



**KENYA COUNTRY OFFICE
ROTARY DISTRICT 9212
P.O. BOX 2364 – 00606, NAIROBI**



23rd October 2024,

From D9212 (Kenya, Ethiopia, South Sudan and Eritrea)
To our Rotarian friends, this is the year of the Magic of Rotary.

Pumwani Maternity Referral Hospital Rehabilitation project brief and partnership proposal.

GG No. 2570758 In Draft

As Rotary celebrates 100 years of impactful service in Africa, D9212 centennial team wanted to celebrate this milestone with a major activity in the Kenyan capital Nairobi. The district team visited the Nairobi County Government Governor Hon Johnson Sakaja to discuss possible options. The governor of the Nairobi County Government challenged the district team to identify a major project that would represent the kind of intervention synonymous with Rotary. The 97-year-old Pumwani Maternity Hospital was identified as a potential candidate for its rich history of service to the people of Nairobi. An assessment of the facility and engagement with the hospital administration confirmed that supporting the hospitals development agenda would enhance the hospitals capacity to deliver high quality health services to the many less fortunate in our community.

The district is sponsoring a global grant on maternal and child Health.

The grant aims to enhance maternal and child health services at Pumwani Maternity Hospital by equipping the Labor ward and New born unit. The grant will also fund capacity training of key department staff at the university of Nairobi school of medicine Department of Obstetrics & Gynecology.

Background

With only 27 bed capacity the hospital opened its doors in 1926 as the first maternity care hospital in sub-Sahara Africa. Expansion continued in 1969 with the maternity bed capacity increasing to 117 and a 50-bed neonate wing. The hospital scope and capacity continued to grow in the early years to the current bed capacity of 354 and 67 at the neonate wing. The hospital remains the largest maternity referral hospital in East and Central Africa. The growth in patient numbers over the years has strained the hospitals resources and capacity leading to dissatisfaction in healthcare services and poor healthcare outcomes requiring urgent intervention as the city population grows.

Maternal and child health remains a critical issue in Kenya, with high maternal and neonatal mortality rates largely due to preventable causes. Pumwani Maternity and referral Hospital, as a major maternity and referral center, notes that the monthly mortality rate is at an average of 10% with mortalities among the preterm and low birth weight newborns contributing to 66% of these deaths. Despite its long-standing presence and growth in patient numbers, the Hospital has had minimal expansion over the years and still operates in old buildings. This is a major cause for concern considering the hospital receives an average of 317,169 patients annually and conducts on average 18,588 deliveries every year, having only 354 bed available. This clear disparity between patient demand and existing infrastructure leads to potential issues such as overcrowding, longer wait times, and compromised patient care. Improving the labor ward and newborn unit capacity with equipment and staff training is our key focus with direct immediate positive impact to the less fortunate in the community.

Community / Facility Assessment.

Our team has visited the hospital several times and we have concluded the community assessment having engaged different stakeholders

The Nairobi County CEC Health.

The Hospital CEO, Hospital Administrator, Hospital Senior Gynecologist, Hospital Nursing officer, Labor Unit in-charge, NBU deputy in-charge, Community Health promoters and patients. We also had the opportunity to engage patients.

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During our visits to the NBU we saw first hand the work the hospital team was doing with the available limited resources. On the day at the very moment we were in the NBU two babies who were being resuscitated did not make it. This incident we shall not forget but reinforced our commitment and determination to deliver the support required to bring down the poor outcomes. We also meet three mothers one who had just delivered her 4th child at the facility! She noted the service improvement over the years and underscored the friendliness of staff from security guards, cleaning staff and nurses. The facility is very clean and the food is good. The other two mothers concurred but noted the hospital was very busy and crowded.

Pumwani Maternity Hospital Work Load report for the years 2021 to date.

| | YR 2021 | YR 2022 | YR 2023 | YR 2024 JULY |
|-------------------------|---------|---------|---------|--------------|
| POPULATION DEMOGRAPHICS | 301893 | 314293 | 335321 | |
| TOTAL DELIVERIES | 18033 | 19403 | 18327 | 9017 |
| MATERNAL DEATH | 14 | 3 | 7 | 3 |
| MATERNAL MORTALITY RATE | 0.07% | 0.01% | 0.03% | |
| NEONATAL DEATH | 319 | 407 | 417 | 211 |
| THEATRE CS | 5226 | 6032 | 5749 | 2538 |
| SVD CASES | 12807 | 13371 | 12578 | 6391 |

Labour Unit Brief

The labour ward facilities are inadequate to meet increasing demand, leading to overcrowding and compromised patient care. The ward has 42-beds with approximately 60-80 deliveries daily. The bed shortage and a lack of maternal labour monitoring equipment that would help in ensuring better maternal outcomes and prevent near misses or maternal and neonatal deaths is of great concern. Our investment would enhance the labour ward by increasing its capacity, reduce waiting times, and improve the quality of maternal care.

| Item/Activity | Description | Importance | Quantity | App Cost per Unit | Approximate Cost (KES) |
|--------------------------|---|--|----------|-------------------|------------------------|
| Adjustable delivery Beds | Increase the capacity to accommodate more labouring mothers simultaneously. | Critical for reducing overcrowding, minimizing wait times, and enhancing patient comfort and safety. | 10 | 297,916 | 2,979,160 |
| Vital signs monitor | Monitoring vital signs in labour ward | Monitoring mothers in labour to have better outcomes | 4 | 97,500 | 390,000 |
| Patient monitors | Monitor the cardiac vitals and monitor high risk mothers | Monitoring mothers in labour to have better outcomes | 3 | 350,000 | 1,050,000 |
| Infusion pumps | For medication of medication to non-ambulatory high risk mothers | Monitor mothers in labour for better outcomes | 3 | 149,000 | 447,000 |

