

Event Schedule

BSP Autumn Symposium 2022

20-Sep-2022

Keele University, Newcastle-Under-Lyme, United Kingdom

EVENT is now 1 day and online ONLY due to clash with the Royal Funeral

Achieving impact in parasitology: learning lessons from interdisciplinary research and community engagement

Delivering interventions to control or eliminate parasitic disease are more likely to be successful when a strong interdisciplinary approach and meaningful culturally-appropriate engagement with the affected communities are employed.

Our one day autumn symposium (20 Sept 2022) at Keele University in Staffordshire UK, will discuss how lessons learnt from practitioners of interdisciplinary delivery and community engagement can help to bring about effective healthcare interventions for the control of parasitic diseases.

This meeting seeks to bring together colleagues from applied healthcare, policy, social science, epidemiology, laboratory science and anthropological backgrounds to explore a range of topics, including but not limited to: the benefits and challenges of interdisciplinary approaches; perspectives from social science on the wide impact of parasitic infections; effects of conflict and the COVID-19 pandemic on control of neglected tropical diseases; evaluation of community engagement in global health; improving access and delivery of healthcare to affected communities; disease modelling; compliance and adherence in Mass Drug Administration.

Submission of abstracts for oral and poster presentations will open on 21st June. The deadline for abstract submissions is 1st September 2022.

Online only access will be available later. Registration is not required to submit an abstract.

Organiser Contact: **Julian Fuller**

Organiser Phone: **01234 211015**

Organiser Email: **info@bsp.uk.net**

Oral Abstracts

Session 1 - (Virtual meeting)

20-September-2022, at 09:10 (25 mins)

Ethical considerations in the design of community-based studies for neglected tropical diseases: Lessons from the Oxford-Uganda Collaboration on Schistosomiasis^{A27668}

Presenter: **Prof Goylette Chami**, *University of Oxford*

SchistoTrack is a prospective human participant cohort led by the Oxford-Uganda Collaboration on Schistosomiasis between the University of Oxford and Uganda Ministry of Health. The purpose of the cohort is to track the development of schistosomiasis-associated morbidities. The baseline of the cohort was completed in 2022 after working in close partnership with rural communities in the study areas for over 10 years. Over 3500

people will be followed annually for another four years to understand the progression of gut and liver disease in the context of *Schistosoma mansoni*. Within the context of schistosomiasis, tracking morbidity is complex. There are no existing treatment strategies for morbidity within existing health centres or through routine mass drug administration campaigns. Open questions remain concerning community engagement approaches, ancillary care, incidental findings, safeguarding of participants and study team members, identification of roles within research teams, payment to participants, legal considerations, and communication of medical findings to participants. Here we share lessons learned within these ethical dimensions from SchistoTrack, focusing on the topic of ancillary care. Schistosomiasis persists due to social and structural inequities in access to water and sanitation infrastructure, medicines, and health care; it is aggregated in rural poor areas. Due to these characteristics, the lessons shared here are anticipated to be widely applicable to other neglected tropical diseases and global health problems in low-income countries.

09:35 (25 mins)

Mental Health impact of parasitic diseases - under researched, under- estimated, under funded^{A27673}

Presenter: **Prof David Molyneux**, *Liverpool School of Tropical Medicine*

Mental health is estimated to be the leading cause of global morbidity as calculated by the Global Burden of Disease (GBD) studies with depressive disorders the most common amongst these conditions and estimated to be the condition which results in the greatest in terms of Years of Life lived with disability (YLDs). However, in the mental health literature these diseases do not figure in the spectrum of conditions which have a consequence for the mental wellbeing of individuals. Our studies on the Neglected Tropical Diseases (NTDs) have to date focussed on parasitic infections -lymphatic filariasis (LF), cutaneous leishmaniasis (CL) and human African trypanosomiasis - to estimate the mental health burden of these conditions when compared with published figures of mental health burden by the GBD. Studies on specific conditions have identified variable levels of prevalence of depressive illness but up to 90% in some studies have been reported. Calculations of the burden of disease are based on Disability Weights (DWs); the DWs used in calculation of mental health burden are 0.655 for patients with major depressive disorders, a much higher figure, than the attribution of DWs for LF and CL (0.109 and 0.013 respectively). Patients with these parasitic conditions are stigmatised, have a high prevalence of anxiety and depression, have reduced a quality of life but the condition does not impact on longevity. Calculations suggest that the hitherto estimated Burden of these infections is grossly under-estimated if mental health co-morbidity is considered. The talk will also address the impact on the social and mental health consequences on caregivers of those disabled; neurocysticercosis, as one of the leading causes of global epilepsy and the mental health conditions associated with toxoplasmosis infection.

10:00 (25 mins)

Of culture and parasites: The anthropology-parasitology nexus in decolonized global health research^{A27675}

Presenter: **Prof Lisa Dikomitis**, *Kent and Medway Medical School*

L Dikomitis¹;

¹ Kent and Medway Medical School, UK

With the increasing calls for large multidisciplinary teams in global health research, anthropologists work now more than ever together with parasitologists. Such interdisciplinary global health research relies on the collaboration among researchers from radically different academic fields, people in and across various communities, societies and countries. Researchers working on these projects often experience competing demands and obligations to and from the local communities in which they work; to and from team members in the different countries; to and from health policy makers; and to and from funding bodies. Added to this mix is the pressure to maintain a consistent level of academic rigour as conventional in their own 'home' discipline, reflexivity and comprehensibility across field sites, cultures and contexts. In this talk, anthropologist Professor Dikomitis will reflect on the nexus of anthropology and parasitology in such global health research, drawing on her experiences of working with parasitologists and researcher from other academic disciplines in her global health research (including the ECLIPSE programme she co-leads with parasitologist Professor Helen Price, www.eclipse-community.com).

10:25 (15 mins)

Community engagement and consent process for implementing controlled human infection studies using *Schistosoma mansoni* in Uganda^{A27598}

Presenter: **Dr Moses Egesa**, *Scientist, MRC/UVRI and LSHTM Uganda*

M Egesa¹; A Ssali¹; E Tumwesige²; M Kizza²; E Driciru³; F Luboga⁴; M Roestenberg⁵; J Seeley¹; A Elliott¹; ¹ MRC/UVRI and LSHTM Uganda Research Unit; London School of Hygiene and Tropical Medicine, Uganda; ² MRC/UVRI and LSHTM Uganda Research Unit, Uganda; ³ MRC/UVRI and LSHTM Uganda Research Unit, Uganda; Leiden University Medical Center, The Netherlands, Uganda; ⁴ Uganda Virus Research Institute, Uganda, Uganda; ⁵ Leiden University Medical Centre, Netherlands

Preparations for controlled human infection studies using *Schistosoma mansoni* (CHI-S) in an endemic setting in Uganda are ongoing. A roadmap developed by a stakeholder's meeting recommended engagement of target communities. The aim was to develop and pilot informed consent procedures that would assure good understanding of the project with potential CHI-S volunteers above 18 years from a fishing community and a tertiary education community in Uganda.

In each setting, a consultative group discussed and modified educational materials covering CHI-S developed by the research team. A mock consent process and a test of comprehension were conducted to assess understanding of CHI-S. Similar discussions and assessment with the modified educational materials were held with a test group. To explore perceptions towards, and feasibility of, participating in a CHI-S, fourteen in-depth key informant interviews and three group discussions were held.

