



# MBARARA CENTER FOR SPORTS AND HEALTH PROMOTION



## DIABETES PREVENTION THROUGH SCHOOLS PROGRAMME

Project Agreement # WDF13-819

### Project Final Report

Prepared by: Byakatonda Milton Acbor, Project Focal Point

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## Acknowledgement

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I am equally very grateful to the Head teachers, lead teachers and peer educators in participating schools who played a vital role in supporting the project.

**Byakatonda Milton Achor**  
Project Focal Point

## List of Acronyms and Abbreviations

BMI-Body Mass Index

DLG-District Local Government

GDW-Global Diabetes Walk

KAP – Knowledge, Attitude and Practices

MCSHEP – Mbarara Center for Sports and Health Promotion

MoESTS – Ministry of Education, Science, Technology and Sports

MoH –Ministry of Health

MRRH – Mbarara Regional Referral Hospital

NCDs – Non-communicable diseases

NGOs – Non-governmental organisation

PA-Physical Activity

USHRD – Uganda Sport for Health, Recreation and Development

WDD-World Diabetes Day

WDF – World Diabetes Foundation

## Project Final Description

<b>Organisation</b>	Mbarara Center for Sports and Health Promotion
<b>Project Name</b>	Diabetes Prevention through Schools Programme
<b>Project Number</b>	WDF13-819
<b>Project Goal</b>	The goal of this project is to promote the adoption of healthy lifestyle behaviours among school children, teachers and their parents to prevent development of diabetes and other chronic diseases by providing information on healthy eating and physical activity.
<b>Project Objectives</b>	<ul style="list-style-type: none"> <li>• To increase knowledge and awareness of diabetes and chronic diseases prevention.</li> <li>• To reduce the risk of developing diabetes and chronic diseases through improving the diet and physical activity patterns among students.</li> <li>• To conduct training and capacity building of the teachers, students and parents to promote practices in the primary prevention of diabetes and chronic diseases in schools participating in the project.</li> <li>• To promote the development of an environment within the schools that facilitates the adoption of healthy lifestyles.</li> </ul>
<b>Project Location</b>	Mbarara and Isingiro districts, Uganda
<b>Project Duration</b>	01 July, 2015 – 01 October, 2018
<b>Project Sponsor</b>	World Diabetes Foundation, Denmark
<b>Project Partners</b>	Vision group, Mbarara Regional Referral hospital, and Uganda Sport for Health, Recreation and Development
<b>Project Team</b>	<ul style="list-style-type: none"> <li>• Project Focal Point: Byakatonda Milton Acbor</li> <li>• Project Manager: Namanya Joshua</li> <li>• Project Accountant: Tusiime Jonah</li> <li>• Health Educator: Tushemereirwe Christine,</li> <li>• M&amp;E officer: Asimwe Patrick</li> <li>• Field officers: Asimwe Ezra, Matsiko Cleave, Duncan, James and Allen</li> </ul>

## Project Performance

The diabetes prevention Project was aimed at promoting the adoption of healthy lifestyle behaviours among school children, teachers and their parents to prevent development of diabetes and other chronic diseases by providing information on healthy eating and physical activity. The performance of the project can be seen in the table below and how targets were reached.

Main activities	Target by end of project, 2018	Status (%)	Remarks
Development of awareness materials	10,000 copies of educational materials	10,000 copies (100%)	Pamphlets and posters with simple messages on healthy lifestyle were developed and distributed in schools.
KAP survey	Baseline and End of project KAP survey	Done 100%	Both baseline and end of project survey were conducted and results showed improved knowledge on diabetes prevention.
Training of peer health educators	400 teachers 1000 students 400 Parents	392 teachers (98%) 998 students (99%) 400 Parents (100%)	Teachers, students and parents from each beneficiary school were selected to participate in the training to build their capacity in providing information on diabetes prevention.
Sensitisation of school management and canteen staff	200 school management members. 100 canteen staff	194 school management members (97%). 92 canteen staff (92%)	Meetings were held with school managers of the 100 schools to ensure support and ownership of the project. Meetings were also conducted with canteen staff at schools to promote sale of healthy foods.
Sensitisation of students, teachers and parents	100 schools 20,670 students 1,000 teachers 4,000 parents	100 (100%) 19904 students (95.3%) 1188 teachers (118.8%) 3506 parents (87.7%)	The peer educators from beneficiary schools were trained to further raise awareness and sensitize their peers on healthy lifestyle.
Promotion of vegetable gardens	Gardens established at 100 schools	Done (100%)	Vegetable and fruit gardens were established at all targeted schools. Different seedlings and seeds were provided and the students and teachers are responsible for maintaining the gardens.
Poster-making and dish competitions	3 competitions	3 (100%)	All 100 schools participated in the competition, where the students designed posters on healthy foods

