



December of 2010

Project: "Multidisciplinary and Portable Ultrasound for the cardiac service of Children's Hospital Sister Mary Loudovica of La Plata"

1 ° STAGE. PROPOSAL:

1) Patrocinadores:

- a) **Local Sponsor:** Rotary Club of South La Plata
- b) **Local partner organizations:** Children's Hospital of The Sister Mary Loudovica through doctors, cardiologists, anesthesiologists and service of congenital heart diseases.
- c) **Sponsor overseas:** Not for the moment

2) Community needs:

a) Description of the beneficiary community and the existing problems:

The project will benefit the children who attend the Child Cardiology Service at Children's Hospital Maria Ludovica of La Plata city receive an average of 100,000 medical visits per year, of which 33% are surgical or require invasive hemodynamic studies.

For the attention of these cases the hospital does not have a portable ultrasound machine with transducer for transesophageal echocardiography, which is crucial for diagnosis. Currently, the Hospital has no neonatal transducers (newborn means children aged 1 day to 3 months)



b) Description of how this problem is handle today:

At present the hospital has ultrasound, but it is old, so the new state of the art would allow for less invasive treatments and use less time for the diagnosis.

c) Description of how to solve this problem with the matching grant:

With the supply of this high-tech diagnostic there will be fewer complications during the cardiovascular surgeries and they will last less time (nowadays many of them last more than 12 hours).

It also avoided many open surgery to solve septal defects of children to be settled by hemodynamic interventions. The benefits of much less invasive than conventional surgery would be important.

Additionally, heart disease will be diagnosed quicker outside the hospital letting the doctors go nearer the patient. The doctors will be theached on how to use this new technology.

3) Description of the project:

a) Sugested activities

- Specification, purchase and provision of portable ultrasound.
- Training of professionals of the cardiac service of Children's Hospital Sister Mary Loudovica of La Plata.
- Dissemination between The Hospital, the RC of La Plata South and the Ministries of Health of the Nation and Province of Buenos Aires will work together t disseminate the rotary matching grant in order to let the community and other hospitals know about it. Moreover, they will be allowed to derivate patients requiring the use of this equipment for a period of 2 years.
- The hospital and The Rotary Club from South La Plata will collect the necessary data to show statistics of the doctors and patients that used the equipment, in order to accurate calculate project's impact.



CARACTERISTICS OF THE SONOGRAPHER DIGITAL AND PORTABLE MULTI-DISCIPLINARY

- Color Angio with new software
- Main Unit monitors and high-resolution color monitoring.
- Continuous Pulse Doppler system
- Video recorder
- Video Printer Color and Black and White
- Transducers:
 - 1- Triple frequency convex Pulsed Doppler
 - 2 -Linear electronic system for studies of Vascular Periférico.Doppler Triple Frequency
 - 3 – Electronic sector. Color Doppler for specific cardiac studies. Triple frequency.
 - 4-Multiple Electronic sector pulsed Doppler for cardiac transeosofagicos studies.

Description of the community group that will receive the benefits of this project.

The children who attend the service of Child Cardiology Hospital Maria Ludovica of La Plata are in average 100,000 per year, of which 33% are surgical or require invasive hemodynamic studies.

The Rotary Club of South La Plata will monitor the project during two years after the provision for the purpose of verifying the sustainability of the project

b) Planned dates for start and completion of the project:



Rotary Club de La Plata Sur

Fundado el 28 de Abril de 1965

Beginning of the project: It will start as soon as it ends the specification, purchasing management, provision, staff training and dissemination in hospitals of La Plata

Estimated time: 4 months.

Duration of the project: After providing the Rotary Club of South La Plata will work with the team that intended by the team congenital heart disease at Children's Hospital Sor María de La Plata Loudovica

Project duration: 2 years

1: Develop statistics of the use and impact of equipment

2: Carry out diffusion campaigns about the use and advantages of this equipment in La Plata hospitals and surroundings to detect patients that could receive benefits from the using of this equipment for fast diagnosis or avoid open operation for children who have these conditions through hemodynamic interventions, much less invasive than conventional surgery.

4) Area of interest

a) An indication of the area or areas of interest Rotary fundation (RF).

