The AfSPID BULLETIN

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EDITOR'S COMMENT

Dear Colleagues

Welcome to this Supplement of the *AfSPID Bulletin*.

Africa has a long-standing tradition of paediatric infectious diseases research, notably focussing on high burden infections such as HIV/AIDS, tuberculosis, malaria, lower respiratory tract infection and diarrhoeal disease.

At the recent WSPID 2022 conference, thirty-three abstracts submitted by African researchers were accepted to the conference programme, 17 (51.5%) were awarded oral presentations, while the remaining 16 projects (48.5%) were presented as e-posters. These abstracts are published in this supplement to highlight the range of current paediatric infectious diseases research projects being conducted in Africa.

The abstracts accepted for oral presentation addressed an interesting spectrum of subjects. Four papers focussed on aspects of antiviral or antibiotic therapy, three papers concentrated on COVID-19-related questions, two papers explored vaccination issues, two papers discussed the prevention or aetiology of diarrhoeal disease and other papers explored lower respiratory tract infection (LRTI) risk, dual HIV/Syphilis rapid diagnostic tests, lung function during treatment for pulmonary tuberculosis, healthcare-associated infection in neonates, disinfection of cellular phones to prevent healthcare-associated infection, and rodents and fleas associated with *Yesinia pestis* infection and transmission.

Solomon in a cluster randomised controlled trial conducted, in rural Ethiopia showed that point-of-use chlorination of drinking water reduced the incidence of diarrhoea by 36% compared to the control arm. Nwafor, *et al.* evaluated dual HIV/Syphilis rapid diagnostic tests in pregnant women in Nigeria and Ethiopia. Dual testing was associated with very high testing coverage and in women with confirmed syphilis, high treatment uptake. The study by Fakunle, *et al*. showed that exposure to high and diverse indoor fungal aerosols were independently associated with LRTI among hospitalised children under-five years of age. Thomas & Lochan in a randomised controlled trial showed that 70% isopropyl alcohol was superior to ultraviolet C light for disinfecting cellular phones of staff members in an ICU setting in South Africa. The multi-centre, placebo-controlled randomised clinical trial by Abotsi et al. showed that long-term azithromycin exposure in children with HIV-associated chronic lung disease resulted in significant antimicrobial resistance among *Streptococcus pneumoniae* and *Staphylococcus aureus* isolates colonising the nasopharynx. Van der Zalm, *et al.* assessed the pulmonary function of adolescents during treatment for pulmonary tuberculosis. Compared to healthy controls, pulmonary function was significantly impaired.

The e-poster presentations also addressed a variety of subjects including malaria, strongyloidiasis, COVID-19, antimicrobial stewardship, community-acquired pneumonia caused by mycoplasma and chlamydia, Group B Streptococcus multifocal arthritis, intravenous immunoglobulin therapy in the paediatric intensive care unit, candida species causing bloodstream infection, the spectrum of bacteria causing bloodstream infection, tuberculous meningitis and treatment response in paediatric pulmonary tuberculosis .

In large multi-regional conferences such as WSPID 2022 the research contributions of each region may be less visible amidst the vast numbers of projects on offer and therefore under-appreciated. By publishing these abstracts, the readers of our journal are given another opportunity to reflect on paediatric infectious diseases research projects that are being conducted on our continent.

I hope that the participant feedback and abstracts in this edition of the bulletin will encourage you to submit your own research projects to the next WSPID conference, which takes place on the African continent, in Durban, South Africa towards the end of 2023.

Brian Eley, editor

SOCIETY NEWS

FEEDBACK FROM CLINICIANS WHO ATTENDED THE WSPID 2022 CONFERENCE

Five clinicians from Africa who attended the WSPID 2022 conference share their observations.

Dr Anthony Enimil, a paediatric infectious diseases sub-specialist based at Komfo Anokye Teaching Hospital, Ghana contributed the following:

I physically attended WSPID 2015 in Brazil. Seven years after this conference, I had the opportunity to participate in WSPID 2022 virtually. It afforded me the advantage of joining this world-class conference in the comfort of my home country. Sitting behind my personal computer, I got updates on contemporary paediatric infectious diseases developments globally.

It was straightforward to navigate the online interface. The programme outline gave enough details on various topics/talks and speakers. It was also easy to translate conference time to my local time. Among the conference topics/lectures/talks, I fully participated in the workshops listed in the following table.

