for Chile" campaign, through which it asked each of its donors to donate a small amount of \$10. TR did this because it was aware that many citizens would be suffering from "disaster fatigue" following the outpouring of support for Haiti.

TR-LA, consisting of Jake Wood, Clay Hunt, William McNulty, Zach Smith and Mark Hayward, rallied in Los Angeles where they finalized gear purchases, checked satellite communications equipment and coordinated air travel to the disaster zone (DZ). While conducting final preparations, TR was contacted by Steve Howry, an American living in San Francisco who was a fan of TR's efforts in Haiti. Steve Howry had previously worked in Chile and wanted to volunteer his services to aid Team Rubicon's pending deployment.

Steve Howry immediately began contacting high-level Chilean officials, eventually gaining Team Rubicon an invitation from Dr. Jorge Lastra, the man heading up Emergency Medical Response services in Region VIII, centered in Concepcion. This endorsement from Dr. Lastra, and the Chilean Ministry of Health (MOH), ensured Team Rubicon's ability to enter the country with its medical supplies.

After Team Rubicon's initial flight plans, which included a private plane from LAX to Chile, was cancelled due to Chile's moratorium on inbound international flights, it opted instead to fly commercial as quickly as possible. The fastest itinerary from Los Angeles to Santiago, Chile was as follows:

*Los Angeles – Sao Paolo, Brazil – Buenos Aires, Argentina (change of airports)– Mendoza, Argentina – overland to Santiago, Chile*

Finally, on Monday, March 1<sup>st</sup>, Team Rubicon departed Los Angeles headed for Santiago, Chile.

### **DEPLOYMENT**

Team Rubicon finally arrived in Mendoza, Argentina on Wednesday, March 3<sup>rd</sup>, after a plane delay in Sao Paulo, Brazil forced them to miss a connection. Once in Mendoza, Team Rubicon was forced to make a decision. Up to this point, TR had been coordinating a private plane from Mendoza to Santiago. However, once on the ground in Mendoza, TR realized that the plane was not yet there. Team Rubicon eventually found private drivers willing to drive all five TR members plus gear in two compact sedans. Team Rubicon opted to take the overland route, calling their flight coordinator in Santiago, Jonathan Bensted, to inform him that they would be changing flight plans to instead fly from Santiago directly into the DZ.

Team Rubicon began driving at approximately 11:00am, with a deadline of getting to Santiago's small regional airport no later than 8:00pm to make its flight to Concepcion before nightfall. The drive was uneventful save for TR's drivers getting lost and attempting to take the team to the large international airport. Once the miscommunication was corrected, Team Rubicon arrived on the tarmac at the airport at approximately 8:25pm. They immediately boarded the plane and were airborne at approximately 8:30pm, just barely making it off the runway before the control tower shut down the airport.



*Team Rubicon crosses the Andes to reach Chile.*

Team Rubicon arrived in Concepcion, Chile late on Wednesday night. After checking in with the military authorities in charge, Team Rubicon set up camp on the tarmac and slept.

The following morning, March 4<sup>th</sup>, TR began coordination with Dr. Lastra of the MOH. After waiting for several hours that morning, TR secured its own transportation through local paramedics. The medics took TR to the local hospital downtown. After coordinating with medical officials inside the hospital, Team Rubicon was tasked with establishing a medical presence to the north in the town of Tome. Upon arriving in Tome, TR saw the extent of the damage the earthquake and ensuing tsunami had caused. Team Rubicon linked up with a local medical outpost and immediately began preparing to field a foot mobile triage team. Hayward, Smith and Hunt were tasked with moving into the local DZ to conduct medical operations while McNulty and Wood moved back with the ambulance to the hospital to have a face to face meeting with Dr. Lastra.

During meetings with Dr. Lastra Team Rubicon conveyed its desire to conduct T3 Operations (Triage, Treatment, Transport) and its ability to conduct these operations far away from the medical infrastructure centered around the city of Concepcion. Dr. Lastra acknowledged TR's ability and concluded that TR should be included in that night's evening coordination meeting with all of Concepcion's government officials. McNulty and Wood agreed to attend the meeting and returned to Tome.



*Tsunami damage in the town of Tome.*

That night, TR attended the coordination meeting with Dr. Lastra and other officials at Concepcion's Government and Military Headquarters. During this meeting Team Rubicon was tasked with the continued medical care of Chile's coastal regions. Following the meeting, Team Rubicon was issued official curfew passes from the Chilean government, officially endorsing their relief effort and allowing the team to be outside in the city past the 6pm curfew placed upon the residents. After discussing the situation on the ground, Team Rubicon opted to contact the TR-Chicago element and instruct them to stand down. The medical need in Chile, combined with the Chilean Government's robust civil services, did not warrant a second medical team's deployment.

On the morning of March 5<sup>th</sup>, Team Rubicon linked up with a local translator and guide with whom it had been put in contact with. Camila Cuevas Bravo, a 22 year old resident of Concepcion, was the niece of Bonnie Banks, an American living in Chile whom TR had been put in contact with. Camila had volunteered to serve as TR's translator and guide, and further offered her family's Toyota Hilux pickup truck as transportation. Team Rubicon immediately packed up its gear and set out on the day's mission.

TR hit an immediate roadblock when it realized that the town to the south that it had been tasked with serving was inaccessible due to a collapsed bridge. Not wanting to waste time, Team Rubicon opted instead to head north, straight into the epicenter of the DZ. TR had received reports that the city of Constitucion, in Region VII, was badly in need of medical care. The Catholic organization Hogar de Cristo had reached out to Team Rubicon and requested assistance. Team Rubicon began the five hour drive north to reach the city. Along the way, Team Rubicon encountered numerous miscommunications with Dr. Lastra and the MOH. After several instances where Team Rubicon actually turned around to return to Concepcion, an agreement was reached whereby TR would coordinate with Dr. Lastra every two hours throughout the day, relaying position, situation and findings.

By nightfall of the 5<sup>th</sup>, Team Rubicon arrived in Constitucion. Team Rubicon had established a contact through Hogar de Cristo and was housed in the parish house next to a partially collapsed church in the town square. Upon arriving Team Rubicon discovered that there was adequate food,

water and a gas powered generator operating one hour per day at the parish. After arriving, Mark Hayward and Camila Cuevas made their way to the Chilean Army field hospital which had been set up at the town soccer stadium. There they introduced themselves to the regional Officer in Charge, Captain Berger, MD. Captain Berger asked Team Rubicon to conduct medical reconnaissance of the outlying communities and relay back to him situation reports via satellite uplink. Captain Berger explained that while he had a fully functioning field hospital, he lacked the manpower and resources to bring patients in.