			and wrote essays on preventing type 2 diabetes through healthy food
Awareness campaign, incl. Radio awareness programmes, TV programmes	24 radio programs. 12 TV programs. 750,000 people reached through media campaign	25 radio programs (104%) 13 TV programs (109%). 750,000 people reached (100%)	At every last Friday and Saturday of the month a radio and TV shows on healthy lifestyle were aired respectively.
Roll out of health camps	6 health camps	7 health camps (50%)	Health camps were conducted where teachers, parents and students were educated about healthy lifestyle. Teachers and parents were screened for diabetes and risk factors, whereas students below the age of 18 were measured using BMI for children. In these camps, 204 teachers, 1534 students and 204 parents had participated.
Procurement of equipment	600 balls	600 (100%)	Furthermore, each school has received different balls and a video on aerobics to promote physical activity.

**Key Project Achievements:**

- Base-line and end-line KAP surveys were conducted
- The project trained 1000 Children and 130 teachers in diabetes prevention. The trained health resource person in turn trained the target population in the 100 project schools.
- In the area of advocacy, the organization conducted health education activities in the 100 schools where 19904 students, 1188 teachers and 3506 parents were sensitized in diabetes risk factors, signs and symptoms, complications and prevention.
- 25 radio programs aired on radio west and 13 TV programs broadcast on TV west
- 6000 IEC materials developed and distributed in schools
- 7 health camps conducted and 1942 people participated.
- Project website constructed [www.mbcshp.org](http://www.mbcshp.org)
- 750,000 people reached by diabetes awareness activities
- 3 world diabetes walks were conducted (2015-2018) during the World Diabetes Day
- School food gardens were established in 100 schools to enable teachers and children access fresh vegetables and fruits.
- MCSHEP has impacted on communities by raising awareness about diabetes and other NCDs prevention reaching 2486 people.
- 600 balls procured and distributed to schools to promote physical activity.

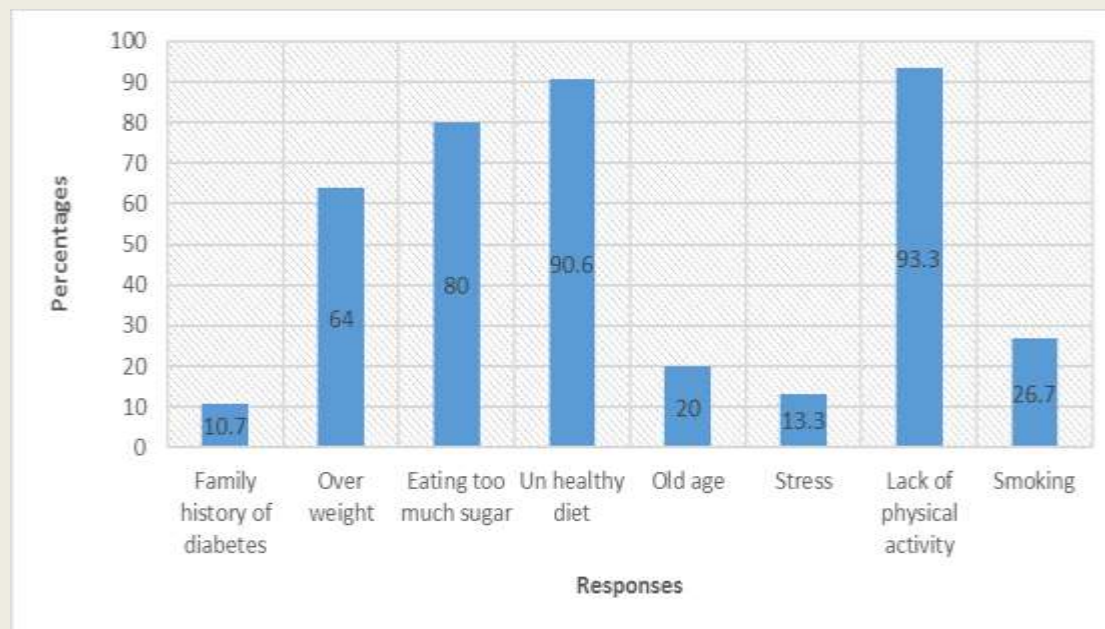
## REPORT ON ACHIEVEMENTS AND ACCOMPLISHMENTS

### Objective 1: To increase knowledge and awareness of diabetes and chronic diseases prevention.

**Outcome I:** Increased awareness and knowledge among the students, teachers and parents about risk factors for diabetes and actions to take to prevent diabetes.