Most participants recognised schistosomiasis as a public health problem but only a few had heard of the CHI-S and how it is conducted. Participants cited the societal benefit of the CHI-S to their families and the community they live in. It was evident that these close social networks would be key in deciding to take part in a CHI-S. Adverse effects were discussed and the worry of these was cited as a possible hindrance to taking part in a CHI-S. Most participants were undecided on the level of compensation that would be appropriate for a volunteer's time to participate in a CHI-S. Potential volunteers in these communities are willing to take part in a CHI-S if they understand the consenting process and CHI-S study procedures. Community engagement is needed to build trust and time must be taken to share study procedures and ensure understanding of key messages.

Session 2 - (Virtual meeting)

20-September-2022, at 11:30 (25 mins)

What's the community got to do with it? Maximising community engagement and involvement in integrated health systems responses to Neglected Tropical Diseases^{A27669}

Presenter: **Dr Laura Dean**, *Lecturer, Liverpool School of Tropical Medicine*

The integrated control and management of skin-related neglected tropical diseases (NTDs) is an increasing priority across many endemic settings. Central to integration efforts and the development of person-centred health systems is a focus on empowering people affected by skin NTDs to be active participants in health care design and delivery. However, best practices regarding the inclusion of affected communities within NTD integration efforts is seldom documented or explored. A key goal of the REDRESS programme in Liberia is to address this implementation gap. Through the use of participatory health research methodologies, we ensure that affected persons and other often unheard voices (e.g. traditional healers) have the opportunity for meaningful and equal participation within service design and delivery. Within this presentation, we draw on experiences from the inter-disciplinary development of an integrated case management strategy for NTDs in Liberia, to highlight best practices related to the engagement of affected persons. Specifically, we focus on the value of participatory health research methodologies in supporting equitable community engagement and ownership of programmes on the road to integration.

11:55 (15 mins)

Depression and Quality of Life Amongst People Affected by Filariasis Lymphoedema: Determining the Sociodemographic and Physical Risk Factors, and the Impact of Enhanced Self-Care Intervention.^{A27582}

Presenter: **Miss Carrie Barrett**, *PhD Student, Liverpool School of Tropical Medicine*

C Barrett¹; J Chiphwanya²; D Matipula²; L Chaponda²; J Turner¹; J Read³; M Taylor¹; L Kelly-Hope⁴;
¹ Liverpool School of Tropical Medicine, UK; ² Ministry of Health, Malawi, UK; ³ Lancaster University, UK; ⁴ University of Liverpool, UK

Background: Lymphatic filariasis (LF) is a major cause of disfiguring and disabling lymphoedema. This study aims to: i) determine the prevalence of and risk factors associated with depression and low quality of life (QOL) in lymphoedema patients; ii) understand if implementation of enhanced self-care (ESC) impacts depression and QOL. Methodology: A prospective cohort of ~300 patients from two regions of Malawi (North/South) was conducted over six months. Lymphoedema patients were surveyed at baseline then trained in ESC; hygiene, deep-breathing, massage and leg exercises. Follow-up surveys at 3- and 6-months assessed depression and QOL using a Likert scale Patient Health Questionnaire (PHQ-9) and a adapted LF Specific QOL Questionnaire (LFSQQ). Data were stratified by the three survey time periods. Associated sociodemographic and clinical conditions (lymphoedema severity, acute dermatolymphangioadenitis (ADLAs; secondary bacteria infections) risk factors were identified using univariable beta regression. Results: Baseline data on 309 patients found that 23% (95%CI, 18%-28%) reported mild/moderate depression and 31% (95%CI, 26%-37%) reported moderately/severely low QOL. A higher number of ADLAs in last 6 months was significantly associated with higher depression and lower QOL scores (pConclusion: Filarial lymphoedema is associated with a high prevalence of depression and lower QOL. ESC is a promising home-based intervention that national LF elimination programmes could readily scale up and help to reduce depression and improve quality of life amongst those affected.

12:10 (25 mins)

Putting people first rather than illness: learning from ECLIPSE_{A27676}

Presenter: **Prof Leny Trad**, *Federal University of Bahia, Brazil*

L Trad¹;

¹ Federal University of Bahia, Brazil, Brazil

12:35 (15 mins)

"When I go to the clinic weekly, who's going to take care of my kids?" The gendered burden of Cutaneous Leishmaniasis (CL) in Sri Lanka; A qualitative study_{A27572}

Presenter: **Miss Hasara Nuwangi**, *Graduate Trainee, Faculty of Medicine and Allied Sciences, Rajarata University of Sri Lanka*

H Nuwangi¹; TC Agampodi²; KG Weerakoon²; L Dikomitis³; H Price⁴; S Agampodi¹;

¹ Department of Community Medicine, Sri Lanka; ² Department of Parasitology, Faculty of Medicine and Allied Sciences, Rajarata University of Sri Lanka, Sri Lanka; ³ Kent and Medway Medical School, University of Kent and Canterbury Christ Church University, Canterbury, UK; ⁴ School of Life Sciences, Keele University, UK

Different aspects of women's lives such as marriage, personal identity, and psychosocial status are affected by cutaneous leishmaniasis (CL). The gender difference in psychosocial burden attached to CL is deep-rooted within the socio-cultural context and social roles of men and women but evidence on how the two genders are affected by CL in the Sri Lankan context is scarce. This study was conducted in the Anuradhapura district, Sri Lanka where CL is endemic, to explore the gendered nature of the burden attached to CL. The methodology had two components. The first component was an ethnographic study using participant observation and a diary study followed up with diary-based interviews (n=26) with community members. The first component was designed to understand the context, to get the researchers immersed in the culture so that meaning behind expressions is understood. The first component also helped identify participants for the second component of the study. As the second component, purposively selected CL patients were given a patient booklet (n=30) with open-ended questions designed to explore the lived experience of CL, followed up by patient booklet-based interviews (n=26). The resulting datasets were analyzed thematically and differences between genders were assessed.

A difference in the burden of living with CL with regard to beauty, facing negative reactions from society, and social roles were identified. Both men and women agreed that facial or other visible lesions damage beauty regardless of gender but facial lesions and scars, in particular, affect females more than males. Participants said that the disease would not affect marriage, reasoning that this is a curable disease. However, a female participant

remarked that she would not let her son marry a girl with a visible, facial lesion. This indicates potential consequences for marriage, especially for females with facial lesions. Some patients of both genders cover up their lesions to prevent others from seeing them and to protect the lesion from infections. Both males and females anticipated negative reactions towards their visible lesions from others. However, there were incidences where young females who are covering the lesions have faced mockery by fellow male CL patients at the clinic. The treatment process also affects the two genders differently both genders talked about the related loss of work. However, when the patient is female, the husband often has to take a day off from work to accompany her to the hospital, increasing the overall household burden. Disruption of the social roles was a concern for female participants particularly the mothers with small children, for whom the time-consuming treatment process disrupted their motherly role of taking care of the children. They expressed being sad and distressed thinking about the clinic day as they have to think about how to manage taking care of their kids. They felt sad leaving their kids unattended for an extended time period during clinic days. The female participants who take care of their elderly parents complained about the disruption of their role as a daughter because of the time-consuming nature of the treatment process. None of the male participants mentioned any disruptions to their social roles. Our findings indicate that women face a unique burden because of CL. This should be further explored and taken into consideration when health promotion interventions are developed in the future.