Date	Activities	Lessons learnt
22 Feb	AfSPID Society Symposium: PATTERNS OF SEVERE COVID IN CHILDREN ACROSS AFRICA, CHALLENGES AND SOLUTIONS FOR MANAGEMENT	I had the opportunity to compare Ghana's covid19 profile with other African countries.
	WSPID Plenary Symposium: THE COVID-19 PANDEMIC: LESSONS LEARNED AND ONGOING CHALLENGES FOR CHILDREN	The perspectives shared from the symposium were informative to my practice.
23 Feb	WSPID plenary symposium: INNOVATION IN INFECTIOUS DISEASES	Innovative diagnostics, many of which were not available in my settings
	WSPID Symposium: COMMUNITY-ACQUIRED BACTERIAL MENINGITIS AND VIRAL ENCEPHALITIS IN THE	This was insightful and knowledgeable personally. The ability to make such diagnoses in my

	ERA OF CONJUGATE BACTERIAL VACCINES	setting makes it challenging.
24 Feb	WSPID Workshop: DIAGNOSTIC ISSUES IN PEDIATRIC INFECTIOUS DISEASES	Limitations in middle-income countries
	WSPID Symposium: HIV/AIDS IN CHILDREN	Managing new challenges amongst adolescents living with HIV

I benefitted from the virtual conference by saving on transport and accommodation, which would have been a personal cost. Waiving the registration fees was an added benefit. Without that, I could not have registered for the conference.

Maintaining the virtual component in future conferences will provide more opportunities for participants from less endowed economies.

Dr Oluwabusayo Babatunde based at the General Hospital Epe, Lagos Nigeria also provided feedback on the WSPID 2022 virtual scientific conference.

I benefited from the free registration for the 2022 virtual scientific conference for WSPID and I am very grateful for the opportunity. My general experience with the virtual conference was very good and this innovation was welcome because it made this conference possible.

The online interface was well designed and easy to access. The topics and discussions were quite stimulating, I particularly enjoyed the discussions around antimicrobial resistance and pneumonia. As expected, the time zone differences made it difficult to attend some of the discussions and I unavoidably missed some discussions. My major challenge was with network connection. It was quite difficult to connect to on most days and there were some sessions I spent the entire period just trying to connect.

The virtual format made it possible for this scientific conference to be held this year, because the prevailing global climate (COVID pandemic and rising prices of aviation services) would have hampered a face-to-face conference. However, I consider the face-to-face meetings to be more enriching than the virtual because it gives an opportunity to connect more meaningfully with other participants. Going forward, a hybrid of both the face to face and virtual meeting may be explored.

Dr Yemah Bockarie, who hails from Ghana but is currently an infectious diseases fellow at Red Cross War Memorial Children's Hospital, Cape Town, South Africa provided the following reflections.

This was my first ever WSPID conference attendance. As advertised, the programme featured a wide variety of interesting topics for the 'paediatric ID mind' that included COVID-19, measles, dengue, antibiotic stewardship, malaria, TB/HIV, and a whole lot more; topics relevant to everyday clinical practice along with an equally exciting line-up of renowned researchers in the PID field. Naturally, my expectation was high and sure enough, I wasn't disappointed.

For each day, there were five rooms with parallel sessions, each with its own flow of "hot" topics, so sometimes it was a dilemma to decide which symposium to attend! The presentations were well-paced with adequate breaks, providing a smooth comfortable experience for the virtual attendee. And I loved how each talk would provide so much information to digest, each formatting a new learning experience for me; for example, I particularly enjoyed the talks into research on immune-suppressive mechanisms of measles infection, to PCV vaccine coverage and cost issues with insight into new ways of providing vaccine doses, to highlight just a few.

Overall, it was a good blend of international speakers who did well to engage the audience with insightful discussions. There were lots of abstracts and case discussions from almost every continent and it truly felt like a global hub for scientific exchange. Nonetheless, as engaging as the sessions were, listening from Cape Town, South Africa in a time zone that was seven hours or so ahead had its downside. So, as you would imagine, there were moments way past midnight, when no matter how appealing the topic was or how much coffee was at hand, the physiological urge to sleep was unstoppable, and so with droopy eyelids, one had to sign off.

On the whole my learning experience was good, and I have been visiting the WSPID website and E-learning portal ever since. I am convinced that this is the first of many more to attend. The city of Durban is set to host the next WSPID conference and poised to deliver the best Africa has to offer. And so, with anticipation building up in my mind, and a rising expectancy of the sheer flavour that local participation would bring, I hope to be part of the next WSPID congress, live from Durban, South Africa, come 2023.

Dr Jombo Namushi, who works in Zambia but is currently an ID fellow at Red Cross War Memorial Children's Hospital in Cape Town, South Africa, summarised his WSPID conference experience:

I am an infectious diseases fellow at Red Cross War Memorial Children's Hospital under the University of Cape Town in South Africa under the supervision of Prof Brian Eley. I wish to register my appreciation to my supervisor for having facilitated my registration to attend the WSPID virtual congress and the pre-congress symposium from 20th to 24th February 2022. As a beginner taking a career path in paediatric infectious diseases, it was a great motivation and mentorship opportunity having to listen and interact with mentors and experts in the field virtually. From the onset, the organization was very good. Once confirmation to proceed with registration was provided, the registration process was easy, quick and communication providing various updates about the conference was timely, clear and easy to follow.

