Collaborating Centres ANNUAL REPORT

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Name of the University, Hospital, Research Institute, Academy or Ministry

London School of Hygiene and Tropical Medicine

Name of the Division, Department, Unit, Section or Area

Department of Clinical Research

City	London	**Reference Number**	UNK-274
Title	WHO Collaborating Centre for Sexually Transmitted Infections		
Report Year	05-2022 to 05-2023		

1. Annual report on the agreed workplan

Describe progress made on the agreed workplan. For each activity, detail (1) the actions taken, (2) the outputs delivered, as well as (3) any difficulties that may have been encountered. Three responses are expected. [maximum 200 words per activity]. Indicate, if an activity has been completed previously, has not yet started or has been placed on hold.

Activity 1

Title: At WHO's request, support the development, implementation and evaluation of STI diagnostic strategies, including point-of-care tests (POCTs).
Description: WHO estimated around 370 million new cases of the four curable sexually transmitted infections (STIs) worldwide in 2012: syphilis,
chlamydial and gonococcal infections as well as trichomoniasis. Such a high burden of STIs
is the reality that the world is facing in the 21st century despite the fact that the above
infections are preventable and treatable. In most cases the current treatment for these
STIs is based on a one-dose cure by antibiotics administrated per os, "traitement minute".
The WHO Department of HIV,Viral Hepatitis, and STI (HHS) and Department of Sexual and
Reproductive Health and Research (SRH) in collaboration with National STI Programmes
and Technical Partners have been implementing the Global Health Sector Strategy Strategy for STI control and prevention, 2016-2021/2030. Such a process requires technical support from Specialized Institutions with strong and internationally recognized expertise in STIs mainly from a public health perspective. The Department of Clinical Research of the London School of Hygiene and Tropical Medicine is one the most well-known centres in this field.
The collaboration with this proposed institution will help to strengthen the WHO work on critical components of STI control and prevention, particularly STI testing, prevention and clinical management of STI cases in key and vulnerable populations through assistance in
conducting research, particularly implementation research, and developing STI policies, providing technical inputs that may inform guidelines and recommendations as well as technical support to the countries through WHO in translating these recommendations into practice.

Status: ongoing
Work relevant to this activity has been undertaken by eight projects.
Emma Harding-Esch co-wrote a chapter on "Point-of-care tests and test principles" for the WHO "Laboratory diagnosis of sexually transmitted infections, including human immunodeficiency virus" manual.
Rashida Ferrand, Michael Marks, Katharina Kranzer and Kevin Martin have been working on the IPSAZ study. It received all ethical approvals in 2022, and started enrolment in January 2023. Over 300 participants have been enrolled from antenatal care in Harare, and tested for STIs. Ongoing quantitative and qualitative data collection for the mixed methods process evaluation has been ongoing since January 2023. The IPSAZ study