12:50 (15 mins)

Content analysis of Sri Lankan Sinhala newspaper articles on leishmaniasis^{A27762}

Presenter: **Mr Asitha Prabhath Mallawaarachchi**,

A Mallawaarachchi¹; S Agampodi¹; M Weerasinghe¹; C Liyanage²;

¹ Department of Community Medicine, Faculty of Medicine and Allied Science, Rajarata University of Sri Lanka, Sri Lanka; ² Department of Sociology, University of Colombo, Sri Lanka

Leishmaniasis is a major public health problem in Sri Lanka, predominately in rural areas. With the high literacy rate in Sri Lanka, newspapers could be utilized as an effective media for public health promotion. The objectives of this study were 1) to assess the prominence and 2) to analysis the content of leishmaniasis articles published in online versions of the most popular five Sinhala newspapers (one government associated and four private associated) in Sri Lanka over the period of two years (2020-21). Newspapers were manually screened and articles related to leishmaniasis were extracted using five pre-identified keywords: 1) “*leishmaniasis*”, 2) “*weli massa*”, 3) “*weli makka*”, 4) “*weli masi uwadura*”, 5) “*charmacatha leishmania*”. Prominence of the articles was assessed using a composite index scoring system introduced by Wilbur *et.al.* (Score range of 7 to18; prominent articles ≥ 15). A thematic analysis was performed to analysis the content of articles. Among a total of 2924 newspapers, only 14 articles were on leishmaniasis. Two-third of articles were published in one private associated newspaper. Only 4 (29%) articles were identified as prominent articles and they all have published in private-associated newspapers. Approximately half of the articles were published with photographs. Five main themes were identified: nature of disease, vector, risk factors, awareness and prevention. The majority of articles were news and the main focus of these articles was to increase the public awareness of leishmaniasis that includes cause, symptoms, treatments and prevention. Most of the news were “warning” articles with the number of patients and disease spreading areas to alert the public. Priority was given to aware the public through data and/or facts including leishmaniasis global and Sri Lankan situation, symptoms and risk factors. However, poor attention was given to diagnosis and treatments. . In features (n=2) prevention strategies were reported in detail. In addition, features were more descriptive articles and they covered vulnerable area, magnitude of leishmaniasis, socioeconomic conditions of vulnerable population, vector control, outdoor occupational behavior, and risk reduction. Newspaper coverage and prominent for leishmaniasis is extremely low in Sinhala newspapers in Sri Lanka in recent years. It is interest to find out why in future studies. Accordingly, this study can understand the differences in shaping and promoting media agendas. By reporting on the nature of the disease, vector, risk factors, awareness, prevention and control, neglected diseases like leishmaniasis can get the attention of Community and policy makers.

Keywords:

Leishmaniasis, Printed media, Newspaper, Health Communication, Sri Lanka

Session 3 - (Virtual meeting)

20-September-2022, at 13:45 (25 mins)

Improving access and delivery of healthcare to affected communities affected by NTDs: strategies employed by MSF.^{A27672}

Presenter: **Dr Margriet den Boer**, *MSF Ntherlands*

14:10 (25 mins)

A qualitative study on visceral leishmaniasis (VL) patients and stakeholders regarding their perception about new drug formulations in North Bihar, India^{A27674}

Presenter: **Dr Sweta Singh**, *Post Doctoral research associate , Institute of Medical science*

14:35 (15 mins)

Evaluating Community Engagement and Involvement (CEI) in creation of a novel health education intervention for Cutaneous Leishmaniasis in Sri Lanka^{A27763}

Presenter: **Ms Jayasundara Mudiyanse Lalani**,

J Lalani¹; GS Amarasinghe¹; ND Wickramasinghe¹; L Dikomitis²; S Agampodi¹;

¹ Department of Community Medicine, Faculty of Medicine and Allied Science, Rajarata University of Sri Lanka, Sri Lanka; ² Kent and Medway Medical School, University of Kent and Canterbury Christ Church University, Canterbury, UK

Community engagement and involvement (CEI) is increasingly being used in global health research to reflect peoples voice in decision making in the process of health promotion. CEI help stakeholders to develop healthier relationships with the local communities to address health-related problems by using a bottom-up approach in a culturally appropriate, context-bespoke way. “Empowering people with Cutaneous Leishmaniasis: Intervention Programme to improve the patient journey and reduce Stigma via community Education” (ECLIPSE) is a health and social intervention study carried out in three different countries including Sri Lanka where CL is a reemerging disease. *Kolam* is considered as a dance drama conducted by masked dancers retelling stories using myth and legend to address a social problem. This study aimed to evaluate the CEI approach in producing a novel intervention, folk drama (*Kolam*) for the purpose of CL-related health promotion. The ECLIPSE intervention included a folk drama (*Kolam*) which was produced based on the information gathered through an in-depth qualitative study in three ECLIPSE communities. The CEI approach used in this process of was evaluated using UNICEF Minimum Quality Standards for CE. The evaluation procedure included separate participant observation during the activities of the project and inductive thematic analysis of qualitative material including field notes, structured patient booklets and interview transcripts. The CEI evaluator assessed how the peoples voice was represented in the newly developed intervention. The process included an analysis of the script of the *kolam* drama which was compared with the findings of the initial thematic analysis using the three core community standards for CE; participation, two-way communication, adaptability and localization. The researchers adopted multiple qualitative methods (including diary studies, patient booklet studies, participant observation, interviews and focus groups) in which community members participated in expressing their experiences, ideas and opinion in the patient journey. The findings of the qualitative work on CL in the three communities revealed three core themes which need to be addressed in health education interventions; diverse clinical manifestations of the skin lesion, myths about the pathophysiology of CL and the delivery of public health message. The researchers worked with the artists to incorporate these aspects in producing the *Kolama*. The character creation was done in a combination of an artistic narration, assimilating the findings of the participant observation conducted in the ECLIPSE communities. The characters of the drama resemble the power hierarchy and behaviours pertaining to the local community. The community-perceived appearance, assumptions and behaviours related to the CL lesion were directly used in the *kolam* script to indicate different presentations of the lesion by the researchers. It was observed that the exact terms used by people were incorporated in the script. The researches purposefully selected the prominent myths related to CL and the parasite to be included in developing the script. Two-way communication was well used in the interviews and group discussions in identifying the origin of myths and incorrect beliefs related to CL. These finding were adapted in a culturally appropriate context of sarcasm in the acts to deliver the exact public health messages to prevent delay in health seeking for CL. Validation of the script and the dramatical adoptions within the *kolama* in the specific communities before delivery would add to the adaptability of the new intervention. CEI approach may be effective in the development of culturally appropriate novel interventions.

14:50 (15 mins)

Engaging and involving communities in conducting a survey to assess community awareness of cutaneous leishmaniasis in rural Sri Lanka: Lessons learned^{A27725}

Presenter: **Miss Sonali Dinushika Gunasekara**,

S Gunasekara²; ND Wickramasinghe²; WM Fernando³; TC Agampodi²; L Dikomitis¹; S Agampodi²;
¹ Kent and Medway Medical School, University of Kent and Canterbury Christ Church University, Canterbury, UK; ² Department of Community Medicine, Faculty of Medicine and Allied Sciences, Rajarata University of Sri Lanka, Sri Lanka; ³ Department of Health Promotion, Faculty of Applied Sciences, Rajarata University of Sri Lanka, Sri Lanka