It was gratifying to see experts from all over the world convene virtually to discuss and share knowledge and best practices in chanting the way forward in curbing infectious diseases in children. The COVID 19 pandemic during which period the congress was held, making a physical conference impossible, cannot over emphasize the importance of infectious diseases especially in children who remain among the most vulnerable populations.

The topics presented were well organized and very appropriate, addressing pertinent issues in paediatric infectious diseases. The talk on global emerging diseases, focusing on arbovirus outbreaks and epidemics was very enlightening. The Global attention over the last 2 years has been on COVID-19, causing destruction in the surveillance of several other emerging diseases and the example of arbovirus was a good reminder. I found the topics on sharing experiences in COVID vaccination programs very helpful both from the Mexican and UK perspectives. The research workshop too was very informative and helpful for an entry professional like me wishing to take a career path in research. Coming from a low-income country where pneumonia continues to be a major contributor to under-five

mortality despite the reduction seen with the introduction of PCV in the recent years, the presentation on new PCVs was timely and very relevant for me as it offers hope to our paediatric population. Also coming from a malaria endemic country, I found the malaria talk on drug development, eradication and vaccines very appealing and relevant to my practice.

I attended about 90% of the presentations and found most of the topics very relevant as they addressed pertinent paediatric infectious diseases issues. The only challenge was the time zone difference, which meant that presentations went on till very late, some as late as 10:00 pm. However, it was an inevitable challenge which no one had control over. But due to the topics being very interesting and relevant, I did manage to stay late and listen to most of them, despite the time. On the other hand, it did work out well as the presentations were coming in the after-work hours when I would have knocked off from work, hence did not interfere with routine working schedules. The other challenge was an overlap in the timing of some presentations, this however was compensated by the recordings that remained on the platform. This was a very good idea which enabled participants to go back and listen to any missed presentations that went on concurrently.

In conclusion, it was a fairly well-organized congress, I learnt a lot from the various presentations and am looking forward to the next congress and other ongoing WSPID learning opportunities. I wish to reiterate my appreciation to the WSPID committee through my supervisor prof Brian Eley who facilitated my registration and my other fellow participants from low- and middle-income countries, to enable us to attend the 2022 12th WSPID congress.

Finally**, Professor Ebele Francesca Ugochukwu** who works as a paediatrician at Nnamdi Azikiwe University Teaching Hospital in Nnewi Nigeria shared her experience of WSPID 2022.

I was glad to be availed the opportunity to attend the 12th World Congress of the World Society for Pediatric Infectious Diseases which took place virtually in February 2022 in Cancun, Mexico.

I was involved from the preconference symposia (20 February 2022) till the end of the conference in the early hours of 25 February 2022 and trailed my activity on the leader board – on which I was No. 5 on the points leaders with 1505 points at the end of the conference.

The conference was well organized and interactive. My time zone made it easy for me to combine my regular work schedule, during the daytime and still hook on to the conference activities in the evenings. This was convenient, but rather tiresome, as the meetings ended late at night. I enjoyed the presentations.

The Sally Gatchalian Research workshops were quite informative. E-poster viewing and exhibitions were easy to navigate. The organization of Regional Society Symposia gave opportunity for attendees to zero in on pertinent/relevant health issues peculiar to the region in question.

The advantage of the conference being virtual was the ability to select topics to listen to from various subsections of the oral presentation topics, navigating back and forth the Sala rooms which may not have been very convenient physically.

However, the downside was not being able to physically interact with other attendees and establish networks.

I must commend the ICT crew for their ever prompt, marvellous and seamless support in resolution of connectivity issues as they cropped up.

ABSTRACTS ACCEPTED FOR ORAL PRESENTATION

DOES DIRECTLY ACTING ANTIVIRAL DRUG THERAPY FOR CHRONIC HCV INFECTION AFFECT THE REMISSION IN SURVIVORS OF CHILDHOOD MALIGNANCY?

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Abstract ID: 310 / **Publication ID:** OP042

Topic: AS17 Viral infections / AS17f Hepatitis

Keywords: safety, chronic hepatitis C, survivors of childhood cancer, sofosbuvir, daclatasvir

Background: The effects of the direct-acting antiviral drug therapy (DAA) for chronic hepatitis C on infected survivors of childhood cancer have not been well investigated in paediatric age groups.

Aims: We conducted a prospective multicentre study to investigate the effect of dual sofosbuvir/daclatasvir therapy on both the HCV clearance and state of cancer remission in survivors of childhood cancer infected with chronic HCV.

Methods: Consecutive chronic HCV-infected survivors of childhood malignancy were included in the study. All were treated with Sofosbuvir/Daclatasvir (SOF/DCV) for 12 weeks and were closely monitored for virus load, liver and kidney functions, and hematologic indices. Follow-up was continued for 48 weeks and included clinical examination, imaging studies, and laboratory investigations for evidence of any recurrence or de novo occurrence of malignant disease.