On the morning of March 6<sup>th</sup> TR attended a coordination meeting with local fire and police officials. Once coordination was established, Team Rubicon headed south along the Pacific coast. Throughout the day on the 6<sup>th</sup>, Team Rubicon established communication between multiple postas, the Chilean equivalent of community clinics. Many of these postas had been destroyed during the earthquake, and still more were unstaffed because of unaccounted for doctors. Team Rubicon gathered reports from these postas and relayed the information back to Captain Berger's unit.



*Rural Posta Clinic*

In addition to coordinating between numerous postas, Team Rubicon identified rural villages that had not yet been reached by emergency personnel. TR volunteered to visit these communities and treat the patients found. Upon conducting these visits, Team Rubicon found a handful of broken bones and minor infections. All patients treated were treated on site, with a high probability for recovery.

On March 7<sup>th</sup>, Team Rubicon headed north with the same mission of medical reconnaissance and T3 operations. Team Rubicon identified multiple villages in need of medical care, including one family stranded in a rural area only accessible via a rope bridge suspended across a river. On the other side of this bridge TR found a woman with a Jones's Fracture to her left foot. Team Rubicon was able to treat and cast her foot; in addition to sending back reports that her family was low on food and in need of follow-on medical care.

On March 8<sup>th</sup>, Team Rubicon continued conducting medical operation in and around the Constitucion area. Throughout the day numerous injuries were treated, included several fractures, minor infections and lacerations. At the conclusion of operations, one middle-aged woman was evacuated by Team Rubicon to the Constitucion field hospital, where she was treated for a fracture and sever infection, likely saving her leg.

On March 9<sup>th</sup>, Team Rubicon ceased medical operations in Chile. TR drove five hours north to the capital city of Santiago, where they flew home to the United States the following day.

## AREAS OF ANALYSIS

1. Transportation
  - a. Air (private, commercial)
  - b. Ground
2. Staging Area
3. Local National Employment
4. Host Government Endorsement
5. Host Government Coordination
6. NGO Coordination
7. Security
8. Medical
  - a. Typical Wounds
  - b. Medical Supplies
9. Communication
10. Use of Social Media
11. Fundraising
12. TR Chicago AAR

Areas of analysis will be presented in the following format:

**Summary:** Summary of issue and how Team Rubicon specifically dealt with it

**Recommendation:** What lessons TR learned, and how it should proceed in future operations

**Action:** What steps need to be implemented by TR to ensure the recommendation is followed



# ANALYSIS

## TRANSPORTATION

### **SUMMARY**

Team Rubicon initially arranged transportation via a private plane from LAX directly into Chile. With reports of Santiago's airport down, TR opted instead to make flight plans into the southern half of the country, where there are numerous airports capable of landing the mid-sized aircraft that had been arranged. However, within 24 hours of the earthquake, Chile placed a 48-72 hour moratorium on all inbound flights. Team Rubicon immediately obtained commercial tickets from Los Angeles into Mendoza, Argentina, and began considering various options for travel from Mendoza into the DZ. One option was private air travel from Mendoza to Santiago, and then hiring or renting ground transportation from Santiago into the DZ. This option gave TR hesitation, however, because reports were filtering out that all bridges headed south from Santiago were down, and ground transportation was unpassable.

The second option for travel from Mendoza involved an over-ground transfer from Mendoza to Santiago. This would involve a trek through the Andes Mountain range and the single lane highway that crossed the border from Argentina to Chile. Reports on this transfer time ranged from 4-10 hours. Once in Santiago, TR could arrange a private chartered plane from Santiago to Concepcion, within the DZ.



*Citation 10 Aircraft utilized by TR*

After analyzing the situation on the ground in Mendoza, Team Rubicon opted to make the drive from Mendoza, for reasons which included an uncertain arrival time for the chartered plane, and a guarantee from a local driver that the drive would take only 5 hours. Team Rubicon paid \$400 per car (two cars) for the trip. The trip took nearly 8 hours, nearly causing TR to miss its scheduled flight from Santiago to Concepcion. However, once in Santiago, TR boarded a private 6 passenger plane and made the journey south to Concepcion.

Once on the ground in the DZ, Team Rubicon once again utilized a local national network for ground transportation. Initially in Concepcion, Team Rubicon coordinated transportation with the local paramedic service, riding around the coastal areas in a licensed ambulance. Beginning on the second day of operations, Team Rubicon utilized a local family's Toyota Hilux (at \$100 per day) for transportation. The Toyota Hilux is perhaps the perfect vehicle for DZ operations. It provides adequate seating in the cab for five people, with enough cargo space in the bed for all gear and 2-4 more personnel. Additionally, the vehicle is well suited to rough terrain and heavy payloads.



*Toyota Hilux Truck provided by Cuevas family*

## RECOMMENDATION

This operation in Chile once again proved that Team Rubicon's critical short-coming is the lack of dedicated air assets. While Team Rubicon secured a private flight in the initial hours following the earthquake, this flight was going to be very expensive and would have added significantly to the cost outlay of the operation. Team Rubicon must continue to seek out and develop effective relationships with individuals and organizations that have access to private air transport. Additionally, pilots willing to volunteer their flight hours for free are crucial to reducing or eliminating cost, however, TR must ensure that these pilots have all their licenses for various countries and regions around the globe, as this was an issue for South America. The chartered flight from Santiago to Concepcion greatly reduced TR's travel time and sped its arrival to the DZ. This proves that private air assets are an avenue that should be pursued.

Private ground transportation again proved to be most valuable to TR's flexibility and speed. Team Rubicon was able to adapt on the fly to the situation and bridge a gap that included a need for medical reconnaissance of outlying communities; only having a dedicated four-wheel drive truck allowed this.

## ACTION

- Contact large corporations and gauge interest in 'lending' their corporate jets as a charitable contribution to future efforts.

- Contact jet-leasing companies, such as MarquisJet, and negotiate special rates for use of its fleet.
- Contact charity flights, such as Wings of Hope and Air Cavalry, and develop MOUs.
- During deployment, ask all affiliates of TR for any connection on the ground in the DZ who may be willing to rent their vehicle or offer their services to help.