Assessing awareness of neglected tropical diseases remains on the lower tier of the global health agenda. Disease awareness is bound to the context of the community, and therefore, available survey instruments validated elsewhere may not be solely adequate and appropriate for understanding the fundamental gaps in community awareness. This paper aims to describe how the community engagement and involvement (CEI) approach can be used to design and conduct surveys to assess community awareness of cutaneous leishmaniasis (CL) using the experience of a rural disease endemic region in Sri Lanka. Initially, a researcher-administered questionnaire was designed using the traditional approach. Even though the key sections and questions of the questionnaire were based on a preliminary literature search, how people term and interpret CL within their context was explored through participant observation and interviews conducted with people with CL. Going beyond the traditional approach of utilizing community members as 'subjects' for pretesting and piloting the survey instruments and procedures, we obtained inputs from people in different power hierarchies within the lay communities to improve the content and the structure of the preliminary survey instrument and the procedure of the actual implementation of the survey. Professionals in public health, education, and agricultural sectors were also involved. The questionnaire consisted of five key sections, including socio-demographic data, perceived causes of CL, awareness of signs and symptoms of CL, perceived susceptibility to acquiring CL, and awareness of the cure and prevention of CL. Most of the questions included in the first draft of the questionnaire were open-ended, which was a barrier to preserving the uniformity of the respondents' answers when data were collected by different data collectors. With the inputs gained through the participant observations, key informant interviews, and focus group discussions conducted with community members and professionals, we restructured the questions into closed-ended questions by developing the most appropriate options. We simplified the language and wording of the questions to improve the clarity and contextualized specific questions related to socio-demographic data, including household income, expenditure, and assets, as those questions were sensitive and difficult to be answered. A selected group of key community members was actively involved in piloting the survey instrument in the selected study setting. They provided inputs for deciding the best time for delivering a community survey, assisted the research team in safeguarding and guiding the data collectors during home visits, and familiarized the data collectors with the study participants and study settings. This was beneficial in bridging the community and the research team, improving response rate, and ensuring completeness and accuracy of data. With the experience gained through working with the community, we understood that the questionnaire should be delivered as a conversation rather than a question-and-answer session to create a supportive environment for the respondents. To convince that, we changed the order of the questions and removed repetitive questions. We identified that professionals' perspectives in conducting surveys differ from the practical implementation in natural study settings. A community perspective is essential to diminish this gap and to develop context-specific and culturally responsive surveys. These types of surveys could be used as the basis for developing effective data-driven public health interventions to prevent and control diseases, particularly the diseases neglected by the local and professional communities. Therefore, using the CEI approach in conducting surveys should be encouraged and strengthened as it will give ownership and say to the community regarding public health issues that matter.

Session 4 - (Virtual meeting)

20-September-2022, at 15:30 (25 mins)

Interdisciplinary approaches to understanding *Schistosoma mansoni* hotspots in Uganda^{A27671}

Presenter: **Prof Poppy Lamberton**, *Reader, University of Glasgow*

Over 240 million people are infected with schistosomiasis. The World Health Organization recommends community wide praziquantel mass drug administration (MDA) to control schistosomiasis associated morbidity, and ultimately transmission. I have identified regions in Uganda where high prevalence and intensities of *Schistosoma mansoni* remain despite over a decade of MDA. My group's research addresses two key questions: 'How can we improve individual treatment success?' and 'How can we reduce transmission at a community level?' Our research is interdisciplinary, working with epidemiologists, population geneticists, molecular biologists, anthropologists, economists and engineers. In this talk I will discuss results on who is reinfecting whom? And how best we might reduce this? Alongside findings on what type of water, sanitation and hygiene

(WASH) interventions community members find acceptable and are willing to work or pay for. Findings will combine to help characterise reinfection risk and optimize intervention trials. There are key limitations of MDA, and it alone will not reduce schistosomiasis. We need a more integrated approach to schistosomiasis control. Additional interventions need to be officially endorsed alongside improving WASH facilities. This will ensure a steady path towards control and ultimately eradication of this debilitating disease.

15:55 (25 mins)

Cutaneous leishmaniasis amidst illicit crops and violence in Colombia^{A27670}

Presenter: **Dr Lina Pinto-García**, *Universidad de los Andes*

In its cutaneous and visceral forms, leishmaniasis stands out as a notorious public health problem in contexts recently affected by armed conflict. On the other hand, the increased incidence and changes in the distribution of both forms of leishmaniasis have also been related to socio-environmental phenomena such as deforestation. In Colombia, conflict and deforestation go hand in hand, especially in the context of coca cultivation for cocaine production, an economy considered illegal by the state and a significant obstacle to peacebuilding. Not surprisingly, cutaneous leishmaniasis is one of several diseases and health conditions that proliferate in the midst of coca and violence. In Catatumbo, the northeastern region bordering Venezuela where most of Colombia's coca is produced, people who work planting and harvesting coca leaves are often affected by this disease. In addition, a large portion of those engaged in this work are now Venezuelan migrants. If access to health care for Colombians living in this territory is already fraught with barriers, these are even greater for non-citizens. Faced with this complex panorama, from an interdisciplinary academic perspective that seeks to contribute to framing the problem and finding solutions, how should we define both "community" and "community engagement"? What is "culturally appropriate" when the state fails to account for this health problem and, at the same time, criminalizes those who suffer from the disease? How to develop "effective health interventions" in a context where leishmaniasis is one of several embodied forms of violence and inequity? This presentation is an invitation to reflect on the difficulty of thinking with rigid definitions and practices of public health. We suggest that it may be more productive to open ourselves to other ways of understanding and dealing with the problem, open to both contingency and complexity.

Posters

Poster 1 : "When I go to the clinic weekly, who's going to take care of my kids?" The gendered burden of Cutaneous Leishmaniasis (CL) in Sri Lanka; A qualitative study

Presenter: **Miss Hasara Nuwangi**, *Graduate Trainee, Faculty of Medicine and Allied Sciences, Rajarata University of Sri Lanka*

H Nuwangi¹; **TC Agampodi**²; **KG Weerakoon**²; **L Dikomitis**³; **H Price**⁴; **S Agampodi**¹;

¹ Department of Community Medicine, Sri Lanka; ² Department of Parasitology, Faculty of Medicine and Allied Sciences, Rajarata University of Sri Lanka, Sri Lanka; ³ Kent and Medway Medical School, University of Kent and Canterbury Christ Church University, Canterbury, UK; ⁴ School of Life Sciences, Keele University, UK

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that the disease would not affect marriage, reasoning that this is a curable disease. However, a female participant remarked that she would not let her son marry a girl with a visible, facial lesion. This indicates potential consequences for marriage, especially for females with facial lesions. Some patients of both genders cover up their lesions to prevent others from seeing them and to protect the lesion from infections. Both males and females anticipated negative reactions towards their visible lesions from others. However, there were incidences where young females who are covering the lesions have faced mockery by fellow male CL patients at the clinic. The treatment process also affects the two genders differently both genders talked about the related loss of work. However, when the patient is female, the husband often has to take a day off from work to accompany her to the hospital, increasing the overall household burden. Disruption of the social roles was a concern for female participants particularly the mothers with small children, for whom the time-consuming treatment process disrupted their motherly role of taking care of the children. They expressed being sad and distressed thinking about the clinic day as they have to think about how to manage taking care of their kids. They felt sad leaving their kids unattended for an extended time period during clinic days. The female participants who take care of their elderly parents complained about the disruption of their role as a daughter because of the time-consuming nature of the treatment process. None of the male participants mentioned any disruptions to their social roles. Our findings indicate that women face a unique burden because of CL. This should be further explored and taken into consideration when health promotion interventions are developed in the future.

Poster 2* : MAGNITUDE OF SCHISTOSOMA MANSONI INFECTION AND FACTORS ASSOCIATED WITH PERSISTENT TRANSMISSION AFTER FOUR ROUNDS OF MASS DRUG ADMINISTRATION AMONG PRIMARY SCHOOL CHILDREN IN LOWER MOSHI, TANZANIA.