Results: A total of 49 chronic HCV infected paediatric patients were included; 29 survivors of malignant solid tumours, and 20 survivors of hematologic malignancies (leukaemia/lymphoma). Their age ranged from 6 to 17 years (mean ± SD = 10.5 ± 3). All patients achieved SVR12 (100% ITT). No single relapse or recurrence was detected for the original malignant disease or the HCV infection. No de novo occurrence of malignancy was also observed throughout the follow- up period of 48 weeks.

Conclusions: SOF/DCV combined therapy might be used safely and effectively in the treatment of chronic HCV infected survivors of solid tumours or hematologic malignancy (leukaemia/lymphoma) in paediatric age groups. No relapses were detected during treatment and throughout the follow up period for either the original malignant disease or the HCV infection.

PRESCRIPTION DAYS OFFERED FOR CHILDHOOD INFECTIONS BY RESIDENTS AND PEDIATRICIANS IN ETHIOPIA VARY FROM INTERNATIONALLY RECOGNIZED GUIDELINES: INDIFFERENCE PROMOTES SUB-OPTIMAL PATIENT OUTCOMES AND ANTIMICROBIAL RESISTANCE

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Abstract ID: 12 / **Publication ID:** OP008

Topic: AS01 Antibiotic Stewardship and Infection Control

Keywords: Pediatrician, Antimicrobial stewardship, Pediatric infections, Duration of antimicrobial treatment, Pediatric resident

Background: Unregulated antimicrobial use, lack of clinical microbiology laboratories and trained personnel are driving antimicrobial resistance in developing countries.

Aims: The objective of the study was to compare antimicrobial prescription days recommended by pediatric residents and pediatricians in Addis Ababa, Ethiopia with guidelines published by internationally recognized bodies.

Methods: This descriptive cross-sectional study was conducted from February - July 2020. Data on recommendations on length of antimicrobial prescription were collected from pediatricians and pediatric residents in Addis Ababa, Ethiopia. Responses were summarized using descriptive quantitative analysis and their conformity to recommendations of internationally recognized guidelines was evaluated. Differences between sub-groups was determined by the Mann-Whitney U test. Analyses were done using Statistical package for the social sciences (SPSS) version 20.0 and significant differences ascertained at p- value < 0.05.

Results: A total of 88 respondents participated in the study. Many respondents suggested prescription days exceeding recommendations for common pediatric infections notably for conjunctivitis, cystitis, cellulitis and lower respiratory infections. Antimicrobial durations often came short of standard recommendations for tonsillopharyngitis, amebiasis and pyomyositis.

Pediatricians favoured less prescription days for endocarditis, hospital acquired pneumonia, cystitis and conjunctivitis. Inter-group differences were significant when prescribing for meningococcal meningitis, otitis media, Candida central line infections and non-gonococcal septic arthritis. Overall, respondents suggested 11,828.6 prescription days exceeding guideline recommendations.

Conclusions: Prescription days offered by pediatric residents and pediatricians practicing in Addis Ababa, Ethiopia differed from those recommended by guidelines for most childhood infections. Observance of evidence-based antimicrobial guidelines leads to favourable patient outcomes, fewer drug-related toxicities and prevention of antimicrobial resistance.

EFFECT OF CHLORINATION ON DIARRHEA AMONG CHILDREN UNDER THE AGE OF FIVE YEARS IN RURAL DIRE DAWA, EASTERN ETHIOPIA: A CLUSTER RANDOMIZED CONTROLLED TRIAL

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Abstract ID: 514 / **Publication ID:** OP002

Topic: AS08 Global Child Health

Keywords: Diarrhoea, effect, water treatment with chlorine, WaterGuard, Ethiopia

Background: Diarrhoeal disease is a leading cause of child mortality and morbidity in the world. The effect of point-of-use (POU) water treatment in improving the quality of water in areas where POU is not provided free of charge were not studied.

Aims: The objective of this study was to evaluate the effectiveness of drinking water disinfection by chlorination in diarrhoeal disease reduction among children under the age of five years in rural eastern Ethiopia.

Methods: We carried out a cluster randomized controlled trial in rural Dire Dawa between October 2018 and January 2019. The 405 households were randomized to intervention and control arms and intervention materials were distributed after conducting the baseline survey. Intervention households received 1.25% sodium hypochlorite with demonstration. Participants in the control households were allowed to continue with their usual habits of water collection and water storage. Generalized estimation equations (GEE) were used to compute adjusted incidence rate ratio and the corresponding 95% confidence intervals.

Results: In the intervention households, a total of 281 cases of diarrhoea were documented, but in the control households a total of 446 cases of diarrhoea were documented. A 36% (adjusted IRR = 0.64, 95% CI 0.57 – 0.73) reduction in incidence of diarrhoea was observed in the intervention arm when compared with the control arm.

