MAKERERE UNIVERSITY

STUDENTS

BY

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CONCEPT ON RABIES AWARENESS WORKSHOP.

Rabies is a viral infection caused by viruses belonging to lyssavirus genus. It is a zoonosis (an animal disease that can spread to humans) transmitted through bites or scratches usually via saliva of infected mammals. The infection primarily circulates among domestic and wild animals such as dogs, cats, monkeys, foxes, bats a few to note. The virus attack the Central Nervous System targeting the brain and the spinal cord and if untreated is fatal.

According to WHO, Rabies is almost always fatal following the onset of clinical signs. In up to 99% of human cases, the rabies virus is transmitted by domestic dogs. Rabies is present on all continents with the exception of Antarctica, but more than 95% of human deaths occur in Asia and Africa. Rabies is a neglected disease of poor and vulnerable populations whose deaths are rarely reported and where human vaccines and immunoglobulin are not readily available or accessible. It occurs mainly in remote rural communities where children between the ages of 5–14 years are frequent victims. (WHO, 2016)

Globally the burden of rabies is still high; estimates indicate that human mortality (due to endemic canine-mediated rabies) is highest in Asia, with the highest incidence and deaths reported in India. This is closely followed by Africa; however estimates of burden have always been uncertain due to the absence of reliable data. (WHO, Rabies, 2014)

In Uganda the prevalence of animal bites is very high, in health centers with rabies vaccine, most of the patients are bitten by dogs, and that a considerable proportion of these are young children, who are at greater risk of developing rabies in the absence of treatment due to the location of the bites they receive. In the absence of post-exposure prophylaxis (PEP), 95% deaths would occur, and that if one dose of PEP is sufficient for protection following a rabid animal bite, 20% deaths would occur annually. (E.M.Fevre, 2005)

Kampala and Wakiso districts have the highest number of cases of people contracting rabies in the country a new survey shown. The survey conducted By Ministry of Health epidemiological division says Wakiso registered 25 cases followed by Kampala with 23 cases of suspected rabies. Over 1100 people contract rabies each year in Kampala alone while 16640 contract it country wide. (A.Bagala, 2016)

PROBLEM STATEMENT

Rabies is a viral infection caused by viruses belonging to lyssavirus genus. It is a zoonosis (an animal disease that can spread to humans) transmitted through bites or scratches usually via saliva of infected mammals. The infection primarily circulates among domestic and wild animals such as dogs, cats, monkeys, foxes, bats a few to note. The virus attack the Central Nervous System targeting the brain and the spinal cord and if untreated is fatal. (IAMAT, 2016)

The majority of human infections occur in Asia and Africa. Travellers coming into close contact with domestic animals or wildlife on ecotourism trips, or those undertaking outdoor activities like cave exploring, camping, trekking, and visiting farms or rural areas are at higher risk. Rabies is also an occupational hazard for veterinarians and wildlife researchers. (IAMAT, 2016)

In more than 99% of all cases of human rabies, the virus is transmitted via dogs; half of the global population lives in canine rabies-endemic areas and is considered at risk for contracting rabies. Although all age groups are susceptible, rabies is most common in people younger than 15 years. 4 out of every 10 deaths due to rabies are in children younger than 15 years. Post-exposure prophylaxis is given on average to 40% of children in Asia and Africa aged 5–14 years, and the majority receiving treatments are male.

In Uganda the prevalence of animal rabies is still high with districts Kampala and Wakiso having the highest numbers of suspected cases. Children below 10 years of age are at greatest risk of animal bites and are bitten more on the head than other age groups, and are thus at greater risk of developing clinical rabies in the absence of treatment. Dogs were found to be the main biting animal in the study. However, only 23% of dogs involved in a bite incident were reported to the veterinary services. The risk from dogs that do not develop rabies in this time period is usually minimal such that patients bitten need not receive vaccine. (E.M.Fevre, 2005)

Interventions have been carried out control rabies which includes dog vaccination; however these focuses on animals yet rabies also affects humans therefore the prevalence remains high especially among children aged 5-15 years.

WHO recently showed that a decrease in human rabies is possible through a combination of interventions involving dog vaccination, improved access to PEP, and increased surveillance and public awareness raising (WHO, Rabies, 2016). Therefore the Rabies workshop will improve the awareness of Rabies in our communities through students so as to reach out to wider coverage of People in Uganda.

JUSTIFICATION

Rabies is a preventable viral disease of mammals most often transmitted through the bite of a rabid animal. In up to 99% of human cases, the rabies virus is transmitted by domestic dogs, more than 95% of human deaths occur in Asia and Africa. Rabies is a neglected disease of poor and vulnerable populations whose deaths are rarely reported and where human vaccines and immunoglobulin are not readily available or accessible. It occurs mainly in remote rural communities where children between the ages of 5–14 years are frequent victims.