## STAGING AREA

### **SUMMARY**

Team Rubicon members initially rallied in Los Angeles, bringing in members from Northern California and Washington DC. Being able to stage together prior to stepping off for Chile allowed the team to consolidate gear, finalize travel arrangements, and establish general mission objectives.

Meeting at the staging area also allowed TR to proceed to Chile as a single unit, which in this case proved crucial. There were many legs on the journey to Santiago, and link up in country would have proven difficult considering the team's layover in Sao Paulo and change of plans in Mendoza. Had the team been attempting to rally near the DZ from different parts of the US, it quite possibly could have become chaos.

### **RECOMMENDATIONS**

Team Rubicon should continue to develop its regional model. By breaking down volunteers into geographic regions, it eliminates the need to fly members from coast to coast before departing on an operation. Additionally, it gives regions the opportunity to meet at times other than for a disaster to conduct stateside humanitarian missions. Ideally, all regional headquarters should be within a 5-6 hour drive for volunteers.

### **ACTION**

- Continue to develop regional teams for the West Coast, Midwest and East Coast
- Begin looking to expand regional teams in Texas, Southeast and Northwest
- Continue fundraising to enable gear purchase and storage

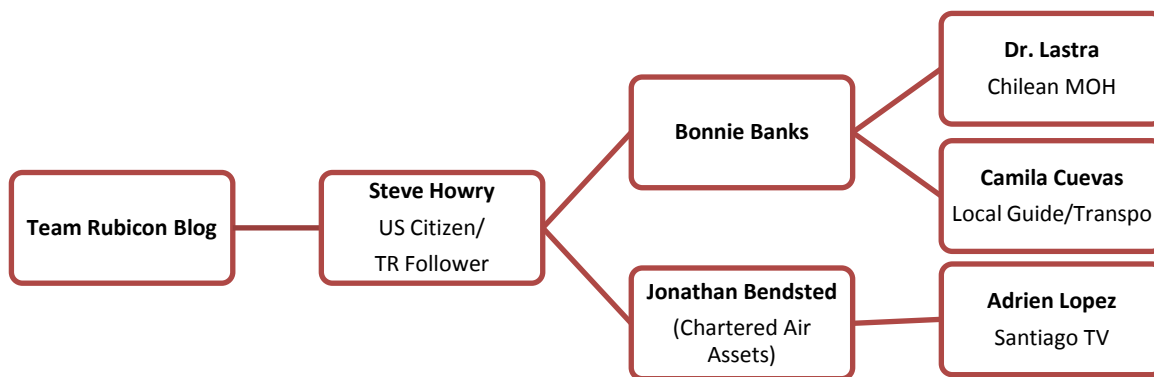
## LOCAL NATIONAL EMPLOYMENT

### SUMMARY

Team Rubicon again relied heavily on local national employment. Upon departing for Chile, TR incorrectly assumed that its limited Spanish skills would be adequate for conducting operations within the DZ. However, once on the ground TR realized that its language skills were far from sufficient.

Camila Cuevas, a local Chilean college student, volunteered her time and services to help Team Rubicon. TR was put in contact with Camila Cuevas via Bonnie Banks, her aunt, an American working indirectly for the Chilean Ministry of Health. Camila proved invaluable in guiding and translating for Team Rubicon throughout its mission. The Cuevas family also allowed Team Rubicon to use its Toyota Hilux truck, which gave TR autonomy to move freely throughout the countryside.

In addition to utilizing local nationals for transportation and translation, Team Rubicon was put in contact with several individuals in Santiago who aided TR's mission from an administrative standpoint. Jonathan Bendsted and Adrian Lopez were contacted by Steve Howry from the US and put in contact with TR while en route to Santiago. Bendsted and Lopez were instrumental in arranging air transportation from Santiago to Concepcion. Additionally, Bonnie Banks was the point of contact for both Dr. Lastra and Camila Cuevas.



*This chart illustrates how Team Rubicon utilized its network of followers to gain access and assets within Chile. None of the individuals listed had worked with TR prior to February 27. This is an excellent example of how TR goes 'outside the box' to solve problems.*

### RECOMMENDATIONS

Team Rubicon must continue to employ local nationals wherever it responds. Having locals who believe in Team Rubicon's mission allows the team to operate more quickly and efficiently. These individuals have a better working knowledge of the DZ country than the inbound TR

element; as such, they can provide real-time input en route that saves time and effort in getting to the DZ.

Team Rubicon discovered its local national help because of coordination through the website and social media. TR must continue to cultivate relationships with individuals who believe in TR's mission and wish to help through any means available, especially if that means simply providing the name of someone on the ground.

### **ACTION**

- Team Rubicon must seek local contacts through its social media network prior to stepping off for a DZ
- Every effort should be made to locate a translator prior to departure
- Teams should deploy with an adequate amount of cash, no less than \$1,000 per operator per week, to cover all expenses
- Teams should develop a thorough understanding of cultural differences within the target DZ.

### **HOST GOVERNMENT ENDORSEMENT**

### **SUMMARY**

Team Rubicon began its journey to Chile without official endorsement from the government of Chile. William McNulty had visited the Chilean Embassy in Washington DC prior to departure, but the embassy was unwilling to draft a letter in support of TR's medical relief mission. However, after following the advice of several contacts close to the Chilean government, Team Rubicon opted to begin travel towards Chile, with the expectation that a government endorsement would be secured en route.

While en route from Argentina to Santiago, Chile, Team Rubicon received its official invitation from within the Chilean government. Bonnie Banks, placed in contact by Team Rubicon follower Steve Howry, initiated the process through her colleague, Dr. Jorge Lastra, who had been placed in charge of Emergency Medical Services in Region VIII. Mrs. Banks informed Dr. Lastra of TR's mission capabilities, and Dr. Lastra agreed that Team Rubicon could add value to recovery efforts in Region VII. Dr. Lastra formally extended an invitation to Team Rubicon, which served as an official endorsement from the Chilean Ministry of Health.

The endorsement from the MOH expedited TR's border crossing from Argentina to Chile. The Andes Mountains pass that TR crossed was congested with traffic in both directions. The wait to be processed by customs agents was approximately 3 hours for arriving vehicles. However, Team Rubicon, with its endorsement, was pulled out of the line of vehicles and swiftly moved through the process.