Conclusions: Chlorinating drinking water at the household level may be a valuable interim solution until potable water is made accessible to the majority of the populations in Dire Dawa Administration and other Ethiopian communities.

INCIDENCE OF FIRST-CHOICE ANTIRETROVIRAL TREATMENT FAILURE AMONG CHILDREN IN MOZAMBIQUE, 2019

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Abstract ID: 127 / **Publication ID:** OP037

Topic: AS17 Viral Infections / AS17a Antiviral drugs and resistance

Keywords: HIV/AIDS, Treatment failure, Children, Incidence, Mozambique

Background: Though access to antiretroviral therapy (ART) has increased in recent years, there is limited information about the incidence of treatment failure (TF) among children in Mozambique.

Aims: We aimed to estimate the incidence of TF, the mean time to TF (MTTF), and to identify regimens associated with higher TF among children on ART, in 2019.

Methods: Data from children on ART were obtained from the national ART registry and those with TF from the national ART Committee database. The total TF incidence was calculated by dividing the number of children with TF by the total number of children on ART, in 2019. Regimen-specific incidences were obtained by multiplying the total incidence of TF by the proportion of children with TF in each regimen. The 1000-sample bootstrap was used to calculate 95% CIs.

Results: The incidence of TF was 246.0 (95% CI: 101.2-390.8) cases per 10,000 children per year. Regimens with higher incidence of TF included AZT+3TC+NVP, TDF+3TC+EFV, and ABC+3TC+NVP with 231.5 (95% CI: 96.6-366.4), 4.9 (95% CI: 2.6-7.2), and 2.2 (95% CI: 1.1-3.3) TF cases in 10,000 children per year, respectively. The MTTF was 5.4 years (95% CI: 5.2-5.6), and d4T+3TC+NVP, TDF+3TC+NVP, and AZT+3TC+LPV/r had longer MTTF of 9.5 (95% CI: 3.3-12.7), 8.3 (95% CI: 2.0-10.5), and 7.9 (95% CI: 6.2-11.8), respectively.

Conclusions: The incidence of TF among children on ART was found to be of public health concern. There is need to consider regimens containing protease inhibitors and DTG as first-choice ART among children to achieve sustained viral suppression.

IMPACT OF THE DUAL HIV/SYPHILIS RAPID DIAGNOSTIC TESTS IN CATALYZING CONGENITAL SYPHILIS ELIMINATION: EVIDENCE FROM ETHIOPIA AND NIGERIA

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Abstract ID: 46 / **Publication ID:** OP050

Topic: AS03 Bacterial Infections / AS03k Sexually transmitted diseases

Keywords: Rapid Diagnostic Tests, Antenatal, HIV, eMTCT, Syphilis

Background: About one million pregnant women (PW) are infected with syphilis globally, leading to an estimated 350,000 adverse pregnancy outcomes annually. In Ethiopia, 45% and 90% of PW are tested for syphilis and HIV respectively during ANC, with testing rates at 16% and 66% in Nigeria. The 'testing gap' between HIV and syphilis represents a missed opportunity to screen and treat maternal syphilis.

Aims: CHAI supported the Governments to conduct pilots, introducing dual HIV/syphilis RDTs in ANC across 40 and 31 Health Facilities (HF) in Ethiopia and Nigeria respectively, demonstrating the dual RDT's operational feasibility and establishing impact driving congenital syphilis elimination.

Methods: HFs with the highest first ANC attendance volume, based on a three- year retrospective DHIS data, were selected for the pilot per region/state. 1,678 health care workers in Nigeria and 159 in Ethiopia were trained to use dual RDTs and administer Benzathine Penicillin G for syphilis treatment over the 6-month and 18-month respective pilot periods in Ethiopia and Nigeria.

Results: 45,413 pregnant women were tested for HIV and syphilis in Nigeria, representing 100% syphilis testing coverage. Syphilis positivity rate was 0.2%, treatment uptake 90% and partner testing 42%. In Ethiopia, 97% of the 14,568 ANC attendees were tested with the dual RDT. Syphilis positivity rate was 0.6%, treatment uptake 98%, and partner testing 75%.

Conclusions: Dual HIV/syphilis RDTs have the potential to rapidly scale up access to HIV and syphilis diagnosis for pregnant women, a key strategy and pathway towards achieving dual elimination of mother-to-child transmission of both diseases.

EXPOSURE TO INDOOR FUNGAL AEROSOLS AND LOWER RESPIRATORY TRACT INFECTIONS AMONG HOSPITALIZED UNDER-FIVE CHILDREN IN IBADAN, NIGERIA

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Abstract ID: 55 / **Publication ID:** OP018

Topic: AS12 Microbiome Studies

Keywords: Lower respiratory tract infections, under-five children, Sub-Saharan Africa, Ibadan, Indoor fungal aerosols

Background: Previous epidemiological studies have documented the household factors associated with childhood lower respiratory tract infections (LRTI), but only very few studies have explored the dose-response relationship between residential microbial diversity and childhood LRTI.