protocol was published on BMJ Open in April 2023. A sub-study protocol detailing an embedded trial investigating financial incentives to improve uptake of parter notification for STIs is currently in press at Wellcome Open Research. An additional sub-study supported by FIND (The Foundation for Innovative New Diagnostics) has also been implemented into the study. This is a validation study for a novel lateral flow assay for gonorrhoea. The FIND team came to Zimbabwe for a site visit and provided training on use of the device.
Tara Beattie, Janet Seeley, Helen Weiss, Mamtuti Panneh, Pooja Shah, Mitzy Gafos, Graham Medley, Karen Devries, and John Bradley have been working on Maisha Fiti (Risk factors for genital inflammation among a cohort of Female Sex Workers in Nairobi, Kenya. A longitudinal mixed-methods study). This longitudinal mixed-methods research study, funded by the MRC and DFID, with 1000 female sex workers in Nairobi, Kenya completed data collection in March 2021 and completed the immunological and cortisol assays on stored blood, genital and hair samples in March 2023. Longitudinal databases with behavioural and biological databases compiled in March 2023. Baseline qualitative and quantitative research papers and follow-up papers have been drafted by team members in Kenya, the UK and Canada, with a number of early career researchers (n=9) supported to draft their manuscript. Eleven papers have been published and a further nine papers are under review or in the final stages of preparation for submission. Three systematic reviews have been undertaken to estimate the prevalence of (i) mental health problems, (ii) harmful drinking, and (iii) substance use among female sex workers in LMICs. It is planned that this trio will help inform policy and much needed mental health and substance use interventions for FSWs in LMICs.
Emma Harding-Esch, Chido Dziva-Chikwari, Katharina Kranzer, Constance Mackworth-Young, Eneyi Kpokiri and Sarah Bernays have been working on the Genital InFlammation Test (GIFT) study for HIV prevention and reproductive health (point-of-care cytokine biomarker lateral flow test for asymptomatic inflammatory sexually transmitted infections (STIs) and bacterial vaginosis), The GIFT study protocol has been completed and received ethics approval from all study sites, including Zimbabwe (Site PI Chido Dziva Chikwari). A Full GIFT Team meeting was held in Cape Town in January 2023, attended by Dr Theodora Wi from WHO (one of the Scientific Advisory Board members). The final GIFT device is ready and being shipped to the sites, alongside the study packs. Within the integration study (Work package lead: Emma Harding-Esch), the Delphi study, which aimed to explore how GIFT could be further developed and used in current management algorithms, with a focus on low- and middle-income contexts, was completed (led by Eneyi Kpokiri), with a manuscript now in preparation. Qualitative interviews, led by Constance Mackworth-Young, have started, as well as a discrete choice experiment study, economic evaluation, and modelling of integration of GIFT into existing algorithms.
Amaya Bustinduy, Fern Terris-Prestholt, Emily Webb, Helen Ayles, Richard Hayes, Philippe Mayaud, and Helen Kelly have been working on SCHISTA: Integrating female sexual and reproductive health screening in Zambia: one-stop self-sampling for schistosomiasis and other genital infections. The Zipime Weka Schista! (Schista! for short) study brings together world-wide experts from the fields of female genital schistosomiasis, cervical cancer, HIV and STIs to propose an innovative approach to integrate multi-pathogen home-based self-sampling and testing. Over 2500 women have been recruited to this longitudinal cohort study to test the hypothesis that integration of home self-sampling for the screening of female genital schistosomiasis with human papillomavirus (HPV) and self-testing for HIV and STIs (namely trichomonas self-testing) is a cost-effective and self-empowering strategy that will increase the detection of cases and improve access to care for girls and women of reproductive age in sub-Saharan Africa.
Deborah Watson-Jones and Kathy Baisley have been working on the DoRIS trial, evaluating the immunogenicity of single-dose HPV vaccines in Tanzanian girls. The DoRIS trial has completed its month (M) 60 follow-up visits. At M36, the trial continues to show high seropositivity and stable antibody concentrations following a single dose of HPV vaccine. Immunobridging was done to a Kenyan study (the KEN SHE trial) in older females that demonstrated efficacy with a single dose; immune responses in the DoRIS single dose cohort were non-inferior to those seen in KEN SHE. DORIS results were presented to JCVI in UK and as part of a package of evidence to WHO SAGE which has changed its HPV vaccination recommendations to allow countries to opt for single dose of HPV vaccine in 9-20-year olds. UK and Australia are amongst the countries moving to single dose HPV vaccination. The DoRIS trial has received funding for another 4 years that will take follow-up up to 9 years post-vaccination. Multiple presentations on the DoRIS trial results at the following meetings in 2022: International Union Against Sexually Transmitted Infections 2022 – Victoria Falls, Zimbabwe; 4-7 September 2022 (Presentation Abstract and Posters #: 166, 205, 206, 216). Coalition to Strengthen the HPV Immunization Community (CHIC) South Asia meeting, New Delhi, India, 13 – 15 December 2022; Asia Oceania Research of Genital Infection and Neoplasia (AOGIN) 2022, Pattaya, Thailand. 24-26 November 2022; Preventing Cervical Cancer 2022 Conference (PCC2022), Melbourne, Australia. 16-