## RECOMMENDATIONS

Team Rubicon must make every effort to secure an official government endorsement prior to departure for a DZ. Conducting this coordination while en route is possible; however, it requires too much effort that could be focused elsewhere. An official endorsement from a nation's embassy would be ideal; however this may not always be an option. Team Rubicon should therefore be prepared to utilize backdoor opportunities that arise through contacts on its website. In order to facilitate easier access to embassies, Team Rubicon should make an effort to meet with Ambassadors during normal down periods. In these meetings, Team Rubicon should emphasize its unique ability to operate independently, not serving as a strain on scarce resources during disasters, and its track record of recent success.

## ACTIONS

- TR must begin developing relationships with embassies and Ambassadors whose nations are susceptible to disasters and poor civil service response.
- Following a disaster, TR should immediately reach out to its online community to begin facilitation of backdoor channels into international governments.
- TR should seek endorsement from foreign departments and ministries other than the State. Endorsement from a nation's military, head of emergency services, or other agency or ministry will serve just as effectively.

## HOST GOVERNMENT COORDINATION

### SUMMARY

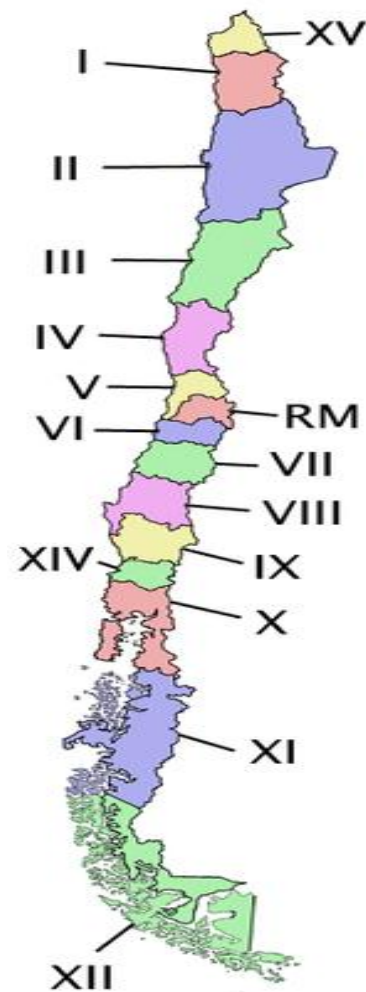
Chile's robust civil services and history of earthquakes had it prepared for this disaster. Within hours of the earthquake, the DZ was flooded with volunteer firefighters and rescue workers from around the country. The Chilean Army was immediately sent in to maintain order, and when citizens began to appear on the verge of unrest, martial law was declared. The declaration of martial law imposed a strict curfew on the DZ's citizens, forbidding them from daytime movement except from the hours of 12:00pm to 6:00pm. This six hour time frame allowed the people to accomplish any tasks they may have had, however it did not give them enough time to congregate and develop into angry masses. This curfew kept the roads clear and allowed the relief workers ease of movement to work.

This environment did not allow Team Rubicon to operate solely under its own authority. The situation dictated that Team Rubicon coordinate all its relief efforts through the Ministry of Health. Numerous problems soon arose that needed to be addressed:

1. Team Rubicon had difficulty locating and coordinating with Dr. Lastra, who was in charge of relief efforts for all of Region VIII. Having TR's sole point of contact within the MOH be the top person in charge was a mistake, since his time was limited.
2. Team Rubicon had difficulty explaining what its expertise was. TR was initially tasked with operating at a clinic in Tome. This static position did not properly utilize TR's ability to operate in a removed field environment.
3. Team Rubicon felt that its operations were being micro managed, and felt that it did not have the freedom to operate within the scope of its abilities according to the mission it had been assigned.
4. Team Rubicon realized that the area surrounding Concepcion (in Region VIII) did not have a great need for T3 operations. TR had difficulty convincing the MOH to allow it to move into Region VII, where TR's assistance had been requested by Hogar de Cristo.

These issues at first caused friction between Team Rubicon and the MOH; however, after attending several coordination meetings, Team Rubicon and the MOH were able to clearly define Team Rubicon's ability, mission and coordination requirements. Once these guidelines were established, Team Rubicon was given authority to operate autonomously within the scope of its mission, so long as thorough communication was maintained with Dr. Lastra at the MOH HQ in Concepcion.

Once effective coordination was established, Team Rubicon was able to operate independently and identify needs that needed to be met. TR moved the focus of its operations from Concepcion to Constitucion, located in Region VII (see map on right for the locations of Regions VII and VIII). Once in Constitucion, TR linked up with a field medical unit of the Chilean Army. The Army recognized Team Rubicon's ability to operate away from established medical clinics and tasked it with conducting medical reconnaissance of the outlying areas which it did not have the manpower to reach. The Chilean Field Hospital also gave Team Rubicon access to any supplies that it required as the need arose. In this capacity, working for the Chilean Army, Team Rubicon served as a force multiplier. Because of the size of the DZ Chile's response was stretched too thin, and not all rural areas were being served. But because of Team Rubicon's abilities, it could scout these areas and report situations back to the larger response element, thereby freeing the Army of this responsibility.



## RECOMMENDATIONS

Team Rubicon cannot assume that all future disasters will be of Haiti's nature. It must be able and willing to fully coordinate and cooperate with host governments and civil service sectors. In order to do this effectively, each TR element deployed should designate either its Team Leader or Assistant Team Leader to serve as the single point of contact with the government authorities. This person then must seek to establish an effective and productive line of communication within the host government. It is essential that either this POC be fluent in the language or an effective translator be present. In order for this dialogue to be effective, this POC must be able to clearly communicate Team Rubicon's abilities and mission objectives, and negotiate conditions for operating that are conducive to that mission.

## ACTIONS

- Designate one member of each team to serve as the POC for coordination
- Identify key figures in the host nation response effort who can help coordinate with Team Rubicon
- Ensure that the language barrier is minimized
- Develop, produce and carry printed material, translated into the local language, what Team Rubicon does best, what its capabilities are, and what assets it has. This material can then be used to communicate more effectively with host governments.