Aims: This study aimed to investigate the association between exposure to diverse indoor fungal aerosols and LRTI among under-five children in Ibadan, Nigeria.

Methods: In-home visits were conducted among 178 under-five children with LRTI matched by age (±3months), sex, and geographical location with 180 community-based under-five children without LRTI in Ibadan, Nigeria. Trained study staff sampled the indoor environment for fungal exposures using active sampling approach. Indoor total fungal count (TFC) was estimated and dichotomized into high (>median) and low (≤median) exposures. Alpha diversity measures including richness (R), Shannon (H), and Simpson (D) indices were also estimated. Conditional logistic regression models were used to test association between exposure to indoor fungal aerosols and LRTI risk among under-five children.

Results: The mean (SD) age of participants was 7.3 (1.35) months with a male preponderance (61.0%). Median TFC was higher in homes of cases (66 cfu/m3) than controls (49cfu/m3). Higher fungal diversities were found in homes of cases (R=2.56; H=0.82; D=2.33) than controls (R=1.89; H=0.55; D=1.88). In the multivariate models, higher categories of exposure to indoor TFC (OR=2.75, 95%CI=1.54–4.89), fungal richness (OR=3.17, 95%CI=1.65–6.07), and fungal diversity (OR=3.00, 95%CI=1.55–5.79) were independently associated with childhood LRTI risk.

Conclusions: Our study suggests an increased risk of LRTI when children under the age of five years are exposed to high levels of indoor fungal aerosols.

AGE AT PRESENTATION FOR BIRTH DOSE VACCINATION IN NORTHERN NIGERIA: IMPLICATION FOR CARE

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Abstract ID: 170 / **Publication ID:** OP027

Topic: AS16 Vaccination: / AS16d Vaccine hesitancy and uptake

Keywords: Birth dose, routine vaccination, timeliness, mother-infant pair, Northern Nigeria

Background: Lack of a timely receipt of vaccines causes challenges such as uncertain immune response and under-vaccination. Hence, timely vaccination is crucial to ensure an infant's early protection.

Aims: To identify the age of presentation for the birth dose vaccination, vaccine antigens received, and determinants of timely presentation for vaccinations in Northern Nigeria.

Methods: A descriptive cross-sectional study involving 1952 mother-infant pairs enrolled from five different states in Northern Nigeria. Data collected include the socio-demographic, antenatal care (ANC) and delivery details, dates of birth, presentation for vaccination, and birth vaccine antigens received. Data analysis was done with SPSS-21.

Results: The median age of the infants at presentation for the birth dose vaccines was six (interquartile range 2-16) days. 413 (21.2%) mother-infant pairs presented on the day of birth (Day 0) or the next day (Day 1), while one-fifth (403, 20.6%) mother-infant pairs came after Day 28. The Bacille-Calmette-Guerin vaccine was most frequently received at 91.2% (1781 infants), oral polio vaccine 1703(87.2%) and hepatitis B vaccine birth dose (HBV-BD) the lowest at 75.1% (1565). The commonest reasons proffered for the delayed presentations were an ill baby (24.7%) and an ill mother, 21.9%. Determinants of presentation within 24 hours post-birth were hospital delivery (OR-1.67, 95% CI; 1.28-2.19), first child (OR-1.4; 95%CI; 1.02-1.93), Christianity (OR-2.141 95%C.I; 1.63-2.81) and mother with tertiary education (OR-1.62, 95%CI; 1.05-2.48).

Conclusions: Timely presentation for birth dose vaccines is low in Northern Nigeria. Furthermore, some babies do not get the required vaccines despite presenting for vaccination. Missed opportunities due to vaccine unavailability is a concern.

VACCINE HESITANCY: PERSPECTIVES OF OLDER WOMEN INFANT CAREGIVERS IN URBAN SLUM COMMUNITIES IN SOUTHWEST NIGERIA

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Abstract ID: 180 / **Publication ID:** OP029

Topic: AS16 Vaccination: / AS16d Vaccine hesitancy and uptake

Keywords: Vaccination uptake, Infant vaccination, vaccine hesitancy, Older women caregivers, Infant caregivers

Background: Vaccine hesitancy contributes significantly to suboptimal vaccination of infants from low wealth quintile families in Nigeria and the different strategies that have been employed to address it are yet to yield satisfactory outcomes. Older women infant caregivers are unrecognized stakeholders in infant care despite their cultural and strategic relevance in infant care. Exploring their views about vaccine hesitancy may offer better understanding of the phenomenon within the local context and guide the design of appropriate interventions.

Aims: To explore the views of older women caregivers regarding vaccine hesitancy and describe their experiences and handling of the same in seven urban slum communities of Ibadan, Nigeria.

Methods: Exploratory qualitative study design was used, and data was obtained using 22 focus group discussions among older women (≥35 years). Data was transcribed, and thematic analysis was used to analyze the data.