18 November 2022; Emerging evidence on the efficacy and effectiveness of a single dose HPV vaccine and its implications for the WHO Africa Region: NITAG Support Hub of the University of Cape Town, in collaboration with WHO, Webinar, 2 November 2022; CHIC Symposium in September 2022 on HPV Vaccination Programs: From Pre-introduction Planning to Restoration and Sustainability - Addis Ababa, Ethiopia, 24 – 25 September 2022; HPV Prevention and Control Board: Antwerp, 2-3 June 2022; The Joint Committee on Vaccination and Immunisation, UK Health Security Agency, 17 May 2022. Challenges included suspension of trial activities between 2021-22 which was lifted on 2 February 2023, and rising costs of shipments and consumables post-COVID. Funding was received to extend the trial to 9 years follow-up.
Matthew Chico and colleagues, in collaboration with Magnus Unemo (WHO CC, Orebro University/Sweden), conducted an independent evaluation of two antigen-based POC tests, OSOM TV and OSOM BVBLUE, in Zambia among 1,021 pregnant women. The study was approved by the WHO Ethic Review Committee, LSHTM Ethics Committee, and in Zambia the Tropical Disease Research Centre Ethics Committee and the National Health Research Authority. The study is registered at the Pan African Clinical Trials Registry (Reg: PACTR202302766902029) and recruitment was completed in May 2023. The team is currently working on the data cleaning and analysis. The study is based on the WHO Protocol that was developed in collaboration with Rosanna Peeling. Matthew Chico is also a Steering Committee Member for the STI Research Interest Group at LSHTM, and Emma Harding-Esch, co-Director of the WHO CC at LSHTM, is a co-investigator.
Rosanna Peeling has continued her collaboration with WHO on the analysis and publication of results from the PRoSPeRo project. The results of this independent multi-country evaluation of STI POCTs (14 countries, 27 sites) will be disseminated in November 2023. So far 9 manuscripts out of 12 are at the different stage of peer review/ acceptance for publication within the BMC Infectious Diseases Supplement.
Publications:
Martin K, Dziva Chikwari C, Dauya E, et al Investigating point-of-care diagnostics for sexually transmitted infections and antimicrobial resistance in antenatal care in Zimbabwe (IPSAZ): protocol for a mixed-methods study. BMJ Open 2023;13:e070889. doi: 10.1136/bmjopen-2022-070889
The ProSPeRo Network. Standardised protocol for a prospective cross-sectional multicentre clinical utility evaluation of two dual point-of- care tests in non-clinical settings for the screening of HIV and syphilis in men who have sex with men. BMJ Open 2022;12:e055275. doi:10.1136/ bmjopen-2021-055275

Activity 2

Title: At WHO's request, support WHO in activities that aim to improve STI prevention and control and sexual and reproductive health (SRH) services in key and vulnerable populations for STIs including HIV.
Description: WHO estimated around 370 million new cases of the four curable sexually transmitted infections (STIs) worldwide in 2012: syphilis,
chlamydial and gonococcal infections as well as trichomoniasis. Such a high burden of STIs
is the reality that the world is facing in the 21st century despite the fact that the above
infections are preventable and treatable. In most cases the current treatment for these
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Minute. The WHO Department of HIV, Viral Hepatitis, and STI (HHS) and Department of Sexual and Reproductive Health and Research (SRH) in collaboration with National STI Programmes and Technical Partners have been implementing the Global Health Sector Strategy for STI control and prevention, 2016-2021/2030. Such a process
requires technical support from Specialized Institutions with strong and internationally
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well-known centres in this field. The collaboration with this proposed institution will help to strengthen the WHO work on critical components of STI control and prevention, particularly STI testing, prevention and clinical management of STI cases in key and vulnerable populations through assistance in
conducting research, particularly implementation research, and developing STI policies, providing technical inputs that may inform guidelines and recommendations as well as technical support to the countries through WHO in translating these recommendations into practice.

Status: ongoing
Nine projects have incorporated work relevant to activity 2.
Elizabeth Fearon has been working on the use of dynamic network models to explore the role of social media use in HIV transmission and health promotion among gay men and other MSM. The focus of this skills development fellowship project shifted somewhat during COVID-19 and with the mpox pandemic. Over the

last year (since May 2022), this project contributed to the development of an early model-based analysis of the potential spread of mpox (then known as monkeypox) among gay, bisexual and other men who have sex with men (Endo et al) . Further development of a more detailed network model using UK surveys of GBMSM is in progress; preliminary findings were reported and discussed during a joint academic and UKHSA meeting in September 2022. The findings reported during this meeting were reported to the UKHSA technical group and reported in the 8th Technical briefing: https://www.gov.uk/government/publications/monkeypox-outbreak-technical-briefings/investigation-into-monkeypox-outbreak-in-england-technical-briefing-8. More informally, the project met weekly for several months with a broader group of academic mathematical modellers to support contextual understanding of sexually transmitted infections among GBMSM.