#### Activity 1.1 KAP-survey for base line and end of project

KAP survey – MCSHEP conducted a baseline survey in 2015 to establish levels of target groups' diabetes-related knowledge, attitudes, and practices (KAP). The key findings of the base line KAP survey showed that students, teachers and parents knew little about unhealthy diet and lack of physical exercise as causes of diabetes (students-6.2% and 2.4% respectively, teachers-17.3% and 4% for unhealthy diet and lack of physical exercise respectively, parents-16% and 0.7% for unhealthy diet and lack of physical exercise respectively). This was followed by the end line KAP-survey in 2018 to provide evidence of impact of the programme. The findings of the end line survey indicated a big improvement in knowledge about the diabetes as regards to unhealthy eating and physical inactivity (students-90.6 % and 93.3% respectively, parents-59% and 58%, teachers-93% and 90%). KAP survey report was shared with the Ministry of Health, Ministry of Education, and the health departments of Mbarara and Isingiro districts as important stakeholders. The chart below shows responses from students about diabetes risk factors:





### Activity 1.2 Health Education and advocacy in schools

A vigorous programme for health education sessions in schools was conducted by trained peer educators, and the project's health educator. The project developed a curriculum to be followed by all schools and students, teachers and parents were given different curriculum but with the same information about diabetes, healthy eating and physical activity. A total of 19,904 students, 1,188 teachers and 3,506 parents were reached with awareness messages. Educational materials in form of brochures and posters were developed and distributed in targeted schools. The health education sessions were carried out in schools by the trained project staff, teachers, students and sometimes guests speakers who were diabetics and were invited to give health talk to students. Health education in schools provided many students in the project the opportunity to learn the importance of healthy lifestyles and skills necessary to engage in healthy behaviors such as eating healthy and participating in physical activity.



### Activity 1.3 World diabetes day celebrations

MCSHEP organised the World Diabetes Day on 14<sup>th</sup> November for three years since 2015, aimed at raising awareness about diabetes. The major event of the was the Global Diabetes Walk. School children, teachers, parents and other people from communities joined the walk to take steps against diabetes. MCSHEP was joining the rest of the world to celebrate this day, in an effort to bring to the attention of the public about diabetes, as one of the leading causes of death but which can be prevented. Each year had a different theme for example: 2016- "Eyes on Diabetes", and 2017- "Women and diabetes - our right to a healthy future". The function was supported by the World Diabetes Foundation. Other activities conducted on this day included health education, free diabetes screening, blood pressure, BMI and waist-circumference measurement. In addition, awareness brochures about healthy eating and physical activity were distributed to participants. At this event, it is when

students who had participated and won in the poster-making and dish competition were rewarded.



*Global diabetes walk, 2015*

#### **Activity 1.4 Media awareness campaign and advocacy**

Through our partner, the Vision Group, awareness campaign was conducted for one hour at Radio West every last Friday of the month, and TV West every last Saturday of the month. Topics about diabetes, physical activity and healthy eating behaviours were aired during the talk shows. Listeners called in and sent messages for questions to be answered. In other project events, the New Vision, Orumuri (local newspaper), Radio and TV West covered these events. A total 25 radio and 13 TV programmes were carried out with the aim of raising awareness about diabetes so that other people may also benefit apart from participating schools. Topics about diabetes, physical activity and healthy eating behaviours were aired during the talk shows. It is estimated that over 750,000 people were reached with diabetes prevention awareness messages.



*Diabetes awareness through media on Radio West*

#### Activity 1.5 Diabetes campaign educational materials.

Educational materials in form of training materials, brochures, leaflets and posters with simple messages on healthy eating, physical activity, and diabetes prevention were developed by the staff of Mbarara regional referral hospital and MCSHEP staff, to be used by the students, staff and parents. These were distributed in schools, churches, and health Centers to raise awareness for people who come to seek health services. A total of 10,000 copies of different IEC materials were produced distributed.