This project impacts on two of the four areas of interest listed RF below:

- i. Prevention and treatment of diseases
- ii. Health of the mother and child

This project has also impact on improving health as an integral part the mission of The Rotary Foundation, which is "to enable Rotarians to promote global understanding, peace and goodwill through the improvement of health, support for education and poverty reduction "

b) Description of how proposed activities will correspond to the area interest



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The Hospital meets the health needs of children in most important province of Argentina with around 14,000,000 inhabitants.

The hospital had 551,000 outpatients during the year 2009 in different specialties:

Cardiovascular, General Surgery, Neurosurgery, Ophthalmology, Nephrology, Surgery, Orthopedic and Burns. It also has 13 operating rooms equipped with highly complex instruments, where they attended 2,948 surgeries last year.

Congenital Heart Disease service takes care of children with this disease with an incidence at 1% of newborn infants. Cases requiring surgery are high complexity, some of which last more than 12 hours, and for that reason required human resources, supplies and high-tech resources.

During 2009 statistics show that 390 surgeries of this type were performed. The portable ultrasound would be used in 40% of these surgeries, in other words, 156 surgeries per year (a rate of one every two days).

The annual number of surgeries has highly increased in the last two years, since the Province of Buenos Aires became part of the National Congenital Heart Disease, controlling not only health children of our province but also the rest of the country. For example, the hospital have had patients from San Juan, Misiones, Jujuy which are provinces far away from Buenos Aires and also patients from neighboring countries in Latin America.

That is the reason why the provision of this equipment will impact much of the population who have congenital heart disease in La Plata and surroundings and from other Hospitals of the Province of Buenos Aires This equipment will help diagnose more risk cases quickly and to avoid treatments with old technology witch take more time and more risk.

c) Sustainability and measurability

The Rotary Club of South La Plata will work as a link between the Ministry of Health of the Nation and the Province of Buenos Aires for hospitals in the area of La Plata and surroundings that do not have this equipment. There will be a written commitment to



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address intention of the Children's Hospital María Loudovica, Ministries of Health of the Nation and the Province to give the necessary framework.

This task of intermediation of Rotary Club of South La Plata will be held for two years since the time beginning of the provision of the equipment.

Description of desired outcomes

- Improve the diagnosis stage
- Improve on-line monitoring in surgery
- Avoids not appropriate cases of open surgery
- Improve post-surgery monitoring
- Aloud patients from other Hospital to use the new technology

The Rotary Club of South La Plata will work to bring the statistics of use and impact of the mobile scanner in the four points listed above. Particularly referred to patients from other hospitals that will benefit from the use of mobile ultrasound transducer

Understanding how all participants will ensure the project Sustainability:

The provision of an ultrasound MULTIDISCIPLINARY, DIGITAL AND PORTABLE

Transesophageal transducers would solve Heart Diagnostics Complex congenital Ultrasound in medical clinic (OFFICE USE).

Would provide advanced monitoring during cardiovascular surgery strengthening the safety of surgery (O.R. USE).

Provide a fundamental tool in the Hemodynamic laboratory in cases of children with septal defects that can be closed by endovascular, avoiding open surgery (HEMODYNAMIC LABORATORY USE).

Would give physicians the cardiovascular recovery room resource excellent reliability for post-surgeries monitoring. (USE IN O.R. AND RECOVERY UNIT).

Would give physicians the cardiovascular recovery room resource excellent reliability for postoperative monitoring. (USE IN UNIT INTERNMENT AND RECOVERY).



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By signing a commitment of cooperation with the Hospital, the Rotary Club of South La Plata will reinforce for a period of 2 years the provision for patients of the hospital and other hospitals of La Plata and surroundings that do not have this equipment and will receive the benefit among other things avoiding open surgery)

Estimated budget:

Equipment: color doppler Premium Eco Transportable VIVID I last generation model.

Price: U \$ 54.0000 (without Tax called IVA which is 21% plus over the original Price)

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Overall funding:

(First the funds from FDD (our district), plus the money contributed in cash (if any), plus the contribution of foreign Club or District and finally asked the Global Fund TRF).