Rashida Ferrand, Katharina Kranzer, Chido Dziva Chikwari, Richard Hayes, Constance Mackworth-Young, and Joanna Busza have been working on STIs in CHIEDZA. This is a cluster randomised trial nested within the CHIEDZA trial (see below) aiming to investigate the impact of providing diagnostic testing for TV, CT and GC to young people with integrated HIV and other sRH services on population level prevalence of STIs. The trial had 16 clusters randomised 8:8 to the intervention (STI testing integrated with HIV and SRH services) or to control (existing facility-based services). The trial has completed recruitment and was unblinded in 2022 with results presented at IUSTI. The results have been fed back to WHO and also fed into WHO STI guidelines, and were also used to inform the GFATM application in Zimbabwe. The trial included a process evaluation and a costing. A symposium on this trial and cHIEDZA will be held at IAS and at IUSTI meetings in 2023. The trial is funded by the UK MRC.

Richard Hayes has been working on PopART analysis and modelling. The INPUTT grant, funded by BMGF, supports the continued analysis and publication of data from the HPTN 071 (PopART) trial of universal testing and treatment (UTT) for HIV in Zambia and South Africa. The INPUTT team (PI: Richard Hayes) meets regularly to plan published outputs from the trial, including epidemiological analyses, phylogenetics and mathematical modelling, the latter coordinated by Prof Christophe Fraser at the University of Oxford. Recent work has included analysis of data from the “Px survey”, a cross-sectional survey of adults in the 21 study communities carried out several years after the end of the trial. The team has also carried out important phylogenetic analyses elucidating the sources of HIV transmission in the study communities, showing the disproportionate role of men aged 25-34, who are currently underserved by HIV services; and additional work on the level and evolution of drug resistance. As the INPUTT grant nears its end in July 2023, we are focusing on distilling our messages for policy-makers: producing policy briefs and engaging with policy-makers in Zambia and at international agencies including WHO, UNAIDS, PEPFAR and GFATM. We held a workshop at LSHTM in March 2023 to support this policy work, which is being led in Zambia by Kwame Shanaube. Although the grant is coming to an end, analysis and publication of results from the trial are likely to continue for some years to come.

Tara Beattie and colleagues, as part of Maisha Fiti, have also been working on behavioural-biological surveys with 1003 female sex workers at three time-points, before and during COVID-19 pandemic. As part of this, all participants were tested and treated for HIV and STIs (gonorrhoea, chlamydia, syphilis, trichomonas, BV). HSV-2 testing was also undertaken. Analyses are underway to understand the prevalence and risk factors of STIs and how these changed longitudinally during the COVID-19 pandemic.

Vicky Simms, Chido Dziva-Chikwari, Katharina Kranzer, Fern Terris-Prestholt, Constance Mackworth-Young, Rashida Ferrand, and Richard Hayes have been working on Community based interventions to improve HIV outcomes in adolescents: a cluster randomised trial in Zimbabwe (CHIEDZA). This is a cluster randomised trial investigating the impact of integrated HIV and SRH services including STI management provided to youth in community-based setting on population level HIV outcomes. The trial was conducted in 24 communities in three provinces in Zimbabwe with outcomes ascertained through a population-based survey of 16,800 youth after 30 months of intervention. The trial main finding was presented to the MOH in Zimbabwe and to CROI 2023. A national stakeholder dissemination meeting in Zimbabwe to be held on 1st June 2023 and symposia on the trial to be held at IAS and IUSTI 2023. A toolkit on how to operationalise integrated HIV and SRH services and policy briefs are being prepared. A process evaluation and costing were also undertaken. The trial is funded by the Wellcome Trust.

