

The mass sport in Ruli Sector: Role of RHIH in promoting sport for health among population



Introduction: Non-communicable diseases (NCDs) remain the leading cause of mortality and morbidity worldwide. The burden is worsening especially in resource limited countries including Rwanda. Evidence has shown that physical exercise plays an integral role in preventing NCDs. In 2016, the government of Rwanda established a mass sport program in the capital city of Kigali entitled “Kigali Car Free Day” which offers an opportunity for Kigali residents to participate in physical exercise around the city on roads free of vehicles. Due to its positive impact, the program have been decentralized in all provinces, districts as well as sectors where local authorities in collaboration with institutions working in the geographic area should implement the program and encourage all citizens to join the effort toward this public health initiative. The program also use to provide free screening of NCDs for residents as it will be applied in Ruli sector settings and beyond in rural area..

It is against this background that ,On this Saturday, 22/02/2020, from 6h30-9h00 AM, RHIH staff and students participated in mass sport organized by Ruli sector. The Sport departure started at Ruli sector headquarter to Kabagenda at 9Km approximately and returned to Gatagara football ground.



Above photos, are showing mass sport attendees while ready to start running from Ruli Sector headquarter.

The physical activities (exercise) at Football ground was leaded and facilitated by Rwanda National police (RNP) and Rwanda defense Force/Ruli sector. They provide psychological moral and motivate all participants during running (Mucaka common known term in Rwanda) as well as ensuring road traffic security control during journey respectively.

Below Photos are demonstrating the RDF and RNP representative while providing the instructions to follow during mass sport at Gatagara football ground.



On arrival at Gatagara football ground, RDF and RNP /Ruli sector , they demonstrate the physical activities to be done by other participants in organizing way and Whatever done was to ensure that the movement of our entire body is achieved. The mass sport participants, they do physical exercise by following rhythm of soft music provided by expert DJ.



Above photos are showing participants in doing physical exercise at Gatagara football ground

WHAT IS HAPPENED AFTER MASS SPORT

Many remarks have been offered to all participants under moderation of Mr. JMV NIZEYIMANA (Executive secretary of Ruli Sector) as keep an eye on:

Overall, message focused on importance of sport for health as treatment and preventive method for fight against different type non-communicable diseases(Cardio-vascular diseases, Diabetes, chronic respiratory syndrome like asthma etc..), strengthening and improving blood circulation and body muscles, Mentally fit and physical well- being, efficient well -functioning of brain with advanced thinking; Body become stronger and healthier, contributing to lower obesity rates as well as lowing exposure factors that lead to chronic diseases.

Representative from different institution affiliated to the health such as Ruli Higher institute of health Ruli District Hospital as well as Ruli Health center where they emphasized on the following:

- Request all population to like sport because it is a life and mobilize/sensitize encourage all adults stayed at home to come in mass sport during sessions of next time.

- To avoid to use alcohol and smoking

- To be screened the NCDs at least twice per year as recommended from National protocol from Rwanda Ministry of health.

- The role of having health insurance in health service accessibility for assistance on timely fashion.

In charge of NCDs at Ruli health center (Nurse Lambert) explained what is NCDs, types of NCDs, NCDs risk factors including insufficient physical activities as a reason why of doing this bi-monthly mass sport in order to increase the indicators among population of Ruli Sector.

Ruli higher institute of health emphasized on Role higher learning institution where they will accentuate on research and publication of facts related to NCDs in Ruli sector and beyond, contribution in health education and promotion during community services offered as well as ensuring all participant that the training curriculum undergone by students prepare them with enough skills and knowledge to address NCDs challenges at all level. Institution committed to develop a project of public health intervention to fight against NCDs that gather inter-sector efforts.

Representative of RNP: **CIP HABIMANA Denys**(RNP Commandant/Ruli Station: Reminded about the national road safety campaign dubbed ‘Gerayo Amahoro program’, Fight against Drug abuse, Fight against Accidents, Don’t drink and Drive, To avoid to become a drunker, Child and adolescent free from exposing to any heavy work especially working in Ruli mining area

Representative of RDF: Remind the present members to provide news on time, to protect the achieved activities in Rwanda (kurinda ibyagezweho), Ensuring the human security.

Ruli higher institute of health staff and students in Screening of NCDs among population attending Mass sport in ruli Sector.

After different speeches, RHIH in collaboration with Ruli District hospital and Ruli health center staff carried out NCDs screening among sport mass attendees where socio-demographic data(age, sex), blood pressure ; Anthropometric measurement such as weight and height for facilitating BMI calculation were recorded for each mass sport participant.



Above photos are showing RHIH students and staff while measuring and documenting weight and height of mass sport members

It is scientifically known that once a person weight does not correspond to her/his height; it may lead to development of some unhealthy behavior. The precaution to be taken and used by the population is to keep measuring their body mass index(BMI) regularly and to teach all population on how BMI should be calculated and proper measures to be taken . BMI as well as high blood pressure are among common known determinants of developing NCDs in future once they are not well controlled.