Results: The older women described vaccine hesitancy as complete avoidance of vaccine, but many did not view delayed or incomplete infant vaccination as vaccine hesitancy. They had all witnessed or experienced vaccine hesitancy in the past and believed it was due to ignorance, misinformation, and lack of trust in government policies. Vaccine hesitancy have been handled by reporting offending parents to community health committees, threatening and educating such parents by the older women.

Conclusions: Older women infant caregivers studied did not recognize the full spectrum of vaccine hesitancy and were handling it using ineffective means. Training these older women about vaccine hesitancy may improve infant vaccination in Nigerian slum communities.

COMPARISON OF ULTRAVIOLET C LIGHT TO ALCOHOL IN DISINFECTING CELLULAR PHONES TO PREVENT HEALTHCARE ASSOCIATED INFECTION IN AN ICU SETTING

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Abstract ID: 14 / **Publication ID:** OP051

Topic: AS13 Miscellaneous

Keywords: 70% Isopropyl Alcohol, Ultraviolet C light, Cellular Phones, Healthcare Associated Infection, Disinfecting

Background: Cellular phones of healthcare workers are carriers of pathogenic organisms yet are rarely disinfected. These devices may become reservoirs to infect susceptible patients. Isopropyl alcohol-based disinfection of the phone has been advocated, but newer devices using ultraviolet C (UVC) light to disinfect cellular phones are now available. Level one evidence does not exist comparing the efficacy of UVC light with isopropyl alcohol-based swabs disinfection.

Aims: This study aims to compare the efficacy of the UVC light to 70% isopropyl alcohol-based swabs in disinfecting cellular phones.

Methods: A randomised controlled study in a paediatric ICU setting was conducted. Cellular phones of HCW or other personnel entering ICU were swabbed prior to and after decontaminating with either 70% isopropyl alcohol-based swabs or UVC light method. The reduction ratio of colony-forming units (CFU) pre-and post-intervention was analysed using the Mann-Whitney U test. In addition, the effectiveness of the decontaminant method was individually analysed using the Wilcoxon signed-rank paired test.

Results: A total of 74 cellular phones were sampled, 34 in the 70% isopropyl alcohol-based group, 35 in the UVC light group, with five exclusions. Disinfection with 70% isopropyl alcohol-based ($z = 5,16$; $p < 0.000001$) and UVC light ($z = 3,28$; $p < 0.005$) were individually statistically significant in reducing CFU of common skin commensals. When comparing isopropyl alcohol-based to UVC, isopropyl alcohol-based disinfection was superior to the UVC disinfection ($p<0.001$), effect size 0.67.

Conclusions: Disinfecting cellular phones with 70% isopropyl alcohol is superior to using UVC light.

ACUTE RESPIRATORY ILLNESS ADMISSIONS IN SOUTH AFRICAN CHILDREN DURING THE COVID-19 PANDEMIC

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Abstract ID: 157 / **Publication ID:** OP033

Topic: AS17 Viral Infections / AS17i Other virus infections

Keywords: Acute respiratory illness, Children, LMIC, outcome, COVID-19

Background: Distinguishing children with SARS-CoV-2 infection compared to other acute respiratory illnesses (ARIs) would assist treatment and infection control strategies, especially where resources are limited.

Aims: The study aim was to describe the profile and outcomes of SA children with ARI with and without SARS-CoV-2 infection.

Methods: In this cross-sectional study, we evaluated routinely collected clinical data of children 0-13 years presenting with ARIs to Tygerberg Hospital, Cape Town between May 2020- November 2020. SARS-CoV-2 PCR was performed on all admitted children presenting with respiratory symptoms.

Results: Data of 178 children was included. SARS-CoV-2 positive children (40/178, 22.5%) were younger (median 6.7 vs 17 months, p=0.09), had lower weight-for-age Z-score (-0.83 vs -0.54, p=0.02) and were more likely female (55% vs 38%, p<0.01). Underlying comorbidities were similar in both groups. Multivariable logistic regression analysis showed SARS-CoV-2 positive children more frequently presented with fever (OR 3.9, 95CI 1.7-8.8), and were less likely to have cough (OR 0.3 95CI 0.1-0.6). Oxygen supplementation (73% vs 75%, p=0.79) and respiratory support (38% vs 26%, p=0.16) were similar between groups, but SARS-CoV-2 positive children were more likely to require PICU (18% vs 7%, p=0.03) and remain on oxygen (median 6 vs 2 days, p=0.01). Readmission within 3 months for respiratory reason was similar (18% vs 15%, p=0.64).

Conclusions: Clinical presentation between children with and without SARS- CoV-2 was comparable. Children with SARS-CoV-2 infection required longer oxygen supplementation and more PICU admissions. These findings suggest a potentially differential long-term outcome in children with SARS-CoV-2 which requires further investigation.