Deborah Watson-Jones, Kathy Baisley and Richard Hayes have been working on Add-Vacc. The baseline HPV prevalence survey prior to the HPV vaccination activities for this cluster-randomised trial was completed between August-December 2022. Data were gathered on HPV vaccination coverage through the National Programme and these were presented as a poster at the IPVC 2023 Conference. Data collected during the baseline survey were used to randomise the 26 wards to the control and intervention arms. Restricted randomisation was used to ensure balance on important characteristics. A public randomisation ceremony

was held, which drew together representatives from the five district councils involved in the trial. The ceremony was attended by the District Vaccination Officers, other stakeholders and potential participants, among others. The site has undergone an initiation visit and is preparing to start vaccination during May 2023.
Deborah Watson-Jones and Kathy Baisley have worked on the DoRIS trial, a randomised, open-label trial of 930 girls aged 9-14 years. The goal of the study is to establish whether the one and two dose schedules of the 2-valent HPV vaccine (HPV16/18; Cervarix®), and the new 9-valent HPV vaccine(HPV 6/11/16/18/ 31/33/45/52/58; Gardasil9®), in HIV negative girls aged 9?14 years in a helminth and malaria-endemic region of Tanzania produce immune responses over a 9 year period that are non-inferior, defined by HPV 16/18 seropositivity, antibody avidity, and memory B cell responses (up to 3 years) to those observed when 3 doses of these vaccines are given to girls of the same age. We have also explored the acceptability and cost-effectiveness of alternative dosing regimens and vaccines in the SSA setting. There are 6 study arms: arms A-C received 3, 2 or 1 doses of Cervarix®; and arms D-F received 3, 2 or 1 doses of Gardasil-9®. The study is being conducted by NIMR/MITU in Mwanza. Month 60 visits for the 1 and 2 dose trial groups started in March 2022 and continued for 12 months. Retention for these visits was 96%. The results have been presented at conferences and meetings in 2022 and also to WHO SAGE and the UK JCVI.
The Zvatinoda! (What we want!) study was completed in 2022 culminating in a national stakeholder dissemination meeting in Zimbabwe in March 2022. The intervention design process was led by a study Youth Advisory Panel and a manuscript describing youth participation in the intervention design process is in preparation. The findings of the feasibility study were presented by co-PI Aoife Doyle at the International HIV & Adolescence conference in Cape Town in October 2022 and a second manuscript describing the study is in preparation led by Constance Mackworth-Young. Community engagement outputs from the study include videos of a song written by the Youth Advisory Panel and of a spoken word piece which was prepared for the dissemination event. These videos highlight the health issues affecting young people and provide a platform for the young people of Chitungwiza to share ‘what they want’ in terms of health services. Elements of the intervention have been incorporated into OPHID’s (the local implementing agency) programmes for youth sexual and reproductive health, and a follow-on research study to further develop and evaluate the intervention is planned..
The Y-Check adolescent health and wellbeing intervention was piloted in Zimbabwe in June-July 2022 with cohort recruitment and full intervention implementation between October 22 and March 23. The intervention involves the screening, treatment and referral, where indicated, for multiple risk behaviours and clinical conditions including nutrition and physical activity, mental health, alcohol and substance use, physical impairment, oral health, and sexual and reproductive health including STIs.The cohort of 2000 10-19 year olds recruited from primary and secondary schools and community hubs in Chitungwiza, Zimbabwe will be followed up at 4 months and 12 months to evaluate implementation and effectiveness outcomes. Similar Y-Check studies will take place in Tanzania (PI Saidi Kapiga) and Ghana (PI Ben Weobong) later this year under the coordination of WHO, Geneva (Prerna Banati/Valentina Baltag). The findings from this multi-country study will feed into WHO guidelines on the format, timing and content of health and wellbeing visits during the adolescent period.
Amaya Bustinduy, Fern Terris-Presthold, Emily Webb, Helen Ayles, Richard Hayes, Philippe Mayaud, Helen Kelly have been working on the Zipime Weka Schista! (Schista! for short) study brings together world-wide experts from the fields of female genital schistosomiasis, cervical cancer, HIV and STIs to propose an innovative approach to integrate multi-pathogen home-based self-sampling and testing. Over 2500 women have been recruited to this longitudinal cohort study to test the hypothesis that integration of home self-sampling for the screening of female genital schistosomiasis with human papillomavirus (HPV) and self-testing for HIV and STIs (namely trichomonas self-testing) is a cost-effective and self-empowering strategy that will increase the detection of cases and improve access to care for girls and women of reproductive age in sub-Saharan Africa.