## ADJACENT NGO COORDINATION

### SUMMARY

Once again, as in Haiti, Team Rubicon's success was heavily dependent on its coordination with a religious organization. In Haiti, the Jesuit Relief Services (a Catholic organization), provided a base of operations, food, water and medicine. In Chile, TR eventually linked up with Hogar de Cristo, another Catholic organization with a large presence in Chile.

Hogar de Cristo is the organization that requested Team Rubicon's assistance in Region VII, and directed TR's efforts to the area surrounding Constitucion. Upon arrival in Constitucion, Team Rubicon was housed at a church in the town square. There were two priests living at the church who were able to provide Team Rubicon with food, shelter and intermittent electricity from a generator. Team Rubicon used this church as a base of operations for approximately 3 days.

## RECOMMENDATIONS

Team Rubicon's continued success will be determined by its continued ability to tap into local charitable organizations on the ground in DZs, whether they be of religious nature or not. Local charitable organizations are the single best source of information, resources and solid local networks that TR can access.

## ACTIONS

- TR must continue to identify and reach out to organizations with global presences. These organizations will likely be religious in nature; however, groups such as the Peace Corps and MSF should be contacted as well.

## SECURITY

### SUMMARY

Chile declared martial law because in the hours and days immediately following the earthquake intermittent looting and violence did take place. Team Rubicon heard first hand reports of looting and responding violent action on behalf of Chilean military and police (resulting in civilian deaths), however these reports were never substantiated. Team Rubicon encountered no security issues whatsoever and required no dedicated security presence during operations.

**Team Rubicon encountered no security issues whatsoever and required no dedicated security presence during operations.**

## RECOMMENDATIONS

Team Rubicon cannot always count on efficient government intervention to maintain peace and order. TR must continue to assume when entering a DZ that the security situation will be unstable, and tailor security decisions subsequently once the situation is analyzed and hazards are assessed.

## ACTIONS

- Continue to emphasize experience in volunteer recruitment (whether previous disaster experience, Police and Fire services, or military service).

- Never deploy a TR element in a size that is unsuited for security in a given scenario.

## MEDICAL

### **SUMMARY**

The medical situation in Chile was vastly different from that experienced in Haiti. Chile's strict building codes kept many structures from collapsing, which reduced acute orthopedic injuries dramatically. Additionally, there was not an absolute shut down of medical services in the DZ, and many key hospitals and clinics remained open. This meant that the majority of victims were treated within hours and the remaining victims were treated within days of the disaster. The medical need that Team Rubicon identified existed in the outlying rural communities. Because of the immense size of this earthquake, even Chile's robust response was stretched thin, and services were focused on the major population centers (this was an assumption that TR made prior to deployment and weighed heavily in its decision to mobilize). This focus on the major cities left many families living in the coastal villages without care.

Team Rubicon focused its efforts in these villages and found an immediate, although sparse, medical need. The typical injuries that Team Rubicon encountered in these areas were often similar to those found in Haiti- extremity fractures and lacerations. The major difference between Haiti and Chile was the lack of major cases of infection and gangrene. There could be various reasons for this, however, Chile's higher level of literacy rates and education was likely a large factor. Most patients TR treated were aware of the need to keep wounds clean and bandaged, thereby reducing the chance of infection. Team Rubicon did encounter several cases of minor infection, with only one requiring serious field surgical debridement.

Moments during field operations once again highlighted the need for having the appropriate medical supplies in the field. At various points Team Rubicon found itself lacking appropriate local pain narcotics and adequate suturing equipment. While Team Rubicon's skilled medics were able to make-do with supplies at hand, future missions must be adequately stocked and equipped so that medical operations are as simplified as possible.

### **RECOMMENDATIONS**

Team Rubicon must emphasize obtaining and stocking appropriate medical gear and medication for deployments. Standardized lists should be developed and distributed, and each team should be responsible for obtaining the necessary items. Additionally, Team Rubicon should be prepared to tailor the medical inventory it takes according to the mission situation. Chile required much less wound cleaning than Haiti because of the steps patients had taken to keep their wounds clean. Reducing inventory in this category frees up space for TR to take more supplies for different injuries, in this case it likely would have been casting material for orthopedic injuries.

## ACTIONS

- Standardize the basic medical needs for each team
- Identify suppliers who manufacture and distribute these items for tactical purposes
- Tailor medical loads prior to future missions to maximize the medical impact that the team can have in the DZ

## COMMUNICATION

### SUMMARY

Team Rubicon primarily used two items for communication- personal cell phones and a Tactical Communications Package (TacPak) that utilized a laptop computer and BGAN satellite system.

The use of personal cell phones once again proved an effective means of communication, allowing easy access to phone service, texting/SMS, email and web applications. T-Mobile once again proved to be the only reliable service provider. The majority of social media updates and coordination took place via a T-Mobile BlackBerry, primarily because it was a single source for all communication needs and was easy to access and operate. The major downside to utilizing personal cell phones is twofold. One, cell carriers will not provide free roaming and data outside the country for disaster services (many did for Haiti, but this was the exception). The charges for these services are cost prohibitive, and cellular phone use in Chile was in excess of \$1,000. Two, Team Rubicon cannot reasonably assume that cell towers will survive future disasters, and therefore cannot rely on cellular service as its primary means of communication.

#### What is BGAN?

**The Broadband Global Area Network** or BGAN for short, is a global Satellite Internet Network with telephony using portable terminals. The terminals are normally used to connect a laptop computer to broadband Internet in remote locations, although as long as line-of-sight to the satellite exists, the terminal can be used anywhere. The value of BGAN terminals is that unlike other satellite Internet services which require bulky & heavy satellite dishes to connect, a BGAN terminal is about the size of a laptop and thus can be carried easily. The network is provided by INMARSAT and uses three geostationary satellites called *I4* to provide almost global coverage.  
-Wikipedia

The second communications tool that Team Rubicon implemented was the TacPak. The Tac Pak provides the ability to access to an internet capable laptop computer, establish a WiFi hotspot, send and receive faxes, and conduct Skype communication. This entire system is housed in a Pelican Case, which protects it from drops and water. The TacPak worked wonderfully when implemented by TR, however the system itself is awkward to transport and is slow to set up when needed. The major upside to the TacPak system is the knowledge that it

can pull a satellite signal from anywhere in the world, ensuring that TR will never find itself in a communications vacuum.