*Some of the awareness materials produced by the project*

### Activity 1.6 School health poster-making and dish competitions

Three challenges were organised for all participating schools in the project to compete in poster making and dish competition under the topic: Health lifestyle and Diabetes prevention. Each school submitted 5 entries for both posters and essays. The winning schools and students were announced and rewarded on 14th November, during the World Diabetes Day celebration. The main aim of this poster-making and dish competition was to raise awareness of how the healthy lifestyles prevents diabetes and other NCDs.



*Poster made during poster-making competition*

### Activity 1.7 Community awareness

In addition to sensitizing schools, the project extended to reach communities to increase awareness of the diabetes risk factors and prevention strategies with a special focus on the community's underserved population. The project has reached out to the communities to individuals and empowered them to make the best health choices. Through these community outreaches, 2486 people were reached in 15 villages. In these meetings, health education and screening were provided and participants were able to find out more about their health status at these screening sessions. They also learnt about the types of diabetes, risk factors as well as prevention strategies.



*Community outreach diabetes awareness at Nyarubungo, Isingiro district*

**Objective 2: To reduce the risk of developing diabetes and chronic diseases through improving the diet and physical activity patterns among students.**

**Outcome: Improved access to healthy foods and physical activity in schools**

#### **Activity 2.1 Promoting food gardens at schools**

All 100 schools were provided with vegetable seeds (spinach, carrots, egg plants, cabbages, and dodo) and fruit seedlings (mangoes and oranges). This was to help them establish gardens that would promote consumption of fresh vegetables and fruits. Gardens have been vital in providing fresh vegetables to teachers and students for meals taken at school daily. During the surplus, students take these fresh vegetables to their homes and some schools sell for income. Still, parents of these schools are encouraged to establish similar backyard gardens at their homes to promote healthy eating at the family level.



*Vegetable seeds and fruit seedlings being distributed at Mbarara Mixed Primary school*

### **Activity 2.2 Providing sports equipment and aerobic DVDs to promote participation in sport and physical activity classes**

Provision of sports and aerobic videos equipment was a part of the diabetes prevention project aimed at increasing participation in physical activity among children. Each school received 6 balls (2 for football, 2 for netball and 2 for volleyball). These balls provided were to help in making children participate in play and also exercise in order to live actively to prevent diabetes type 2. However, most schools found it more difficult to use the aerobic DVD partly due to lack of electricity and a functional DVD player. However, with the rural electrification program in various areas where the project has been implemented, it is hoped that they will be put to good use and encourage children to do aerobics.



*Balls being handed over to the lead teacher at Katerera primary school, Isingiro district*

**Objective 3: To conduct training and capacity building of the teachers, students and parents to promote practices in the primary prevention of diabetes and chronic diseases in schools participating in the project.**

**Outcome: A team of peer educators established at schools to promote healthy lifestyle for diabetes prevention**

**Activity 3.1 Training workshops for teachers, parents and students on prevention of diabetes,**

Through the project intervention peer health educators (teachers, parents and students) were identified and trained. 400 parents, 392 teachers and 998 students were trained in diabetes prevention; topics covered were diabetes-its risk factors, signs and complications, healthy eating and physical activity. These peer educators especially teachers and students were responsible for establishment of health clubs in schools, roll out of debates and health talks (i.e. during assembly), sustaining the school gardens, promoting healthy messages at the school premises (putting up signs and posters) and poster competitions.



*Teachers after training as peer educators in diabetes prevention*

### **Activity 3.2 Advocacy and sensitisation meeting for school management and canteen staff**

Sensitization sessions were carried for school management committees and canteen staff. Schools were represented by 2 members of school management and 1 canteen staff. Sensitization was about the project in their schools and its importance, their roles in supporting project through policy formulations and overseeing the project succeed. The canteen staff were sensitized of providing healthy foods in school for students and teachers. A total of 194 management committees and 92 canteen staff were sensitized about the role of the project in their respective schools, and forming policies that promote healthy living.



*A section of school board and management committees, and canteen staff after sensitization workshop*



### Activity 3.3 Diabetes screening and health awareness camps

Seven (7) Camps were conducted for schools to participate. A total of 1534 primary and secondary school students, 204 teachers, and 204 parents were screened by health staff from Mbarara Regional Referral Hospital (MRRH). In addition, their blood pressure and BMI were also measured. Those at risk were referred to MRRH. Follow ups were made to these referred parents and teachers to take any necessary actions. An amputated diabetic person was invited in each of these camps to give a testimony which made the participants take diabetes message seriously.



