

PA-165 ADHERENCE TO MEDICATION AND CLINIC CARE EXPERIENCE AMONG PREGNANT AND BREASTFEEDING WOMEN LIVING WITH HIV IN THE KILIMANJARO REGION, TANZANIA

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Background Adherence to antiretroviral treatment (ART) among HIV-positive pregnant and breastfeeding women is influenced by various context-specific factors. This study aimed to investigate clinic experience and adherence among pregnant and breastfeeding women living with HIV. This cross-sectional study was conducted among pregnant and breastfeeding women living with HIV who were receiving care at selected health facilities in Kilimanjaro region.

Methods Data were collected through face-to-face interviews using a semi-structured questionnaire. We analyzed data using descriptive statistics to describe levels of adherence. Differences in adherence rates between pregnant and breastfeeding women were assessed using chi-square tests.

Results The study included 100 breastfeeding women and 42 pregnant women. Self-reported adherence to antiretroviral therapy (ART) among pregnant and breastfeeding women was 94%, while pharmacy refill data indicated adherence rates of 57%. Although not statistically significant, pregnant women were found to be more adherent compared to breastfeeding women by 57.14%, ($p = 0.987$). Women who were satisfied with clinic care also tended to be more adherent, with a rate of 57.45%, ($p = 0.248$), compared to those who were not satisfied. Fifteen percent of the participants reported having to travel a long distance to access the clinic, despite other facilities nearby. This was attributed to concerns about stigma, lack of comfort, and unfriendly healthcare workers. Eighty percent of the women understood the importance of adhering to ART. However, only 37% had attended workshops or training sessions at the clinic on adherence to ART and medications.

Conclusion This study highlights the importance of ensuring access to healthcare services for pregnant and breastfeeding women living with HIV. Despite the high level of understanding of the importance of adherence to ART, only few women had attended workshops or training sessions on adherence to ART. Efforts should be made to increase participation in training and education programs to improve adherence to ART.

PA-166 CIRCULATING ANODIC ANTIGEN (CAA) DETECTION IN PREGNANT WOMEN AND THEIR CHILD DURING SCHISTOSOMA HAEMATOBIIUM INFECTIONS IN LAMBARÉNÉ, GABON

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Background The detection of schistosome-derived antigens in urine is a highly effective diagnostic approach for controlling schistosomiasis. It offers greater sensitivity compared to parasitological methods and involves a more convenient, user-friendly lab-based method. This diagnostic approach is particularly advantageous for pregnant women and young children, as early detection of active infections can lead to prompt treatment with Praziquantel (PZQ). The freeBILy clinical trial in Gabon (NCT03779347) evaluated the accuracy of the circulating anodic antigen (CAA) test for detecting *Schistosoma haematobium* (Sh) infections in pregnant women as well as an endpoint measure for PZQ efficacy.

Methods The accuracy of the upconverting particle lateral flow (UCP-LF) CAA urine test was comprehensively evaluated using a cross-sectional design and comparing it against urine filtration (UF) and PCR. Subsequently, Sh-positive pregnant women were enrolled in sub-study and received a single dose of PZQ either immediately (intervention) or after delivery (control) to assess the safety of PZQ use during pregnancy and to monitor the kinetics of CAA levels following PZQ administration. Finally, in an observational, longitudinal study mothers and their newborns were followed to determine the incidence of schistosomiasis in infants with accurate diagnostics.

Results A total of 733 pregnant women were enrolled in this study with mean age 25.3 years. The prevalence of schistosomiasis measured by the respective tests was 18% (UF), 19% (UCP-LF CAA), and 12% (PCR). Compared to the composite reference standard, the sensitivity of UCP-LF CAA was 71.8%, with 64% and 68% for UF and PCR, resp.

Conclusion Preliminary data show a high prevalence of schistosomiasis among pregnant women. Furthermore, the UCP-LF-CAA test was more sensitive than conventional microscopy, which contributed to the improved health of pregnant women as they were treated during pregnancy. PZQ treatment had no deleterious effects on mother nor child, and administering it to pregnant women can be considered to be safe.

PA-167 CHARACTERIZATION OF HIV-1 RESERVOIRS IN CHILDREN AND ADOLESCENTS: A SYSTEMATIC REVIEW AND META-ANALYSIS TOWARD PEDIATRIC HIV CURE

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Background The virostatic effect of antiretroviral therapies (ART) infers viral persistence in sanctuaries, with a high likelihood of reactivation off-treatment. This systematic review and meta-analysis aimed at estimating the global burden of archived drug resistance mutations (ADRM), the size of reservoirs and their determinants in paediatrics.

Methods Were included, randomized and non-randomized trials, cohorts and cross-sectional studies of HIV reservoirs in vertically-infected participants, published in English/French between 2002–2022. As primary outcomes, we evaluated the prevalence of ADRMs and estimated the size of reservoirs (HIV-1 DNA copies/10⁶ cells) in paediatrics. Subgroup analysis were performed to further characterize the data and the meta-analysis was done through random effect models.