Publications

Akira Endo et al.,Heavy-tailed sexual contact networks and monkeypox epidemiology in the global outbreak, 2022.Science378,90-94(2022).DOI:10.1126/science.add4507
Prem K, Choi YH, Bénard E, et al. vaccination schedules: a comparative modelling analysis. medRxiv 2021.02.08.21251186 [pre-print under review].
You T, Zhao X, Hu S, et al. Optimal allocation strategies for HPV vaccination introduction and expansion in China accommodated to different supply and dose schedule scenarios: A modelling study. eClinicalMedicine 2023; 56:101789.

Markowitz LE, Drolet M, Lewis R, et al. Human Papillomavirus Vaccine Effectiveness by Number of Doses: Updated Systematic Review of Data from National Immunization Programs. Vaccine 2022; 40(37):5413-5432.
Bénard E, Drolet M, Laprise JF, et al. Potential benefit of extended dose schedules of human papillomavirus (HPV) vaccination in the context of limited resources and COVID-19 disruptions in low- and middle-income countries: A mathematical modeling analysis. Lancet Global Health 2022; in press.
Burger E, Laprise JF, Sy S, et al. (2022) Now or later: Health impacts of delaying single-dose HPV vaccine implementation in a high-burden setting. International Journal of Cancer 1-6. doi:10.1002/ijc.34054;
Whitworth HS, Schiller J, Markowitz LE, et al. Continued HPV vaccination in the Face of Unexpected Challenges: A Commentary on the Rationale for an Extended Interval Two-Dose Schedule. Vaccine 2020; 39(6):871-875.
Whitworth HS, Gallagher KE, Howard N, et al. Efficacy and immunogenicity of a single dose of human papillomavirus vaccine compared to no vaccination or standard three and two-dose vaccination regimens: A systematic review of evidence from clinical trials. Vaccine. 2020 Feb 5;38(6):1302-1314. doi: 10.1016/j.vaccine.2019.12.017. Epub 2019 Dec 20.

Presentations

Watson-Jones D, Changalucha J, Ewing V, Whitworth H, Pavon MA, Kelly S, Kapiga S, Lees S, Dillner J, Stanley M, Hayes R, Baisley K. Reducing Community Prevalence of HPV by offering a single dose of HPV Vaccine to boys and young men in Tanzania – The Add- Vacc trial. 35th International Papillomavirus Conference & Basic Science, Clinical Science and Public Health Workshops IPVC 2023, Washington, USA. 16 – 21 April 2023. (Poster #1300)

International Webinar: Supporting an equitable and faster approach to cervical cancer prevention. This symposium is supported by Hokkaido University (Japan), Aberdeen University (UK), NHS Lothian (UK), Toyama Prefectural University (Japan), Kyoto Tachibana University (Japan), Aberdeen Center for Women's Health Research, Daiwa Anglo-Japanese foundation, Kakenhi. 19 May 2023 (online)

Title: Global Evidence Supporting One Dose HPV Vaccination: Update from the one dose consortium

Special Interest Satellite Symposium (CHIC): HPV VACCINE INTRODUCTION IN LMIC: Key Factors in Global and National-Level Decision making, Implementation lessons learned, and evidence for One-Dose use, IPVS 2023, Washington, 15 – 21 April 2023

Title: Evidence related to HPV Vaccine One-Dose schedule from Trials conducted in Tanzania, Costa Rica and India.

Global Vaccine and Immunization Research Forum 2023, Incheon, Seoul, 28 – 31 March 2023

Title: Optimizing Vaccine Regimen presented by Deborah Watson-Jones

The Coalition to Strengthen the HPV Immunization Community (CHIC) South Asia meeting, New Delhi, India, 13 – 15 December 2022

Title: The DoRIS trial within the session titled One dose; the current scenario and the way forward.

Asia Oceania Research of Genital Infection and Neoplasia (AOGIN) 2022, Pattaya, Thailand. 24-26 November 2022.

Title: Immunogenicity and safety of single dose HPV vaccine

Preventing Cervical Cancer 2022 Conference (PCC2022), Melbourne, Australia. 16-18 November 2022

Title: Evidence supporting one-dose vaccination: outcomes from the one-dose consortium.