## RECOMMENDATION

Team Rubicon has already purchased 4 Iridium satellite phones for use on future operations. These phones, similar to the Tac Pak, do not operate off of cellular towers and thus eliminate TR's need to rely on cell phones. Team Rubicon must also investigate the best way to replicate the capabilities of the TacPak (which was graciously on loan to TR) in a more transportable, field-operator friendly package. There are multiple satellite options available (BGAN is the major manufacturer) with different price points and capabilities. TR must identify the one that most meets its needs and purchase enough to ensure that every TR element that will deploy has satellite capabilities.

In addition to increasing its satellite communications capabilities, Team Rubicon should attempt to create a partnership with T-Mobile, who has proven to be the most reliable carrier abroad. Since mobile phones, when receiving a cellular signal, are the easiest method of communication, TR should look to reduce its cost in this department so that it can continue to utilize smart phones when able.

## ACTIONS

- Distribute Iridium phones to the regional teams and ensure that they have a thorough understanding on how to operate them
- Identify and purchase the most effective satellite system for TR operations
- Develop and build a communications suite similar to the Tac Pak but is more portable and field friendly
- Contact T-Mobile and attempt to establish a corporate sponsorship agreement with the carrier.

## SOCIAL MEDIA

## SUMMARY

Team Rubicon continued its aggressive use of social media to drive fundraising, establish a connection with donors and raise awareness of issues on the ground. The teamrubiconusa.org website, newly launched since the Haiti Operation, played a crucial role in Team Rubicon's mission in Chile. Constant updates were sent to the blog via both the Tac Pak and cellular smart

phones. The updates created a donor-responder connection that fostered feelings of 'being there' for TR's donors. This donor-responder connection is one of the key things that makes Team Rubicon unique. Many supporters of Team Rubicon send in emails stating that they feel like they know the people they are supporting with their donations. Being able to place a face and name to a response effort gives the donor the feeling like they actually handed the \$20 bill to the responder instead of donating to what has been deemed the "Donor Black Hole" at other large organizations. This donor-responder connection ensures that TR's supporters will continue to support Team Rubicon missions in the future.

Team Rubicon also launched its operation in Chile with a multi-pronged fundraising initiative that utilized Facebook, Twitter and the TR blog to encourage people to donate "Just \$10" (discussed at more length in the Fundraising section). Additionally, Team Rubicon sent out a newsletter 'blast' to its over 2,000 subscribers, explaining TR's reasoning for deployment and again asking for "Just \$10." This campaign successfully jumpstarted TR's operation.

Team Rubicon did find gaps in its social media uses while in Chile. For one, updating the TR blog via cell phones was not a simple process, and often required sending the update in email format to TR HQ in the states. This delayed the posting process, creating a lag that sometimes lasted up to 8 hours. Team Rubicon has discovered that WordPress, the website host, has a BlackBerry and iPhone application that easily allows blog and website updates through the phone. Additionally, an application called HootSuite, will allow TR to update all its social media sites (Twitter, Facebook, LinkedIn) simultaneously with one simple update.

Additionally, Team Rubicon has decided that a heavy emphasis must be placed on finding a way to geo-tag posts and pictures. These geo-tags will integrate with either Google Earth or Google Maps, creating a layer on the website that will pin TR's exact location as they treat patients and upload updates. This will not only give donors a visual reference for Team Rubicon's location on the ground, but allow TR to 'pin' pertinent information to the ongoing relief efforts onto an easily accessible map.

**For example:**

At one location in Chile, Team Rubicon found a woman with a broken foot. Her family lived in a very simple structure on a plot of land across a large river. The only doctor near her was a 7 hour *horse ride* into the next village. Her home had been destroyed and she, her husband, and three sons were living in a neighbor's single room home. Team Rubicon treated and splinted her broken foot, however, the woman needed a follow-up examination within two weeks. With an interactive map application, Team Rubicon could pin her location into Google Earth; the pin, when clicked, would bring up her photo, name, age, injury, what treatment she was given, date

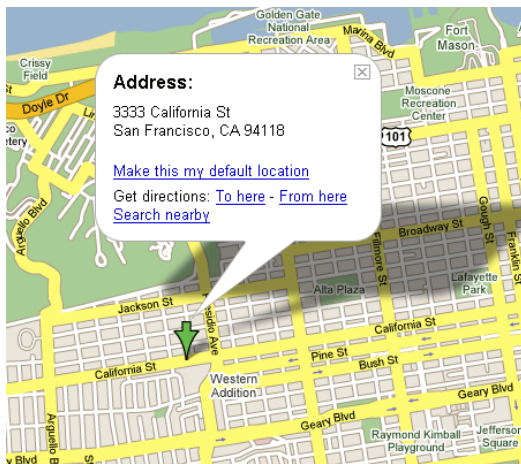


treatment was given, medications given, follow-up medical requirements, and other needs (her family was running low on food and had no power). Larger NGOs, or the Chilean government, could access this information via the map and, once they had their operations running in the rural communities, could identify the needs in the area.

The applications for a tool such as this are limitless. Not only does it continue to increase the donor-responder connection, but it facilitates better communication and coordination between Team Rubicon and adjacent NGOs. Having the ability to link updates on TR's map with other communal maps would further expound this tool.

## RECOMMENDATIONS

Team Rubicon must continue to explore social media platforms and applications. For every social media network or tool on the market, there exists ten applications that make it even more



powerful. Applications such as HootSuite and WordPress make posting updates easier and quicker, reducing the lag in the donor-responder connection. Innovating tools such as Google Maps allows Team Rubicon to ensure follow-on medical care is provided.

Team Rubicon should seek out and approach 'social media experts' who may be willing to volunteer their time to help develop TR's social media capabilities. Some such experts were impressed with Team Rubicon's development at the recent Mobilize.org Summit, which Team Rubicon took first place.