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| | | | | | |
|---------------------------------|--|--|----|---------|-------------------|
| Suction machines | Increase capacity in ensuring we do have any blocked airways post delivery | Clear airway post delivery | 3 | 35,000 | 105,000 |
| KIWI (AVD) | Decrease mothers going to theatre due to delayed 2 nd stage | Enable staff have better outcomes due to delayed 2 nd stage | 5 | 6,000 | 30,000 |
| Examination lamps | | Enable staff better lighting during labor monitoring and delivery | 3 | 33,000 | 99,000 |
| Resuscitaires and sensor probes | Reduce hypothermia post-delivery for the neonates and increase the capacity to handle neonatal emergencies | Reduce hypothermia, handle neonatal emergencies | 10 | 150,000 | 1,500,000 |
| CTG Machines | Increase capacity in Fetal monitoring | | 3 | 300,000 | 900,000 |
| Oxygen Concentrator | | | 4 | 100,000 | 400,000 |
| Pulse Oximeters (neonate) | Increase capacity of pulse and vitals of neonates' post delivery | Neonate pulse monitoring and vitals | 2 | 60,000 | 120,000 |
| Neonatal Digital weighing scale | Increase capacity to immediately weigh babies post delivery | Post-delivery weighing of babies | 2 | 36,000 | 72,000 |
| Fetal Doppler | Fetal Monitoring | | 5 | 36,000 | 180,000 |
| Total | | | | | 8,272,160. |

New Born Unit Brief.

The New Born unit admits approximately 15 neonates daily which is an average of 350 neonates per month. As indicated in the above background brief the new born unit has a bed capacity of 67 bassinets (most are outdated metal bassinets) and 12 incubators to cater for 102 neonates on a daily basis. The facilities are inadequate to meet increasing demand, leading to overcrowding of neonates through sharing of the incubators and bassinets, inadequate heating source and phototherapy machines for babies with jaundice leading to compromised patient care. These are reasons for the above poor outcomes at the NBU and our investment is sure to deliver the desired results.

| Item/Activity | Description | Importance | Quantity | Cost per Unit | Approximate Cost (KES) |
|--|-----------------|---------------------|----------|---------------|------------------------|
| Newborn Temperature Regulation to prevent Neonatal Mortalities & Morbidities | Radiant warmers | MTTS Wallaby warmer | 5 | 343,000 | 1,715,000 |

| | | | | | |
|---|--|---|----|---------|------------------|
| from hypothermia | Space Heaters | Oil Based space heaters | 15 | 30,000 | 450,000 |
| | Resuscitaires with probes | For use in reduction of hypothermia among newborns | 5 | 150,000 | 750,000 |
| | Infant Incubator | Maintain a controlled temperature as the infant develops | 7 | 470,000 | 3,290,000 |
| Infection prevention and quality of care | Transport incubators for Temperature regulation while referring newborns | Medi quip limited own battery operated. Oxygen cylinder port access Equity transportable | 2 | 980,000 | 1,960,000 |
| | Bassinets to effect one baby one cot during admission Newborn at NBU | Bassinets cots as per item specification at http://supply.unicef.org/s00202150html . | 45 | 17,400 | 783,000 |
| | Suction Machines for Airway & breathing support | A speed Suction machines for NBU | 3 | 23,940 | 71,820 |
| | | | | | |
| Airway and circulatory support among newborns | Pulse oximetry | Life box pulser oximeters for NICU and ICU with adult and neonatal probes | 30 | 6,000 | 180,000 |
| Total | | | | | 9,199,820 |

During our engagement with the hospital administration it was emphasized that continuous training of the staff at the labout and Nbu is required.



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Training is a key component of the intervention we propose and the existing relationship between our district and the Dept of Obs & Gyn at the University of Nairobi through clubs that have been involved in maternal and child health area of focus will be of great importance.

There exists an Emergency Obstetric training developed by Dr Ann Kihara for previously at the Dept of Obs Gyn at the University and now the president of FIGO. We shall engage the department to facilitate the training.

Health services in Kenya is a devolved function of the county governments and Pumwani Maternity Hospital is under the Nairobi County Government. An MOU has been forwarded to the county government for signing.

We believe the initiative will directly benefit a significant portion of the lower income population by improving healthcare services at the hospital. Potentially saving many lives every year. The facility requires major rehabilitation and a program is now in place. With support from Rotary the team at the hospital will be empowered to continue delivering the much-needed health services to mothers and babies in Nairobi and its environs.

The above item cost estimates and equipment request has been provided by the hospital and we shall subject them to a procurement process and rationalization once we have financial commitments. The total budget cost includes the training and miscellaneous component.

The tentative phase 1 project budget is approximately USD 166,000.

Conversion done at Kes 135 to the US Dollar.

We have DDF commitments from

D9212- Host Sponsor.

D3310- International Sponsor

District in Hongkong

We are inviting your district to consider supporting this global grant with DDF from your district.

We look forward to your partnership. We plan to deploy our intervention from January 2025.

Yours in Rotary,

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