Title of the discussion: The one dose debate Co-chair Deborah Watson-Jones

Emerging evidence on the efficacy and effectiveness of a single dose HPV vaccine and its implications for the WHO Africa Region: NITAG Support Hub of the University of Cape Town, in collaboration with World Health Organization, Webinar, 2 November 2022

Title: Evidence for One Dose HPV Vaccine - The DoRIS clinical trial, Tanzania.

CHIC Symposium in September 2022 on HPV Vaccination Programs: From Pre-introduction Planning to Restoration and Sustainability - Addis Ababa, Ethiopia, 24 – 25 September 2022

Title: Evidence for One Dose HPV Vaccine: CVT, India-IARC trial and the DoRIS trial

International Papillomavirus Society Conference 2020 – Virtual Conference

Title: A systematic review of evidence from clinical trials on the efficacy and immunogenicity of a single dose of Human Papillomavirus vaccine compared to no vaccination or standard three and two-dose vaccination regimens

Authors: Hilary S Whitworth, Katherine E. Gallagher, Natasha Howard, Sandra Mounier-Jack, Gladys Mbwanji, Aimée R Kreimer, Partha Basu, Helen Kelly, Mélanie Drolet, Marc Brisson, Deborah Watson-Jones

Abstract #: 1175
Aoife Doyle, C Mackworth-Young, P Charashika, E Chiringwaringwa, T Kaseke, L Manja, K Mapuranga, J Sibanda ,K Siziba, O Wilding-Davies; L Larsson, N Simpson; A Kydd; A Mangombe; K Webb. Zvatinoda! (What we want!): Feasibility study of a youth-led mobile phone intervention to improve demand for and provision of youth sexual and reproductive health services in Zimbabwe. HIV & Adolescence Workshop, Cape Town, 05 Oct 2022.

Activity 3

Title: At WHO's request and under its leadership, support WHO in activities related to PMTCT, hepatitis and STIs/sequelae elimination, including cervical cancer, and provide technical inputs that may inform the development of the WHO guidelines.
Description: WHO estimated around 370 million new cases of the four curable sexually transmitted infections (STIs) worldwide in 2012: syphilis,
chlamydial and gonococcal infections as well as trichomoniasis. Such a high burden of STIs
is the reality that the world is facing in the 21st century despite the fact that the above
infections are preventable and treatable. In most cases the current treatment for these
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Strategy for STI control and prevention, 2016-2021/2030. Such a process
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recognized expertise in STIs mainly from a public health perspective. The Department of
Clinical Research of the London School of Hygiene and Tropical Medicine is one the most
well-known centres in this field. The collaboration with this proposed institution will help to strengthen the WHO work on critical components of STI control and prevention, particularly STI testing, prevention and clinical management of STI cases in key and vulnerable populations through assistance in conducting research, particularly implementation research, and developing STI policies, providing technical inputs that may inform guidelines and recommendations as well as technical support to the countries through WHO in translating these recommendations into practice.