RHIH students contribute in screening NCDs where 134 populations were screened, for blood pressure and BMI of each participant was recorded by considering measurement of weight and height of each members.



Above photos are showing RHIH students in Nursing and Midwifery, Ruli Hospitals' nurses while measuring blood pressure and giving advises on life style as well as explanation of results from NCDs screening.

The population to be screened, they have undergone in seven stations which are: Reception, Height measurement, Weight measurement, Blood pressure measurement by trained nurses and Midwives from RHIH/Ruli DH and Ruli HC, body mass index calculation and interpretation for each participant and health promotion education by providing counselling on lifestyle modifiable risk factors and advise for health care seeking at nearest health care facilities. The Majority of all screening activities have been done by RHIH staff and students as evidenced by their presence in most stand where 5 out of 7(71.4%) stands were served by RHIH. Other healthcare from Ruli DH and Health center appreciated the worker accomplished by RHIH.



Ruli Sector Leader headed by Mr. JMV NIZEYIMANA(Executive Secretary) are playing Role model to encourage all population staying in Ruli to participate in sport and be screened for NCDs.

The majority of screened persons especially some leaders showed an interest and curiosity to understand well the interpretation of Blood pressure and Body mass index where RHIHI nurses and midwives students took their time to explain the diseases, risk factors and how they can interpret the results and encouraging them self-checking at regular basis.

Every screened participants received also educational intervention for behavior changes for having sustainable health as indicated in below photos.



Above photos are showing different categories of participants when they were being receiving education for health promotion.

The surprisingly, **ADJ Uwitonze Gabriel** (Palatoon commandant RDF Ruli sector) and other soldiers as well as RNP , were very impressed to know the meaning of their results after screening and therefore, **Mr. IRADUKUNDA Pacifique** (Level two student in nursing department at RHHI) took sufficient time to describe what is blood pressure, what is the meaning of elevated blood pressure and its categorization as well as the meaning and implication of Body mass index(BMI) to the well-being of the population and all explanation were provided us below detailed:



The blood pressure measurement

Blood pressure is the pressure of circulating blood on the walls of blood vessels. Most of this pressure is due to work done by the heart by pumping blood through the circulatory system.

High blood pressure was defined as a systolic blood pressure of more than or equal to 140 mmHg and/or diastolic blood pressure more than or equal to 90 mmHg or any population currently taking antihypertensive medications.

There are several type of machine to be used depend on manufacturer and in our circumstance, an automated blood pressure machine (OMRON® digital device) should be used to obtain the blood pressure readings especially at field work like in this outreach for community services. Three readings should be taken 3–5 min apart after 15 min rest of the mass sport participant for ruling out the disease. As recommended by WHO, the average of the last two readings must be calculated and used as the final blood pressure measurement.

The interpretation of Blood pressure was explained using the standard set by a World Heart Federation Roadmap in collaboration with World health organization as adopted by Rwanda Ministry of health in Non-communicable diseases division at Rwanda Bio medical center (RBC) to be utilize among population living in land of thousand hills.

The classes of raised blood pressure Category

Category	SBP (mmhg)	DBP(mmhg)
Optimal	<120	<80
Normal	120-129	80-84
High normal(pre-hypertension)	130-139	85-89
Grade 1 hypertension (Mild)	140-159	90-99
Grade 2 hypertension (Moderate)	160-179	100-109
Grade 3 hypertension (severe)	≥180	≥110

Body mass index (BMI)

BMI was expressed as weight in kilogram/height in square meters (kg/m^2). Weight and height were measured using Genesis weighing scales with a laser for measuring height.

No	Classification	BMI: Weight Expressed in Kilogram /Height ² expressed in meter (kg/m ²)	Interpretation and Health status implication
1.	Under weight	<18.5 kg/m ² (lean	Low but risk of other clinical problem increased
2.	Normal range	18.5–24.9 kg/m ²	Average
3.	Overweight(Pre obese)	25.0-29.9	Mildly increased
4.	Obese	≥ 30	
4.1	Class 1	30-34.9	Moderate
4.2	Class 2	35.0-39.9	Severe
4.3	Class 3	≥40 and Above	Very severe

They get improved knowledge on high blood pressure and BMI and they committed to explain through share the gained knowledge to others in their daily duties and responsibilities. They will encourage other to do self-checking in their life.

In finish, it is clear that hypertension is a major public health problem in Sub Saharan Africa (SSA), particularly in urban areas. Levels of detection, treatment, and control are worryingly low, suggesting that high levels of adverse effects such as stroke, heart failure, and renal failure will become apparent in the years to come. There is an urgent need to encourage healthy lifestyles as a means of primary prevention and also to increase awareness of hypertension through public education. There is a need to establish multi-disciplinary and inter-sectorial intervention to address the issue to the entire population of Gakenke starting at Ruli Sector and nearest sectors and Local authorities committed to keep mobilizing their population to attend the mass sport as many as possible. It will be done twice per month (1st week and 3rd week of every month.