Increasing knowledge regarding wound washing, seeking Post Exposure Prophylaxis and the need to vaccinate dogs and cats are likely to result into effective prevention of Rabies. This therefore justifies our event on Rabies awareness as students will be educated on effective Rabies prevention.

OBJECTIVE OF THE EVENT

Broad objectives

- To assess level of knowledge regarding Rabies among secondary school students and create awareness on transmission, first aid and prevention.

Specific objectives

- To assess the level of knowledge on Rabies
- To create awareness on Rabies through health education.

METHODOLOGY

The event will take place at St. Noah Girls Secondary School, Zana Bunamwaya Division among secondary students and those from other neighboring secondary schools will be invited. This awareness workshop will involve use of structured questionnaire on rabies which will be given to the students inform of a pretest. After the pretest, discussions will be held with the students on knowledge of transmission, first aid in case of bite and prevention of Rabies. At the end of the session, the same structured questionnaires given in the pretest will be administered to the students inform of a post test to assess the increase in the level of knowledge acquired during the workshop.

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MAKERERE UNIVERSITY

STUDENTS

REPORT ON RABIES AWARENESS WORKSHOP THAT TOOK PLACE ON 5TH NOVEMBER 2016 AT ST. NOA GIRLS' SS.

BY

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DECLARATION

I APIYO PHIONAH, the team leader do hereby declare that the presentation in this entire report is our original work in relation to our One Health Day event in Uganda and that no part has been plagiarized without citations nor has it been presented by any student for the award of any qualification.

ACKNOWLEDGEMENT

We wish to thank various people who have helped us come up with this report since it has been a result of hard work, commitment and dedication.

Special thanks to OHCEA Makerere University for the opportunity given to us to be part of organizing and participating in the One Health Day event. And also to the OHCEA Uganda focal person Dr. Esther and Madam Peninah for the technical and professional guidance they gave us during organization of our event.

Our appreciation also goes out to our team leader, Apiyo Phionah for the great leadership and hard work towards the organization of the event and coming up with this report.

Finally we thank the Almighty God for the team and for having enabled us complete our event.

LIST OF ABBREVIATIONS AND ACRONYMS

OHCEA	One Health Central and East Africa
SS	Secondary School
St.	Saint
Dr.	Doctor
No.	Number

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EXECUTIVE SUMMARY

This report summarises the One Health Day event called Rabies awareness workshop organised by a multidisciplinary team of Makerere University students. This team comprises of three environmental health science students, one Animal production technology and management student and one human medicine student. The event took place on 5th November 2016 at St. Noa Girls' secondary school, Zana Wakiso district and the people who attended include over 500 students, a few teachers and the health inspector of Zana, Wakiso district. The activities carried

out during the workshop and these include; introduction to one health concept, pretest session, Rabies lecture, discussion/ question and answer session and posttest session.

The team managed to succeed in the organization of the event and according to the results from pretest and posttest, there was increase in the level of knowledge of students regarding rabies.

Some of the challenges faced by the team include national examinations which interfered with the time scheduled for the event, limited time given by the school to carry out the event and the sudden/ unexpected closure of Makerere University greatly affected the team.

INTRODUCTION

1.0 Introduction

Rabies awareness workshop was done to assess the knowledge of students on rabies thus majorly its transmission, first aid in case of a dog/cat bite and prevention. The workshop was organized by a team of students from Makerere University Kampala, Uganda; the team comprises of three environmental health science students, one Animal production technology and management student and one human medicine student. The workshop took place in St. Noa Girls' Secondary School Zana, Wakiso district and over 500 students from all classes attended excluding senior six students who didn't attend because they were preparing for their examinations. St. Noa Girls' SS was chosen by convenience as one of our classmates is a health inspector and the area is under his jurisdiction, therefore he suggested for us the school. The event took place on 5th November 2016 and the people who attended include the students, a few teachers present and the health inspector of Zana, Wakiso district. Various activities were done during the workshop and these included; introduction to one health concept, pretest session, Rabies lecture, discussion/ question and answer session and posttest session.

1.1 Roles played by each team members.

Environmental health students: mobilized the students in the school prior to the day of the event and lectured on prevention of Rabies.

Human medicine student: provided information to students on clinical manifestations and first aid of rabies.

Veterinary student: described to the students the routes of rabies transmission, how humans should relate with their pets and gave more explanations on post/pre-exposure prophylaxis and vaccination of dogs/cats.