Presenter: **Miss Witness Bonaventura**, *Tutorial assistant, Kilimanjaro Christian Medical University College*

W Bonavenutur¹; V Silvestri¹; V Mushi¹; MI Mshana¹; J Nyanda¹; DB Laswai²; S Manyata²; PR Tarimo²; DV Gasarasi¹;

¹ Department of Parasitology and Medical Entomology, Muhimbili University of Health and Applied Science MUHAS P.O. Box 65001 Dar es Salaam Tanzania, Tanzania; ² Kilimanjaro Christian Medical University College, P.O.Box 2240-MOSHI, Tanzania

Background *S. mansoni* infection remains a major public health concern in Tanzania. Although schistosomiasis is rarely fatal, if not treated, it can cause long-term morbidities such as anemia due to gastroenteric bleeding caused by trapping of the eggs that damage tissues through inflammation. School-based mass drug administration (MDA) with Praziquantel, improvement of water, sanitation, and hygienic practices, and increasing awareness on control among risk groups, especially among school children, have been the major control measure in the country. Despite these interventions, the prevalence of *S. mansoni* infection in most of these endemic areas has remained unacceptably high. Epidemiological data after the four rounds of MDA in Lower Moshi are lacking, and the factors contributing to the persistent transmission remain unknown. Hence, the need for the current study **Objective:** The main objective of this study was to determine the magnitude of *Schistosoma mansoni* infection and factors associated with persistent transmission after four rounds of Mass Drug Administration among Primary School Children in Lower Moshi, Tanzania. **Materials and Methods** A quantitative school-based cross-sectional study was conducted among 593 primary school students. A two-stage cluster sampling approach was used to obtain the participants. Interviewer-administered questionnaires were used to gather information on social demographic characteristics and the factors associated with the persistent transmission of *S. mansoni* (information on participants' participation in MDA rounds, knowledge and attitudes towards infection, water contact, and fecal disposal practices). The prevalence of schistosoma infection was established by analyzing a single fecal sample from each participant by formal-ether concentration, and infection intensity was established through the Kato Katz technique. Descriptive statistics were used to summarize the data into frequencies, proportions and their 95% CI, Pearson's Chi-Square (χ^2) test was used to compare the differences between categorical variables and modified Poisson regression analysis was performed to establish factors which were significantly associated with infection at the significance level of 5%. **Results** A total of 593 study participants were recruited for this study (257 males and 336 females). The prevalence of *S. mansoni* infection was 12.98% (77/593), higher among males compared to females (14.01% vs 12.02%; $p=0.51$) and in the age group, 11-14 years compared to younger age groups (10.45% vs 15.8%). Among the 77 school children positive for *S. mansoni*, more than half (53.25%) had light infection intensity with a few (7.79%) having heavy infection intensity. The overall geometric mean egg per gram of faeces (GM-epg) of the

study participants was 89.1 GM-epg (95% CI: 71.04-111.8) Living in Mabogini ward (APR=1.268; CI: 1.2-1.339; p= 0.000), the type of toilet available (APR=1.08; CI: 1.01-1.16; p= 0.026) and participation in MDA (APR=0.918; CI: 0.848-0.994; p= 0.037) were the only factors independently associated with the persistent transmission of *S. mansoni* infection at multivariate analysis. Conclusions and recommendations The overall prevalence of *S. mansoni* infection among primary school children in Lower Moshi was moderate (12.98%). Participation in MDA, pour flush toilets, and residence (Magobini ward) were significantly associated with persistent transmission of *S. mansoni* infection. Further studies are recommended to map the focal points of schistosoma infection in Lower Moshi, to ensure equity in the distribution of school-based MDA. An integrated approach with adequate water supply and sanitation interventions should be added to MDA to ensure access to services without the need to visit water sources to fetch water for flushing the toilets after use. Keywords: Magnitude, *S. mansoni* infection, Knowledge, Attitude, Water contact practices, MDA rounds and Lower Moshi, Tanzania.

Poster 3* : Prevalence of gastrointestinal helminth parasites of trade cattle in Aguata and Orumba South Local Government Areas, Southeastern Nigeria

Presenter: **Dr Chukwunonso Obi**, Lecturer , University of Nigeria, Nsukka

CF Obi¹; MC Akata²; OJ Ezubelu²;

¹ University of Nigeria, Nsukka Nigeria, Nigeria; ² Federal College of Education (Technical), Umuze, Nigeria

Gastrointestinal helminth parasites (GHPs) constitute a major impediment to livestock production in the tropics. The prevalence of gastrointestinal helminth parasites of trade cattle was investigated in Aguata and Orumba South Local Government Areas (LGA), Southeastern Nigeria. Fecal samples were collected per rectum from 210 randomly selected cattle [Aguata LGA (n=140) and Orumba South LGA (n=70)] over a three-month period. The sex, breed and body condition scores of the cattle were noted. The samples were individually subjected to floatation and sedimentation techniques. The overall prevalence of GHPs was 57.6% (95% CI = 0.509–0.643). Of the 140 cattle screened at Aguata LGA, 74 (52.9%; 95% CI = 0.446–0.609) were positive for gastrointestinal helminth ova while 47 (67.1%; 95% CI = 0.555–0.77) were positive out of the 70 cattle screened at Orumba South LGA. A variety of gastrointestinal helminth ova were detected including strongyles, strongyloids, *Toxocara*, *Fasciola*, *Schistosoma*, *Moniezia* and *Paramphistomum* ova. Four zoonotic helminth ova were detected in the study area. Strongyle eggs were the most prevalent eggs detected in single infections, followed by *Fasciola* eggs. Mixed infections were more common than single infection. Body condition score was significantly associated (p<0.0001) with the prevalence of GHPs of cattle in the study area, while sex and breed were not. It was therefore concluded that trade cattle in Aguata and Orumba South LGAs, Southeastern Nigeria were affected by variety of GHPs including zoonotic helminths. Thus, routine anthelmintic treatment, good management practices and public enlightenment on the zoonotic importance of GHPs is highly essential.

Keywords: Prevalence; Gastrointestinal helminth parasites; Cattle; Southeastern Nigeria

Poster 4* : A New Poster Abstract: Prevalence and Risk Factors of Soil Transmitted Helminthes Infection and Malnutrition Among School-aged Children in Ibadan

Presenter: **Mr Azeez Ibrahim** , Mr, Anchor University, Lagos. Nigeria

AG Ibrahim MK Tijani²; RI Nwuba³;

¹ Anchor University, Lagos. Nigeria , Nigeria; ² University of Ibadan, Nigeria; ³ University of Medical Sciences, Ondo State, Nigeria

Background: In developing countries, infections caused by soil-transmitted helminthes (STH), such as *Ascaris lumbricoides*, *Trichuris trichiura*, and hookworm pose major public health problems among school-age children, resulting in impaired physical growth such as stunting and thinness, and cognitive development. This study aimed therefore to determined the prevalence of STH, malnutrition and factors associated with transmission among school-age children (SAC) in four local government areas in Ibadan. Method: A cross-sectional study was carried out in eight primary schools in Ibadan, Oyo State, Nigeria, from May to November, 2018. SAC ages