Results Overall, 50 studies from 17 countries worldwide were included encompassing 2569 vertically infected participants (aged 2-days to 19-years; 52.81% females). There were limited data on the quantitative characterization of viral reservoirs in SSA, and sensitive tool as ddPCR for characterizing viral reservoirs were not implemented in the most sub-Saharan Africa (SSA) countries. Overall prevalence of ADRMs was 37.80% [95%CI: 13.89–65.17], with 48.79 [95%CI: 0–100] in Africa, 42.08% [6.68–82.71] in America, 23.88% [95%CI: 14.34–34.90] in Asia, and 20.00% [95%CI: 10.72–31.17] in Europe; without any difference between infants and adolescents ($p=0.656$). Starting ART before 2 months of age limited the size of HIV-1 DNA ($p=0.054$). Participants with long suppressed viremia (>5years) had lower rates of HIV-1 DNA ($p=0.027$) whereas pre-/post-ART CD4 $\leq 29\%$ and pre-/post-ART viremia $\geq 5\text{Log}$ were all found associated with higher rates of HIV-1 DNA ($p=0.038$, $p=0.047$, $p=0.041$ and 0.035 respectively).

Conclusion Our findings underscore high levels of ADRMs in paediatrics worldwide, with a higher reservoir driven by delayed ART initiation, shorter period of viral suppression and immuno-virological failures. Thus, strategies for paediatric HIV functional cure should target adolescents/children with very early ART initiation, high immunity and long-term viral suppression.

PA-172 IMPACT OF GLOBAL HEALTH RESEARCH IN AFRICA UNDER THE EDCTP-FUNDED “ONE-HEALTH” PUBLIC-PRIVATE PARTNERSHIP PANDORA-ID-NET-1

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Background New emerging and re-emerging infectious diseases continue to cause loss of life around the world. For a rapid, effective, and robust response to these outbreaks, a multidisciplinary public-private consortium “ONE HEALTH”, PANDORA-ID-NET-1 of 22 partner institutions (13 African and 9 European) led by Fondation Congolaise pour la Recherche Médicale was created following an EDCTP (2016) call.

Methods PANDORA-ID-NET-1 implements its activities by area and by transversal activities through 4 regional hubs (West, East, Central, and South Africa) for the development of intervention teams with rapid, mobile laboratory services, capable of responding to epidemics of emerging and re-emerging infectious diseases, and of carrying out inter- and intra-epidemic actions.

Results Expected impact: Global visibility of this essential network that provides accelerated evidence for the optimal clinical management of patients and guides the public health response to any serious infectious epidemic. Medium-term impact: Improved capacities for the detection and epidemiological surveillance of new or re-emerging infectious disease threats originating in Africa or elsewhere.

Long-term impact: Capacities of the 4 regions to develop and conduct high-quality clinical trials and research on emerging infectious diseases.

Conclusion PANDORA-ID-NET-1 had an impact on research in many African countries of 4 regional hubs. He has been an important tool for improving capacity to respond to outbreaks of emerging and re-emerging diseases for public authorities and aims to support the Africa CDC in its action. Through its many activities, workshops, capacity building, interventions in response to Lassa Fever in Sierra Leone, Chikungunya outbreak in Republic of Congo, Arenavirus surveillance in Zambia, Monkeypox studies in Nigeria, Europe’s response largest Monkeypox outbreak and currently against Covid-19 pandemic in Sub-Saharan Africa, the Global Response or epidemiological, genomic surveillance in Congo and in antimicrobial resistance and, has made more 222 publications, more 20 in The Lancet (<https://www.pandora-id.net/>) and joining different initiatives.

PA-173 COVID-19 VACCINES UPTAKE AMONG HEALTHCARE WORKERS WITHIN PRIMARY HEALTHCARE FACILITIES IN AN URBAN SETTING IN UGANDA

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Background Vaccination is one of the most successful public health interventions for preventing infectious diseases. A successful vaccination program depends on high coverage, and health care workers (HCWs) play a pivotal role in ensuring high uptake of vaccines in the population. COVID-19 vaccines have been proven to be efficacious, and vaccination campaigns have been ongoing, however there is a perceived high vaccine hesitancy even among health care workers in Uganda.

This study aimed at describing the facilitators, barriers to and level of uptake of COVID 19 vaccines among healthcare workers in primary healthcare facilities in an urban setting in Uganda.

Methods We conducted an online cross-sectional survey among healthcare workers in private and public healthcare facilities in Entebbe municipality between July 2021 and August 2021. Data was collected using an online questionnaire. Uptake of the vaccines among healthcare workers was analysed as proportions, and logistic regression was used to analyse barriers and facilitators to uptake of COVID 19 vaccines.

Results The study enrolled 360 participants, with 61.7% ($n=222$) females. A total of 236 (65.6%) healthcare workers had received at least one dose of COVID 19 vaccine with higher uptake among females 64% ($n=151$). Age above 40 years (OR 4.29), participating in COVID 19 vaccine related activities (OR 4.18) and having had a negative SARS-COV-2 test result (OR 1.79) increased the odds of having been vaccinated. Working in either a private for profit (OR 0.23) or a private not for profit (OR 0.19) reduced the odds of having been vaccinated. History of having cared for a COVID 19 patient and having a positive SARS-COV-2 test result did not influence the uptake of the vaccines in the study population.

Conclusion Vaccine uptake among healthcare workers was close to the World Health Organisation (WHO) recommended uptake of 70% by mid-2022.