Status: ongoing
Deborah Watson-Jones, Kathy Baisley and Richard Hayes have been working on the AddVac Trial which is evaluating the impact of adding a single dose of a prophylactic human papillomavirus (HPV) vaccine (Gardasil®) in males aged 14 to 18 years alongside routine HPV vaccination in girls (two doses of Gardasil® given through the national HPV vaccination programme) on the population prevalence of HPV infection. Genital HPV prevalence in 18 to 21-year-olds will be compared between intervention clusters (female and male vaccination) and control clusters (female vaccination only) at 3 years after the intervention. This may inform policy making regarding similar one-off single dose catch-up programmes in individuals in this age group. In addition, blood sampling for immune responses and safety data collection will be performed in a subset of 200 male subjects in selected intervention clusters. This will provide supportive data to inform policy regarding the single-dose approach.
Deborah Watson-Jones and Kathy Baisley are also working on the DORIS trial that is currently evaluating the immunogenicity of single-dose HPV vaccines in Tanzanian girls. Data from the DoRIS trial M24 and M36 results have been presented to WHO SAGE and have informed the WHO position paper and guidelines on HPV vaccination and the single dose recommendation.
Mark Jit and Deborah Watson-Jones have been working on a Single dose HPV vaccine consortium. They have done Evidence synthesis including, a systematic review collating evidence on single dose HPV vaccination, compared to no vaccination or to multidose schedules, among participants vaccinated through clinical trials – First conducted in 2018; subsequently updated in 2021 and 2022. First review published at: https://linkinghub.elsevier.com/retrieve/pii/S0264-410X(19)31659-7; an evidence review collating trials, observational and modelling data on single dose HPV vaccination – First created in 2018; subsequently updated in 2019, 2020 and 2022. Current edition available at: https://www.path.org/resources/review-current-published-evidence-single-dose-hpv-vaccination/ They have also done modelling, including completed global cost-effectiveness analysis of 1-dose vs 2-dose vaccination under different assumptions. This was done in collaboration with ULaval, Harvard and UK HSA. Available as a pre-print: https://www.medrxiv.org/content/10.1101/2021.02.08.21251186v2; completing the work done for SAGE in 2019 on optimal vaccine strategies under supply constraints; collaborated with Harvard (lead) and ULaval on the impact of delaying 1-dose vaccination. Published as: Burger et al; collaborating with ULaval (lead) on the potential benefits of extended dose schedules given vaccine supply constraints and COVID-19 disruptions in low- and middle-income countries. Available as a pre-print; being submitted for publication: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4016646

Amaya Bustinduy, Fern Terris-Presthold, Emily Webb, Helen Ayles, Richard Hayes, Philippe Mayaud, Helen Kelly have been working on the Zipime Weka Schista! (Schista! for short) study brings together world-wide experts from the fields of female genital schistosomiasis, cervical cancer, HIV and STIs to propose an innovative approach to integrate multi-pathogen home-based self-sampling and testing. Over 2500 women have been recruited to this longitudinal cohort study to test the hypothesis that integration of home self-sampling for the screening of female genital schistosomiasis with human papillomavirus (HPV) and self-testing for HIV and STIs (namely trichomonas self-testing) is a cost-effective and self-empowering strategy that will increase the detection of cases and improve access to care for girls and women of reproductive age in sub-Saharan Africa.

2. Annual report on other activities requested

Should WHO have requested activities in addition to the agreed workplan, please describe related actions taken by your institution [maximum 200 words]. Please do not include in this report any activity done by your institution thatwas not requested by and agreed with WHO.

3. Resources

Indicate staff time spent on the implementation of activities agreed with WHO (i.e. those mentioned in questions no. 1 and no. 2 above). Do not include any data related to other activities done by your institution without the agreement of WHO. Please indicate staff time using the number of "full-day equivalents" – a day of work comprising 8 hours (e.g. 4 hours work per day for 7 days should be recorded as 3.5 full-day equivalents).

Number of staff involved (either partially or fully)

Senior staff	Mid-career staff	Junior staff, PhD students
28	8	17

Number of full-day equivalents, total for all staff involved

Senior staff	Mid-career staff	Junior staff, PhD students
0	0	0

Implementation of the agreed workplan activities (i.e. those mentioned in questions no. 1 and no. 2 above) normally require resources beyond staff-time, such as the use of laboratory facilities, purchasing of materials, travel, etc. Please estimate the costs of these other resources as a percentage of the total costs incurred (e.g. if you incurred costs of USD 100 and the value of your staff time was USD 50 which makes the total of USD 150, please report 33.3% and 66.7%).

Percentage of costs associated with staff time	Percentage of costs associated with other resources	Total
0.00	0.00	0.00

4. Networking

Describe any interactions or collaboration with other WHO Collaborating Centres in the context of the implementation of the agreed activities If you are part of a network of WHO Collaborating Centres, please also mention the name of the network and describe your involvement in that network [maximum 200 words].

Emma Harding-Esch, working with the British Association for Sexual Health & HIV (BASHH), has developed a package of work to address irregularities in online STI service provision issues in the UK, including leading a comprehensive review of current STI testing guidance and establishing dialogue with care providers, patients and the public, regulatory bodies and political stakeholders. Also working with BASHH, launched the Bacterial Special Interest Group "Microscopy of STIs" website (bsigmicro.org) and app (BSIG Micro on Apple App store/Playstore), aimed as a training aid for nurses and doctors working in Sexual Health worldwide.