5 to 18 years old were randomly selected from primary one to six, across four Local Government Areas. Stool samples were collected and helminth eggs were quantitatively estimated using the Kato-Katz thick smear technique. Anthropometric data was obtained using a height measuring tape to the nearest 0.1 cm while weights were recorded using weighing scale to the nearest 0.1 kilograms. Malnutrition indices such as stunting and thinness were defined as Height-for-Age Z-score [HAZ] <-2Standard Deviation (SD) and Body-Mass-Index-for-Age Z-score [BAZ] <-2SD respectively. Multivariable logistic regression was used to assess factors associated with STH, thinness, and stunting. Results: A total of 458 SAC took part in the study, and an overall prevalence of 9.0% (95% CI 6.6 to 11.6) was observed for STH; 7.6% (95% CI 5.2 to 10.0) for *A. lumbricoides*, 2.8% (95% CI 1.5 to 4.6) for *Trichuris trichiura* and 1.5% (95% CI 0.7 to 2.3) for double infection. Stunting and thinness were 24.7% (95% CI 21.5 to 27.9) and 27.3% (95% CI 24.1 to 30.5), respectively based on the WHO reference Growth Standards. Notably, ages of the children (Adjusted OR= 1.688; 95% CI: 1.412 to 2.018; P<0.001), unhygienic classes (Adjusted OR= 0.729; 95% CI: 0.559 to 0.950; P= 0.019) and improper washing of hands (Adjusted OR= 0.815; 95% CI: 0.381 to 1.741; P = 0.031) were important factors associated with determining, stunting, thinness and STH infestation. Conclusion: The study has highlighted factor that predisposes SAC to high risk of STH infection, stunting, and thinness. Improper washing of hands, such as washing without soap, among the sampled children were more likely to be positive for STH infestation and thinness than those who washed their hands properly after defecation. Promotion and supervision of students' personal hygiene and improvement in parents' socio-economic status may further help to reduce the prevalence of STH, stunting and thinness among school children in these LGAs in Ibadan.

Keywords: Soil-transmitted helminthes, School-age-children, Stunting, Thinness, Ibadan.

Poster 5 : ONCHOCERCIASIS AMONG SCHOOL AGED CHILDREN IN ULANGA DISTRICT, TANZANIA. A CROSS-SECTIONAL STUDY ON BURDEN AND ASSOCIATED TRANSMISSION FACTORS AFTER MORE THAN TWO DECADES OF COMMUNITY DIRECTED TREATMENT WITH IVERMECTIN

Presenter: **Miss Mwanahawa Mshana**, student, Muhimbili university of health and allied sciences

MI Mshana¹; V Silvestri¹; W Bonavenure¹; V Mushi¹; DV Gasarasi¹;

¹ Department of Parasitology and Medical Entomology, Muhimbili University of Health and Applied Science MUHAS P.O. Box 65001 Dar es Salaam Tanzania, Tanzania

Background: Onchocerciasis is a neglected tropical disease caused by the helminth parasite *Onchocerca volvulus*. It is transmitted to humans by the bite of an infected vector, a black fly of *Simulium* genus. Onchocerciasis is associated with dermatological itching and lesions (nodules and onchocercoma), growth impairment (Nakalanga syndrome) and neurological manifestations (Nodding syndromes). Efforts have been directed to the control of morbidity and elimination of the disease through mass drug administration of ivermectin for 12-15 years according to WHO guidelines. However, despite interventions, the disease remains prevalent in most African foci, and there is an increasing evidence of comorbidities associated with the disease such as epilepsy among children in onchocerciasis endemic areas.

Most studies reported aggregated prevalence of adults and children, masking the actual burden of the disease in pediatric age in the endemic areas. Since children's exposure reflects the ongoing transmission and the efficacy of interventions put in place, there is a need to focus studies on this specific population to guide future interventions.

Objective: The objective of this study was to determine the burden of onchocerciasis and factors associated with continued transmission in school aged children in Ulanga District, Morogoro Region-Tanzania.

Material and methods: A school based cross-sectional study was conducted among school aged children aged 6 to 12 years, randomly selected from three cluster-sampled schools. Exposure of participants to *O. volvulus* was determined by OV-16 IgG4 rapid test. Symptoms, knowledge and practices related to onchocerciasis were assessed through an interview-administered questionnaire. Descriptive statistics was used to summarize prevalence and symptoms of onchocerciasis; factors associated with the disease were analyzed through bivariate analysis and multivariate analysis was used to confirm factors significantly associated with the disease.

Results: A total of 270 participants were included (41.5% males, 58.5% females). The prevalence for onchocerciasis was 19.6%, with males being more infected than females (25.9% vs 15.2%; p=0.03). Gender

difference is likely due to activities that increase exposure in males, even though no association was reported between infection and the activities analyzed in this study.

Prevalence increased with age (1.3%; 23%; 23.2% respectively for participants aged 6-8; 9-10 and 11-12 years; $p < 0.001$) and was higher in rural compared to urban areas (3.2% vs 37.9%; $p < 0.001$). Even though participants in the rural area (Msogezzi) reported high ivermectin uptake, they also had the highest infection rate (62.3% of all the positive individuals) suggesting continued exposure to *Onchocerca volvulus* in the rural setting.

The factors that were significantly associated with onchocerciasis transmission were ivermectin uptake, with AOR=3.17(1.53-6.58; $p = 0.002$), age with AOR=21.55 (2.01-230.63 $p = 0.011$ for participants aged 9-10 and AOR of 31.45(2.73-362.27; $p = 0.006$) for participants aged 11-12 years and sex, with AOR=2.2 (1.13-4.28; $p = 0.02$).

Conclusions and recommendations

There is high prevalence of *Onchocerca volvulus* exposure (19.6%) among SAC in Ulanga district despite more than 20 years of CDTI suggesting continued transmission, children being indicators of newly acquired infection. The only factors that were significantly associated with continued transmission of onchocerciasis were age, sex and ivermectin uptake.

There is a need for integrated approach adding health education interventions to mass drug administration with ivermectin.

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Poster 6* : Burden and risk factors for *Schistosoma mansoni* infection among Primary School Children: a quantitative school-based cross-sectional survey in Busega district, Northern Tanzania

Presenter: **Dr George Ogwen**, Parasitologist, NIMR Mwanza

G Ogwen¹; V Mushi¹; V Silvestri¹; W Bonavenature¹; J Nyanda¹; N Mololo²; F Yoram³; M Hussein⁵; D Tarimo⁴;

¹ Department of Parasitology and Medical Entomology, Muhimbili University of Health and Applied Science MUHAS P.O. Box 65001 Dar es Salaam Tanzania, Tanzania; ² Maweni Regional Referral Hospital, Kigoma, Ministry of Health and Social Welfare, Tanzania, Tanzania; ³ 5Department of Clinical Oncology, Muhimbili University of Health and Allied Sciences, Dar e Salaam, Tanzania, Tanzania; ⁴ Department of Parasitology and Medical Entomology, Muhimbili University of Health and Applied Science, P.O. Box 65011, Dar es Salaam, Tanzania, Tanzania; ⁵ 6Department of Environmental and Occupational Health, School of Public Health and Social Sciences, Muhimbili University of Health and Allied Sciences, Dar es Salaam, Tanzania, Tanzania

Background Intestinal schistosomiasis is one of the most common neglected tropical diseases in Tanzania. Despite massive praziquantel administration, data from Northern Tanzania have reported a prevalence of up to 93.2%. Because the disease is focal, depending on host, environmental and intermediate host factors, there is a need to acquire data in specific settings to better tailor interventions. Therefore, the study assessed the prevalence and factors associated with persistent transmission of intestinal schistosomiasis among school-age children in Busega district, Northern Tanzania.