*The ability to 'geo-tag' updates and information from the field would be invaluable to TR*

## ACTIONS

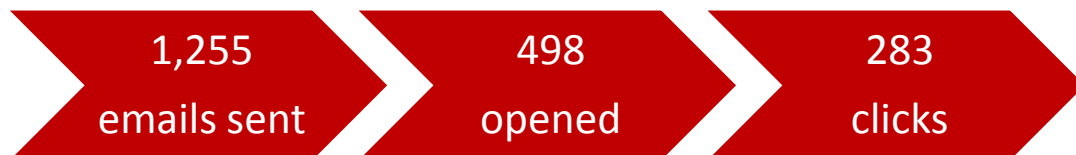
- Place a high priority on designing and integrating Google Maps or Google Earth into TR's website
- Increase TR's social media presence through continued campaigning and promotion on Facebook and Twitter
- Ensure that every member of Team Rubicon has a working knowledge of the social networking strategy and becomes actively involved in promoting it
- Test new social media applications that multiply effectiveness

## FUNDRAISING

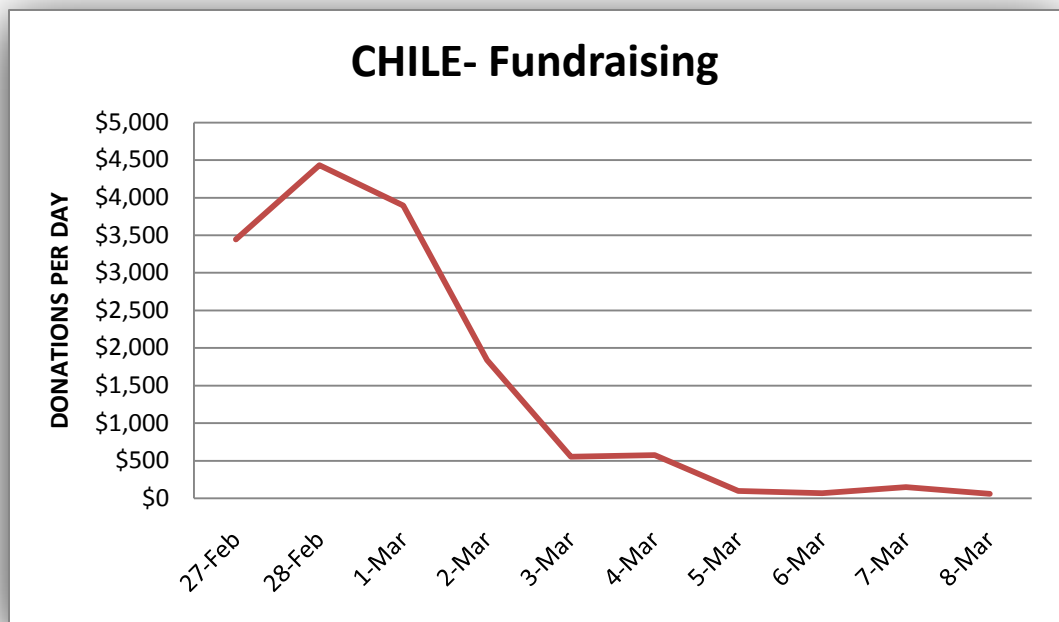
### SUMMARY

Team Rubicon made the decision to deploy to Chile with the full expectation that it could cover the expense of the operation through a fundraising campaign that once again utilized social media and the donor-responder connection. Team Rubicon first alerted supporters of a possible deployment within hours of the quake, then, when the vote to deploy was cast, supporters were notified via Twitter, Facebook, the blog and the newsletter.

Because of the proximity of the Chilean earthquake to the Haitian disaster, Team Rubicon knew that a certain amount of donor ‘fatigue’ would be present. Team Rubicon could not realistically expect donors who had just donated amounts equaling hundreds or thousands of dollars to once again write checks that big. Instead, Team Rubicon opted to ask everyone for just \$10. At the time of the Chile earthquake, TR’s newsletter had 1,255 subscribers. The \$10 campaign was sent to all of these emails. Of the 1,255 emails, 498 were opened (39.7%, industry average = 19.6%), and 283 (16.5%, industry average = 3.5%) people clicked the donate link. It is easy to see that Team Rubicon’s newsletter response is way above the average marks for non-profits, with twice as many opens and nearly five times as many clicks.



The \$10 campaign opened with great success. Many supporters from the Haiti operation again gave to Team Rubicon, and the response was rapid. The following chart shows the number of individual donors per day-



As can be seen on the chart, Team Rubicon supporters were quick to answer the call for funding (TR calls this money “Flash Cash”), however, donations quickly tapered off and essentially went dry 7 days into the operation. This is most likely due to the lack of exposure the Chile disaster got in the United States versus the exposure that Haiti received.

At the end of Operation Fuerza Chile, Team Rubicon discovered that it had not raised enough money to fully cover the expense of the operation. The shortage was met with funds left over from previous donations. This shortcoming drives home the realization that fundraising must be a full time priority for Team Rubicon and that it cannot rely on “Flash Cash” for future missions.

### RECOMMENDATIONS

Team Rubicon must discover new ways to fundraise during times when it is not responding to natural disasters. TR has already proven its ability to tap its network of support for rapid fundraising, however, there is no guarantee that this sum will cover expenses for future missions. Team Rubicon should pursue multiple avenues of fundraising, both traditional and nontraditional.

### ACTIONS

- Apply for both federal and foundation grants.
- Host social fundraising events, such as happy hours.
- Seek corporate sponsorships (for both money and in-kind donations)
- Develop an option for TR supporters to sign up for an automatic monthly donation, for example John Doe subscribes to donate \$25 on the first of every month for a year.

### TR-Chicago After Action Report

TR-Chicago was put on alert to be the follow-on team to deploy, if needed, to Chile. TR-C encountered many issues while on standby for deployment. Most of these issues were the result of Team Rubicon being in its early stages of organizational development and the rapid turnaround in deployment following operations in Haiti. The lessons learned by TR-C show how Team Rubicon can grow as an organization and improve response by Regional Teams.