*Participants at one of the organised camps at Itegyero primary school*

## Objective 4: To promote the development of an environment within the schools that facilitates the adoption of healthy lifestyles.

**Outcome: Enabling environment created in schools to promote healthy choices among students and teachers**

### Activity 4.1 Establishing talking compound in schools.

Sign-boards with prevention messages were distributed to all 100 schools to further disseminate information to students and staff about preventing type 2 diabetes. The sign-boards were then put in various strategic areas in the schools' compound with messages like: *Diabetes is preventable, avoid obesity, avoid sugary drinks, 30 minutes of exercise daily, and Avoid smoking.*



*Talking compound at Kashaka high school with diabetes prevention messages*

### Activity 4.2 Establishing health clubs

Health clubs and NCD Prevention Associations in schools managed by students, parents and teachers respectively were established. Schools formed health clubs whose members are students. The clubs are led by students who were trained during capacity building. Each club leader recruited a minimum of 10 members who were educated about diabetes type 2. Clubs also organised debates related with health promotion topics for students to participate in. This model has helped reach many students in schools where we operate. Clubs also organized a wide range of enjoyable activities to ensure active participation of the students which included sports participation as a way of increasing the interest and engagement of the students to enrich their knowledge of adopting healthy lifestyle.



*A debate session on diabetes being conducted at Masha Seed secondary school*

### **Project Monitoring & Evaluation**

Internally the project was monitored on a weekly basis through monitoring visits by the M&E officer, and the Field officers. To be able to monitor and oversee the 100 schools effectively, a Lead teacher who is a focal person in school was appointed in every school. The Lead teacher gathered information about the activities undertaken by the peer educators, which are registered in the monitoring tools provided to them. The schools were also clustered in zones and one person was dedicated as focal person for these schools called the Field Officer. This field officer is responsible for gathering the information from the other schools. In this way, it became easier to collect the data and monitor project results. The activities for project monitoring included: Field Visits, Focus Group Meetings, Follow-up, and Review meetings.



*Project staff and other stakeholders after an evaluation meeting*

### Sustainability Plan

The sustainability of this project was planned right from the project inception by involving participation and collaboration of all concerned line ministry, district authorities and community to ensure that the outcomes of the project continue beyond the WDF grant period. The following activities will ensure sustainability of the programme even after its completion:

- **Capacity building:**

Teachers and students were trained in primary prevention activities as peer educators to continuously spread diabetes prevention awareness messages among the target groups and thus the impact of the programme will be sustained.

- **Website:**

Diabetes prevention information and knowledge generated by the project is available on the project website [www.bcshep.org](http://www.bcshep.org). This in addition to social media platform and talking compound will further sustain awareness messages to school community.

- **Integrating project activities in the school programme:**

The project will integrate project activities in the school programmes and activity budgets are allocated like school gardening, teaching of PE and active school clubs. All these will help in sustaining the project activities beyond the project duration in terms of sensitization and awareness.

### Challenges faced during project implementation

- Large number of schools to be supervised by one M&E officer posed a challenge at first until we recruited field officers to support in monitoring project activities.
- Retrogressive profit gains that promote consumption of unhealthy foods such as selling of junk foods at some school canteens is still a challenge. This lack of choice makes children take unhealthy foods rather than no food.
- High demand of some teachers in schools for motivation in terms of money.

- Staff turnover where some trained staff were transferred from participating schools in the project to other non-participating schools.
- Trained students as peer educators finished their levels of education and other crossed to others schools which posed a challenge.
- Prolonged droughts that always affect established gardens
- Parents trained as peer educators were lacking literacy and could not understand the English language used.

### Strategies to address the Challenges

- We reached out to schools for more sensitization to schools which were performing below standard
- Recruited other teachers in schools which were affected by transfers.
- Followed up to school management committees to oversee the project activities.
- Encouraged schools to use drip irrigation to mitigate the effects of climatic change on school gardens.
- Made outreaches to schools during events that bring parents together, and we raised awareness in the local language that they understood.
- During the radio talk-shows, we communicated in the local language