Methods A school-based cross-sectional study was conducted among 363 primary school children, randomly selected from school clusters in the Busega district. A single stool sample was collected from each child for *S. mansoni* ova and infection intensity examination using Kato-Katz. Factors related to intestinal schistosomiasis transmission were acquired through a questionnaire. A malacological survey was carried out to determine the *Biomphalaria* infectivity rate. Descriptive statistics and logistic regression analysis were conducted to analyze the association between schistosoma infection and factors related to transmission in this setting.

Results Prevalence of *S. mansoni* infection was 41.3% (95% CI: 36.3-46.5), higher among male and statistically significantly higher among the younger group aged less than 11 years (46.4% vs 35.3%, $p = 0.032$). Intensity of infection was high in 1.6%, moderate in 9.6% and light in 30.9%. Studying at Mwamayombo Primary School (AOR= 2.50, 95% CI: 1.12-5.60) was the only factors significantly associated with *S. mansoni* infestations. Snail intermediate host was *Biomphalaria sudanica* snails whose infectivity rate was 0.97% confirming ongoing transmission in the area.

Conclusions There was a high prevalence of *S. mansoni* infection (41.3%) among school age children in Busega district. The presence of the infected *Biomphalaria sudanica* document persistent transmission, favoured by low knowledge and negative attitudes among school aged children. Hence, the need of multi-approach intervention for schistosomiasis prevention and elimination.

Keywords: *Schistosoma mansoni*; *Biomphalaria*; Knowledge, attitude and practices; Busega district; Northern Tanzania

Poster 7* : **The relationship between spreading of parasitic infection (malaria) and COVID-19 in tropical regions**

Presenter: **Miss Alaa omer ramadan adam**, *Medical labrotary specialist, Alain medical Center*

A ramadan adam¹;

¹ Alain medical Center, Sudan

Greetings to co-workers, it is an honor for me to participate in this conference, and I hope that it will benefit me and you. Today, I want to raise a recurring phenomenon during our work in the tropics, since malaria is still considered by us as an endemic disease. With the symptoms of malaria, and actually after the examination, the presence of the disease (malaria) is proven, and then the symptoms develop until the symptoms of the covid appear and prove its presence, which increases the severity of the symptoms in the patient compared to other covid patients without (malaria), which prompted us to make this phenomenon into question and search for the relationship and the mechanism of infection Which links the two diseases, and if covid is a cause of malaria easily or vice versa. I think that it is a topic of research that we can get great results from if co-workers and researchers from different countries participate in it

Kindly regards

Alaa omer ramadan

medical laboratory specialist

sudan

Poster 8* : **Depression and Quality of Life Amongst People Affected by Filarial Lymphoedema: Determining the Sociodemographic and Physical Risk Factors, and the Impact of Enhanced Self-Care Intervention.**

Presenter: **Miss Carrie Barrett**, *PhD Student, Liverpool School of Tropical Medicine*

C Barrett¹; J Chiphwanya²; D Matipula²; L Chaponda²; J Turner¹; J Read³; M Taylor¹; L Kelly-Hope⁴;

¹ Liverpool School of Tropical Medicine, UK; ² Ministry of Health, Malawi, UK; ³ Lancaster University, UK; ⁴ University of Liverpool, UK

Background: Lymphatic filariasis (LF) is a major cause of disfiguring and disabling lymphoedema. This study aims to: i) determine the prevalence of and risk factors associated with depression and low quality of life (QOL) in lymphoedema patients; ii) understand if implementation of enhanced self-care (ESC) impacts depression and QOL. Methodology: A prospective cohort of ~300 patients from two regions of Malawi (North/South) was conducted over six months. Lymphoedema patients were surveyed at baseline then trained in ESC; hygiene, deep-breathing, massage and leg exercises. Follow-up surveys at 3- and 6-months assessed depression and QOL using a Likert scale Patient Health Questionnaire (PHQ-9) and a adapted LF Specific QOL Questionnaire (LFSQQ). Data were stratified by the three survey time periods. Associated sociodemographic and clinical conditions (lymphoedema severity, acute dermatolymphangioadenitis (ADLAs; secondary bacteria infections) risk factors were identified using univariable beta regression. Results: Baseline data on 309 patients found that 23% (95%CI, 18%-28%) reported mild/moderate depression and 31% (95%CI, 26%-37%) reported moderately/severely low QOL. A higher number of ADLAs in last 6 months was significantly associated with higher depression and lower QOL scores (pConclusion: Filarial lymphoedema is associated with a high prevalence of depression and lower QOL. ESC is a promising home-based intervention that national LF elimination programmes could readily scale up and help to reduce depression and improve quality of life amongst those affected.

Poster 9* : A geospatial analysis of local intermediate snail host distributions provides insight into intestinal and urogenital schistosomiasis within under-sampled areas of Lake Malawi

Presenter: **Miss Amber Reed**, *PhD student in Statistics and epidemiology, Lancaster University*

AL Reed¹; C Jewell¹; JR Stothard²; C Fronterre¹; M Stanton²; S Kayuni²; M Alharbi²;

¹ Lancaster University, UK; ² Liverpool School of Tropical Medicine, UK

Along the southern shoreline of Lake Malawi, autochthonous transmission of intestinal and urogenital disease can occur. However, the underlying distribution(s) of intermediate snails is only partially known from previously sampled sentinel locations. To model and interpolate snail distributions, a secondary geospatial data analysis of existing malacological survey data was undertaken. Data on snail abundance collected at focal sites along the lakeshore were fitted using a Bayesian Poisson latent Gaussian process model. By smoothing the abundance estimates out along the shoreline, this method allowed us to estimate the abundance of snails that might be observed at any of the intervening points, together with a measure of uncertainty engendered by the inherent inability to observe snail abundance at all points. Separate models were fitted to the number of snails observed at our study sites for each species (*viz. Biomphalaria* and *Bulinus*). Our adopted model, used a combination of two-dimensional (2D) and one dimensional (1D) mapping to allow us to predict along the shoreline. Our interpolations identified certain areas of interest for each snail species, respectively which helps refine future geospatial sampling frames. Furthermore, we have shown substantive heterogeneities in snail distributions along the lake which, in turn, provide insight into local dynamics of schistosomiasis transmission.

Poster 10* : Community engagement with the Orang Asli communities in Malaysia

Presenter: **Miss Praveena Rajasegaran**, *Student, Universiti Malaya*

P Rajasegaran¹; Z Ya'cob¹; JJ Khoo²; SK Loong¹; BL Makepeace²; S Abu Bakar¹;

¹ University of Malaya, Malaysia; ² University of Liverpool, UK

The Orang Asli are the ethnically diverse descendants of the earliest inhabitants of Peninsular Malaysia, some of which have origins extending beyond the past 10,000 – 15,000 years. Living in rural areas, they are still deprived of the basic necessities of life, including the facilities, education and knowledge essential for health and well-being. In line with our research goal to understand the transmission of vector-borne diseases among the rural populations in Malaysia, we took the opportunity to conduct engagement activities with the Orang Asli communities of the Semai and Jakun tribes with support from the Global Peace Foundation. The engagement programs consisted of interviews and talks using pictorial posters appropriate for illiterate participants of all ages from villages in Perak and Pahang states. The interview sessions with the Jakun tribe revealed that approximately 30% of the villagers have experienced vector-borne diseases, especially malaria and Chikungunya. This two-way interaction also discovered that 99% of participants of both tribes had experienced being bitten by more than one vector, primarily by mosquitoes followed by ticks and mites. Additionally, young children were found to be affected by soil-transmitted diseases. Our pictorial posters include information on the transmission of vector-borne and zoonotic diseases, including Covid-19, information on disease symptoms and preventive measures, as well as general hygiene measures. Essential items including nutritious food, deworming tablets and school stationeries were also distributed to the people. Through engagement activities, we effectively garnered the support of the Orang Asli communities for better research and education to help alleviate the diseases affecting them.