2.0 Methodology

Pretest: this involved randomly sampling five groups of students from different classes to answer questions on Rabies before the lecture session using a questionnaire to assess the students' knowledge on rabies. The questionnaire comprised of eight questions on rabies transmission, first aid, treatment and prevention which was marked out of 15 marks.

Lecture session: this involved use of a well-organized presentation on rabies which was approved by the OHCEA focal person in Uganda. The team used the presentation to elaborate and equip the

students with information regarding rabies which was as well answering questions in the questionnaire.

Question and answer: this involved students asking questions regarding rabies and the team giving answers to the questions.

Posttest: the same questionnaires were given to the same groups of students; the aim of this was to assess the increase in the level of knowledge acquired by the students during the lecture. The questionnaires marked out of 15 marks and converted into percentage. Both the results from pretest and posttest were compared to measure the increase in level of knowledge hence creating awareness on Rabies.

ACTIVITIES CARRIED OUT

3.0 Activities carried out during the Rabies awareness workshop.

3.1 Introduction to the one health concept.

The team started by introducing to the students the one health concept and the importance of having a multidisciplinary team.

Figure 1: The health inspector introducing the team to the students and teachers in St. Noa, and highlighting on the one health concept as the team was multidisciplinary.

3.2 Pretest session

This involved use of semi structured questionnaires that assessed knowledge of students on Rabies transmission, first aid and prevention. And also asking students on the number of dogs each had, whether they were vaccinated or not. These questionnaires were given to five groups of students from each class who represented the five classes (senior one to senior five).

Figure 2: Some students of St. Noa answering the questionnaire in groups during the session.

A). Table 1: Results from the pretest.

PRETEST RESULTS							
Class	Marks (15)					Mean Marks	Mean marks (%)
A(S.1)	5	5	4	7	2	4.6	30.7
B(S.2)	6	6	7	5	7	6.2	41.3
C(S.3)	4	4	7	5	5	5	33.3
D(S.4)	8	4	2	3	3	4	26.7
E(S.5)	3	2	4	3	4	3.2	21.3

B). **Table 2: The numbers of dogs per class are as below.**

Class	No. of dogs
A(S.1)	17
B(S.2)	18
C(S.3)	37
D(S.4)	17
E(S.5)	28
TOTAL	117

Dogs vaccinated BUT not regularly: 76

Dogs never vaccinated: 41

3.3 Rabies lecture session.

The team organized a power point presentation on rabies which included information on Rabies regarding its transmission, first aid and prevention and also answered all the questions in the questionnaires. This presentation was thoroughly given and explained to the students to fill their knowledge gaps on Rabies.

Figure 3: Upper left shows the vet student giving a lecture; the upper left shows the team and lower shows the students who attended the lecture.

3.4 Question/ answer session

After the lecture, students were given time to ask questions regarding Rabies/ dogs. And the team members answered the questions. Hard copies of the presentation were given to teachers and some students.

Figure 4: Students asking questions on rabies while the team answers.

3.5 Posttest session.

In this session, the same questionnaires were given to the same students to measure the level of awareness created on Rabies during the workshop.

Figure 5: Team members perusing through the questionnaires.

Table 3: The table below shows results of the posttest.

POSTTEST RESULTS							
Group	Marks (15)					Mean Marks	Mean marks (%)
A(S.1)	10	9	9	8	7	8.6	57.3
B(S.2)	9	6	8	9	11	8.6	57.3
C(S.3)	9	9	6	10	7	8.2	54.7
D(S.4)	11	10	10	8	8	9.4	62.7
E(S.5)	10	11	9	9	10	9.8	65.3

CHALLENGES, SOLUTIONS AND CONCLUSION

4.0 Challenges

- November is a month of examinations for candidate therefore it was difficult to mobilize all students to be part of the workshop hence limiting the team to only one school that is St. Noa who permitted the team.
- Restricted entry to the school by police and limited time of less than 2 hours was given to the team to carry out the event which was not as scheduled.
- Unexpected and sudden closure of Makerere University greatly affected the team and made the team fail to reach the Heads of department to obtain proof as students of the university and post our event on the school website.

4.1 Remedies to the challenges

- The event was rescheduled to a weekend which was a Saturday and only students of St. Noa girls participated.
- We used the One Health Day Facebook page to post the rabies awareness event.

- The team used the Makerere University admission forms and University identity cards as proof of student since we couldn't obtain letters from our faculties due to closure of the University.

Figure 6: A group photo of the team, a teacher and a few students of St. Noa Girls' SS.

4.2 Conclusion

The rabies awareness workshop on rabies transmission, first aid and prevention organized by the team was successful with an increased level of knowledge of students from maximum mark of 41.3% in the pretest to 65.3% in the posttest. Rabies is a viral infection which cannot be treated in case clinical manifestations start appearing on a patient therefore, increasing awareness especially among children can help reduce Rabies mortality and morbidity in Uganda.