## SUMMARY

- Team Rubicon had no central United States command center
  - All the information received about TR-C deployment decisions was coming from the blog
  - TR-C did not have a clear picture of what was going on during travel or initial operations in Chile.
  - TR-C was receiving information on the fly regarding stateside media, travel and personnel contact in real time. Organizational hierarchy and communication were unclear
- No established criteria for TR-C deployment
  - Deployment decisions were being made by TR-LA once on the ground, however, this decision was a judgment call, and did not follow an objective checklist
- There was no criteria for levels of readiness for TR-C volunteers
  - The second team out of Chicago didn't know if they were leaving in a day or a week. Team members took vacation time from work only to find we were in a holding pattern
  - Volunteers used valuable vacation time and if the Chicago team would have been deployed in a week, the volunteers would have then been unable to deploy
- The ability of team members to deploy was not adequately addressed prior to the disaster happening. Some volunteers could go immediately. Some could not leave for one week
- The Chicago team did not have a cache of supplies
  - Volunteers were asking employers at hospitals for supplies
  - This created a potentially unpleasant situation when team members had to tell employers that the Chicago team did not go to Chile having collected supplies

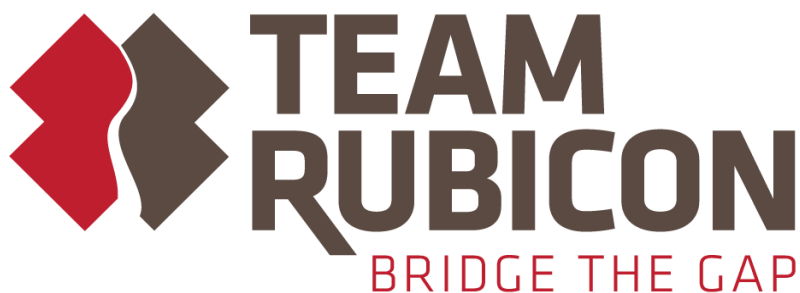
## RECOMMENDATIONS

- Activate a central command center in the United States as soon as disaster strikes
  - A command center can coordinate the team at the disaster zone, stateside teams ready to deploy and all stateside resources such as transportation, media, political contacts and other relief organizations
  - The command center will have a direct line of communication to the field teams via satellite phone and to the stateside resources

- Develop an organizational chart complete with names, position and duties, phone numbers and location
- Deployment criteria for primary and secondary teams must be set up. For example, use information from the primary team along with other sources to determine if:
  - Additional teams need to be sent immediately
  - One team is adequate and an additional team can be sent to relieve the primary team
  - No additional teams need to be sent
- Regional teams should set up a tiered response for a disaster. For example:
  - Response level green
    - A disaster has happened somewhere in the world and we are actively monitoring the situation. Your team may be deployed in the future. Get personal gear ready. Tell team leader or coordinator your probable ability to respond and timeframe. Yes, no, immediately, one week etc.
  - Response level yellow
    - The probability of being deployed is strong. Talk to employer about possibly taking time off work. Coordinators and team leaders get more definite idea from volunteers about who can go. Determine personnel for teams. Get team supplies ready.
  - Response level red
    - Team will be deployed. Finalize vacation with employer. Finalize transportation. Make sure all loose ends are taken care of.
- Supplies need to be procured and stored at the regional levels. Procuring supplies while a disaster is happening should be kept to a minimum. Communication equipment should be kept by the regional teams.

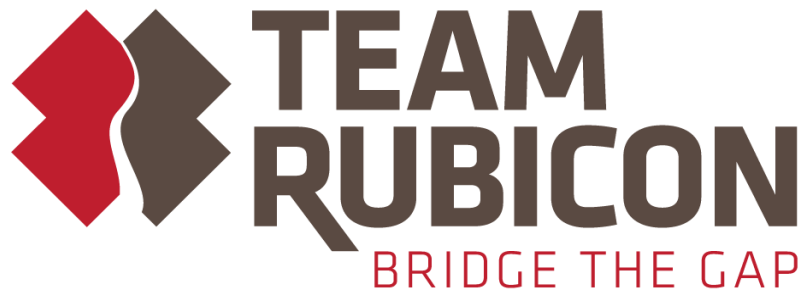
## KEY LESSONS LEARNED

1. **National governments will not always collapse following a catastrophe.** Team Rubicon must be prepared to coordinate directly with host governments and militaries.
2. **Team Rubicon is not needed at every DZ.** In hindsight, TR would not have deployed to Chile. The Chilean government's response to the disaster was adequate, and did not warrant TR's involvement.
3. **Sometimes the best connections come from the least expected places.** Steve Howry had never spoken with anyone at Team Rubicon before Chile, but became the sole reason TR received an official Chilean endorsement.
4. **Air transportation is still the single largest logistical obstacle.** TR must develop a better system for more rapidly deploying its teams.
5. **Social Media is TR's best ally.** Team Rubicon must continue to develop ways to get its donors involved.
6. **Team Rubicon must focus on fundraising throughout the year.** TR cannot rely on Flash Cash donations once disasters happen, it should instead view this money as replacing the coffers it is utilizing to fund the operation.
7. **Internal communication is crucial to organizational success.** Lack of communication will stall any TR operation in the future. Information must flow effectively from teams in the field to teams waiting to deploy.
8. **Tsunamis produce few traumatic injuries.** Most victims either escape with minor injuries to high ground or are trapped and subsequently killed in the flooding water.



## KEY ACTIONS

1. Develop access to air assets.
2. Integrate Google Earth into the website and create the ability to geo-tag information.
3. Develop a comprehensive, year round fundraising campaign.
4. Establish contacts with Ambassadors at foreign embassies prior to disasters.
5. Continue to establish regional teams.
6. Develop minimum criteria that must be met in order to activate and deploy Team Rubicon elements.
7. Determine a method for activating an Operational Command Center.
8. Establish organizational flow charts and communication diagrams.
9. Continue to recruit volunteers.



**APPENDIX I**



March 22nd, 2010

Mr. Jacob Wood  
President  
Rubicon Team

Dear Jacob,

On behalf of Hogar de Cristo, I would like to thank Rubicon Team for its outstanding contribution to our country immediately after the earthquake that affected Chile on February 27<sup>th</sup>.

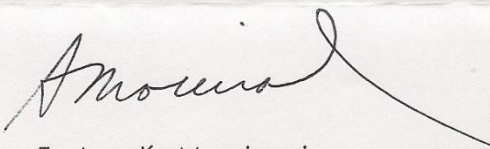
I not only would like to congratulate the generous spirit of its members, but also the values that inspire your actions and the immense professionalism shown during your stay in the South of our country.

I was told that your team performed very impressive medical procedures and that you reached poor and isolated people that would not have received any help if it were not for your participation.

I consider that you fulfilled your mission by coming to Chile: You bridged the critical time gap between large natural disasters and conventional aid response, providing rapid vanguard medical care by fielding small, self-sustaining, mobile teams of especially skilled first-responders.

I truly believe that persons like you and your team members make the difference in this world, helping to provide dignity, love and welfare to the most needed people.

Sincerely yours,



Fr. Agustín Moreira, sj  
General Chaplain

PAM/PL/vi  
015-10

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