Poster 11 : From spillover to persistence: hybridization and schistosomiasis transmission dynamics at the human-animal interface

Presenter: **Dr Anna Borlase**, *Post-doctoral researcher, University of Oxford*

A Borlase¹; JW Rudge²; E Léger³; ND Diouf⁴; CB Fall⁵; SD Diop⁶; S Catalano⁷; M Sene-Wade⁸; JP Webster⁷; ¹ University of Oxford, UK; ² London School of Hygiene and Tropical Medicine, UK; ³ Royal Veterinary College, UK; ⁴ Université Gaston Berger, Senegal, Thailand; ⁵ Université Cheikh Anta Diop de Dakar, Senegal; ⁶ IFSAR Bambey, Université de Thies, Senegal; ⁷ Royal Veterinary College, University of London, UK; ⁸ Université Gaston Berger de Saint Louis, Senegal

Zoonotic spillover and hybridization of parasites are major emerging public and veterinary health concerns at the interface of infectious disease biology, evolution and control. Schistosomiasis is a neglected tropical disease of global importance caused by parasites of the *Schistosoma* genus, and the *Schistosoma* spp. system within Africa represents a key example of a system where spillover of animal parasites into human populations has enabled formation of hybrids. Combining model-based approaches and analyses of parasitological, molecular and epidemiological data from Northern Senegal, a region with a high prevalence of schistosome hybrids, we aimed to unravel the transmission dynamics of this complex multi-host, multi-parasite system. Using Bayesian methods and by estimating the basic reproduction number (R_0), we evaluate the frequency of zoonotic spillover of *Schistosoma bovis* from livestock, and the potential for onward transmission of hybrid *S. bovis* × *S. haematobium* offspring within human populations. We estimate R_0 of hybrid schistosomes to be greater than the critical threshold of one (1.76; 95% confidence intervals 1.59-1.99), demonstrating the potential for hybridization to facilitate spread and establishment of schistosomiasis beyond its original geographical boundaries. Equally vital to evaluating multi-host systems is the identification of key hosts; we estimate R_0 for *S. bovis* to be greater than one in cattle (1.43; 95% confidence intervals 1.24-1.85), but not in other ruminants, confirming cattle as the primary zoonotic reservoir. Through longitudinal simulations we also show that where *S. bovis* and *S. haematobium* are co-endemic in livestock and humans respectively, the relative importance of zoonotic transmission is predicted to increase as the disease in humans nears elimination.

Poster 12 : Content analysis of Sri Lankan Sinhala newspaper articles on leishmaniasis

Presenter: **Mr Asitha Prabhath Mallawaarachchi**,

A Mallawaarachchi¹; S Agampodi¹; M Weerasinghe¹; C Liyanage²;

¹ Department of Community Medicine, Faculty of Medicine and Allied Science, Rajarata University of Sri Lanka, Sri Lanka; ² Department of Sociology, University of Colombo, Sri Lanka

Leishmaniasis is a major public health problem in Sri Lanka, predominately in rural areas. With the high literacy rate in Sri Lanka, newspapers could be utilized as an effective media for public health promotion. The objectives of this study were 1) to assess the prominence and 2) to analysis the content of leishmaniasis articles published in online versions of the most popular five Sinhala newspapers (one government associated and four private associated) in Sri Lanka over the period of two years (2020-21). Newspapers were manually screened and articles related to leishmaniasis were extracted using five pre-identified keywords: 1) “leishmaniasis”, 2) “weli massa”, 3) “weli makka”, 4) “weli masi uwadura”, 5) “charmacatha leishmania”. Prominence of the articles was assessed using a composite index scoring system introduced by Wilbur *et.al.* (Score range of 7 to18; prominent articles ≥ 15). A thematic analysis was performed to analysis the content of articles. Among a total of 2924 newspapers, only 14 articles were on leishmaniasis. Two-third of articles were published in one private associated newspaper. Only 4 (29%) articles were identified as prominent articles and they all have published in private-associated newspapers. Approximately half of the articles were published with photographs. Five main themes were identified: nature of disease, vector, risk factors, awareness and prevention. The majority of articles were news and the main focus of these articles was to increase the public awareness of leishmaniasis that includes cause, symptoms, treatments and prevention. Most of the news were “warning” articles with the number of patients and disease spreading areas to alert the public. Priority was given to aware the public through data and/or facts including leishmaniasis global and Sri Lankan situation, symptoms and risk factors. However, poor attention was given to diagnosis and treatments. . In features (n=2) prevention strategies were reported in detail. In addition, features were more descriptive articles and they covered vulnerable area, magnitude of leishmaniasis, socioeconomic conditions of vulnerable population, vector control, outdoor occupational behavior, and risk reduction. Newspaper coverage and prominent for leishmaniasis is extremely low in Sinhala newspapers in Sri Lanka in recent years. It is interest to find out why in future studies. Accordingly, this study can understand the differences in shaping and promoting media agendas. By reporting on the nature of the disease, vector, risk factors, awareness, prevention and control, neglected diseases like leishmaniasis can get the attention of Community and policy makers.

Keywords:

Poster 13* : **Subclinical vascular damage in *Schistosoma* spp. endemic regions: a community based cross-sectional study in Kome Island, Tanzania**

Presenter: **Dr SILVESTRI VALERIA**, *Post Grad Msc Student , MUHAS University of Dar es Salaam*

V Silvestri¹; MI Mshana¹; V Mushi¹; W Bonavenature¹; J Nyanda¹; C Kinabo¹; A Zacharia¹; G La Torre²; B Ngasala¹;

¹ Department of Parasitology and Medical Entomology, Muhimbili University of Health and Applied Science MUHAS P.O. Box 65001 Dar es Salaam Tanzania, Tanzania; ² Department of Public Health, La Sapienza University Rome, Italy

Background Cardiovascular abnormalities have been described in patients with schistosomiasis. Their true prevalence and clinical features in endemic settings are unknown.

Aim The study aimed to assess the prevalence of subclinical cardiovascular damage in a population endemic to schistosomiasis.

Methods A cross-sectional study using colour-ultrasound assessment of abdominal and carotid arteries among adults aged >18 years living in Kome Island, Tanzania was conducted. Carotid intimal medial thickness, carotid plaque, mean abdominal aortic diameter, and presence of aneurysms were assessed. Anamnestic data on previous *Schistosoma* infection was collected; the actual prevalence of *Schistosoma mansoni* and *Schistosoma haematobium* was also assessed through stool and urine investigations.

Results A total of 264 participants (166 female, 98 male) were enrolled (mean age of 50 ± 15.5 years). The history of previous schistosomiasis was 27.3%, actual positivity for *Schistosoma mansoni* was 5.9%. mAOD was significantly increased among participants with a previous history of schistosomiasis (16.7 ± 2.8 mm vs 17.6 ± 3 mm; $p = 0.02$), with an a-OR of 1.15 [CI 1.04-1.28]; $p = 0.007$

Conclusions The significant difference in the mAOD in participants with previous Schistosomiasis history schistosomiasis, suggests the need for further investigations on aortic damage in endemic populations, independently from the positive laboratory investigations.

Key words Schistosomiasis; Cardiovascular risk; Abdominal aortic aneurysm; carotid artery IMT, Colour-ultrasound; South Saharan Africa