APPENDIX

5.0 RABIES QUESTIONNAIRE

CLASS……..

1. Rabies is a disease acquired from;

a) Infected sheep and cows
b) Infected poultry animals
c) Infected cats and dogs
d) All the above

2. Rabies is transmitted through the following

a) Saliva from bite by infected animal
b) Scratch from infected animal
c) Contact with mucous membrane (mouth and nose) of infected animal.
d) All the above

3. How long do rabies signs take to manifest?

a) 1-2 days to 1 week

b) 1 day to 1 month

c) 1 year

d) 1 week to 1 month

4. What is the first aid after a dog/ cat bite?

a) Wash the wound with water

b) Wash the wound thoroughly with clean water and soap

c) Rash the victim to the hospital

d) Tie the wound with a cloth to prevent over bleeding.

5. Do you have dogs?

a) Yes

b) No

6. How many dogs do you have?.....

7. Are they vaccinated?

a) Yes

b) No

8. Do you do routine vaccination as required?

   a) Yes

   b) No

9. There is treatment for rabies. True or false

10. There is no Post Exposure Prophylaxis (PEP) for human after dog or cat bite. True or False

11. Routine vaccination is the only way to prevent animals' rabies. True or False

12. The following is vaccine schedule for dogs and cats.

a) 1st vaccine at 3 months of age. True or False

b) Booster vaccine at 1 year later. True or false

c) Vaccinated every 3 years after this. True or False.

13. Give at least 5 signs of rabies

Evaluation summary report- evaluation criteria

1. Criteria concerning the project concept/ program (5 points or 20 points).

- <u>Events description- clear, concise</u>

  The One Health Day event organized by a team of five (5) Makerere University students was a Rabies Awareness Workshop. The event occurred on 5th November

2016 at St. Noa Girls' Secondary School, Zana Wakiso district. The event involved an introduction to the one health concept, pretest session which assessed level of knowledge on Rabies, a lecture session by the team to educate the students on Rabies, question and answer session and a posttest which assessed the level of knowledge acquired by students during the lecture.

- Relevance to the objectives of One Health Day, i.e. to stimulate collaborations across professional communities and create public awareness of the need for a One Health approach.

  The Rabies Awareness workshop created awareness on Rabies transmission, first aid and prevention among high school students.

- Innovation of event concept.

  Using school going students to reach a wider coverage of the community through instilling them with information on rabies which they pass on to their different families and to fellow children who may be school going or non-school going.

- Relevance of the Event to the targeted audience (age groups, audience backgrounds, abilities, skills).

  The targeted audience was of age group 12-19 years which is most affected by Rabies in Wakiso, Uganda. Therefore the workshop equipped the students with information on the necessary precautions to take in prevention and first aid in case of a dog/cat bite.

2. Criteria concerning Event Objectives (3 points each or total 15 points)

Objectives will be scored using the following SMART criteria:

- Specific

  Creating awareness on Rabies.

- Measurable

  Assessing knowledge levels of students regarding Rabies through use of pretest before the lecture session and posttest after the session.

- Achievable

  Easy to mobilize students since they are readily available in schools.

- Realistic

  Easy to communicate with students.

- Time-specific

  One day event.

3. **Criteria concerning promotion (10 points)**

- **Advertising**

  The event was advertised on different Social media that is, One Health Day Facebook page, and whatsapp.

- **Reach:** How many people did your event reach?

  Over 500 students were reached which was the primary target population and a number of people reached on social media.

- **Depth:** To what extent did your event inform people who knew nothing about One Health or change the minds of people who had some understanding of it?

  The students did not have information regarding One Health therefore the team introduced the one health concept and it was also expressed by the multidisciplinary team of Makerere University students which was composed of Environmental Health students, Veterinary student and Human medicine student.

4. **Criteria concerning implementation (20 points).**

Immediate impact based on event objectives and their measurement (15 points).

Narrative Summary (5 points if each of the following questions is addressed)

- Did you meet your objectives? Yes
- If not, why not?
- Did you encounter unexpected barriers/hurdles?

  Yes and these include being examination period, there was restricted entry into the schools hence making it hard to invite students from other school and organizing the event on a week day.

- How did you overcome the hurdles?

  The event was rescheduled to a weekend which was a Saturday and only students of St. Noa girls participated.

- What would you do differently next time, and why?
  - Next time we would reach out to different schools in Uganda to increase the coverage and reach out to many communities.
  - We would register dogs within the rural communities to know their numbers and ease monitoring and vaccination.
  - We would vaccinate all the registered dogs within the communities and encourage the owners to do routine vaccination of Rabies.