### Lessons Learnt

- Effective implementation of a programme needs dedication and commitment of partners and wider network of volunteers. Teamwork is important in execution of project work if it is to be successful.
- Maximizing contacts with the beneficiaries improves outcomes. There is need to always reach the beneficiaries of the project to learn about their challenges and successes.
- Bringing services closer to communities raises awareness about diabetes. Community out-reaches are vital for the underserved populations to learn about diabetes as most of them do not go for health checkups until they are sick.
- Strengthening diabetes clubs in schools helps in sustaining peer education. The clubs in schools sustains the project activities like the established school gardens, peer education and awareness activities like organising debates on NCDs related matters.
- Budget for training and refresher courses for the peer educators should be allocated so that when teachers are transferred, or students complete, there is no gap left.
- Identify various avenues of reaching parents to promote healthy lifestyles which include using community awareness outreaches and school parent' general meetings.
- Referral system need to be strengthened to ensure there is follow-up to referred persons during camps, and get treatment in the hospital.
- Awareness materials should be prepared in both English and local language to benefit both literate and illiterate persons.
- Schools can act as knowledge transfer centers both for the students that can act as ambassadors to their homes and for the surrounding communities.
- Using media is effective in reaching many people even those outside the programme –to benefit indirectly.

## PROJECT PHOTOGRAPHS



*Ms Mette Skar from WDF visiting the Vision Group (partner) offices*



*Ms Hanne Strandgaard from WDF, Dr Gerald Mutungi from Ministry of Health visiting the project*



*Participants of global diabetes walk, 2016*



*Peer training participants after the training*



*Capacity building workshops organised for school management committees*



*A health camp conducted for diabetes screening*





*Vegetable seeds and fruit seedlings being distributed in one of the beneficiary schools*



*Balls distributed in schools to promote physical activity*



*Health education being conducted in school*



*Field visit to beneficiary schools by Ms Mette Skar from WDF*



*A school garden at Bujaga Integrated primary school with fresh vegetables*



*Students attending one of the health camps organised*

# Isingiro warned on diabetes

ISINGIRO

By Abdulkarim Ssegendo and Andrew Tushabe

Residents of Isingiro and neighbouring districts have been advised to always go for diabetes screening and regular health check-ups.

The call was made by Dr Anthony Muyingo, a diabetes specialist at Mbarara Hospital and lecturers at Mbarara University. He said diabetes has increased in the district courtesy of the rapid rise they had anticipated.

Muyingo said the increased prevalence of diabetes was a result of poor diet and genetic factors. This has led to kidney failure, heart disease, blindness, and infectious diseases such as tuberculosis.

He said if people tried to watch their eating habits such as avoiding fatty foods, having regular fruit and vegetable diets and doing exercises, their risk of getting diabetes would be reduced.

"The first factor is genetic. Weight gain and obesity also cause diabetes. This is largely a result of what we choose to eat and the activities we choose to take part in," Muyingo said.

He made the remarks while addressing hundreds of people who turned up for Global Diabetes Walk which took place in begyiro-Nyarubungo, Maiba sub-county in Isingiro district. The event was organised by Mbarara Centre for Sports and Health Promotion in partnership with Vision Group and



Dr Anthony Muyingo attending to one of the people who participated in diabetes walk in Isingiro

Mbarara Hospital, with funding from the World Diabetes Foundation.

Over 500 people got free diabetes screening.

The Isingiro district health officer, Dr Edison Tumushere, told people to

avoid HIV, which he said is disastrous when it combines with diabetes.

"This is a reminder about the President's seven points on health. Two of them are good eating habits and exercising. And you should know

that consistent taking in of fat is not the best eating habit," he said.

Tumushere said Isingiro medical workers have not participated in the recent nationwide medical workers strike.

## Battle for Lugogo cemetery rages on

KAMPALA

By Michael Odong

The battle for Lugogo cemetery has raged for seven years. Now the Court of Appeal has halted the lower court's order, directing city businessman Eganor Kagame to take over the property.

Justice Elizabeth Musinguzi halted the directive, pending the disposal of an appeal filed by the registered trustees of the Hindu Union against Kagame. Businesswoman Fulgence Tumwahirwe and the registrar of titles. The union is led by business mogul Mukesh Shukla.

"Having looked at the judgment and order of the lower court, I am satisfied that there exist serious issues of law that require judicial consideration," she ruled. The judge said if the land is released to Kagame in compliance with the lower court order, it would render the appeal irrelevant as the bodies of the deceased are likely to be moved away and desecrated.

"If the interim order is not granted, it will result in more inconvenience, loss and suffering to the Hindu family," she observed.

Uganda nets sh87b for restoration

Kabale receives

*An extract of the newspaper where our global diabetes walk was covered in 2017*