CHARACTERISTICS OF CHILDREN WITH SEVERE COVID-19 REQUIRING INTENSIVE CARE

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Abstract ID: 169 / **Publication ID:** OP034

Topic: AS17 Viral Infections / AS17i Other virus infections

Keywords: MISC, Children, Intensive care, LMIC, COVID 19

Background: Children and adolescents with SARS-CoV-2 infection (COVID-19) are less likely to have severe pneumonia but may present with multisystem inflammatory syndrome (MIS-C) and both these conditions have low mortality. There are limited data on the characteristics and outcomes of children with severe COVID-19 and MIS-C requiring paediatric intensive care (PICU) from resource-limited settings.

Aims: We aim to describe the indications for admission and the outcomes of patients admitted to PICU at Tygerberg Hospital in Cape Town, South Africa.

Methods: Retrospective review of patients < 13 years admitted to PICU with COVID-19 or MIS-C from 17 April 2020 to 31 August 2021.

Results: Sixty three patients required PICU. Twenty-three (36.5%) had MIS-C, 35 (55.5%) had severe COVID-19 and in five (7.9%) children the COVID-19 was thought to be incidental. Patients with MIS-C were older (median age 84 months, IQR 48.0-108.0) than those admitted with severe COVID 19 (median age 20.5 months, IQR 7.0-57.5). Co-morbid disease was more common in children with severe COVID-19 (18/35, 51.4%), than in children with MIS-C (4/23, 17,4%). No children with MIS-C died, but 10 out of 35 children with severe COVID-19 died (28.6%). Of the children admitted to PICU with severe COVID-19 23/35 (63.8%) required invasive ventilation and 15/35 (35.7%) inotropic support. More children with MISC required inotropic support (15/23, 65%).

Conclusions: This cohort is small, but we are concerned that in this group of children with COVID-19 mortality is high once admission to PICU is required. Children with MIS-C had good outcomes.

HEALTHCARE-ASSOCIATED INFECTIONS AMONGST NEONATES IN NON- TERTIARY HOSPITALS, SOUTH AFRICA

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Abstract ID: 238 / **Publication ID:** OP046

Topic: AS14 Public Health and Epidemiology / AS14 Healthcare-associated infections

Keywords: Mortality, aetiology, neonate, healthcare-associated infection, South Africa

Background: In low- and middle-income countries, infection is a major contributor to neonatal mortality, and aetiological data from non-central hospitals are scarce.

Aims: We conducted enhanced laboratory surveillance for culture-confirmed bloodstream infections and meningitis among neonates aged <28days at six non-tertiary level neonatal units in South Africa.

Methods: From October 2019 through September 2020, clinical data and isolate(s) were collected. Healthcare-associated-infections (HAI) were those diagnosed in a neonate aged ≥3days and hospitalised for ≥48hours prior to specimen collection.

Results: Of 933 episodes of neonatal infection, clinical data were available for 812. Of these 30% (243/812) were early-onset sepsis (EOS: aged <3days), 14% (111/812) were community-associated infections (CAI: aged >3days and hospitalised <48hours) and 56% (n=458/812) were HAI. Day 28 mortality was 21% amongst EOS, 20% amongst CAI and 29% amongst HAI (p=0.01). 259/458 (57%) HAI cases had isolates available for characterisation. Of these, 79% (205) were Gram-negative bacteria (GN), 15% (39) Gram-positive bacteria (GP) and 6% (15) fungal isolates. The top four aetiologies were *Klebsiella pneumoniae* (102, 39%), *Acinetobacter Baumanni* (58, 22%), *Enterobacter cloacae* (19, 7%) and *Staphylococcus aureus* (18, 7%)

Amongst HAIs, 48% (93/195) GN and 65% (24/37) GP were susceptible to at least one first-line antibiotic (ampicillin and gentamicin). Eighty-five percent (162/191) GN and 89% (32/36) of GP were susceptible to at least one second-line antibiotic (piperacillin-tazobactam and amikacin). Fifty percent (98/196) GN and 78% (28/36) GP were susceptible to meropenem.

Conclusions: Neonatal HAI was associated with a high mortality, with high prevalence of GN infections and substantial resistance to WHO-recommended antibiotic therapy.

IMPACT OF LONG-TERM AZITHROMYCIN THERAPY ON CARRIAGE AND ANTIBIOTIC RESISTANCE OF RESPIRATORY BACTERIA AMONG CHILDREN WITH HIV-ASSOCIATED CHRONIC LUNG DISEASE: A RANDOMISED CONTROLLED TRIAL

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Abstract ID: 263 / **Publication ID:** OP060

Topic: AS02 Antimicrobial Agents: Resistance, pharmacology, pharmacogenetics, PK/PD analysis, TDM

Keywords: chronic lung disease, Antibiotic resistance, Azithromycin, HIV, Sub- Saharan Africa

Background: Selection for antibiotic resistance remains a concern with long- term azithromycin (AZM) use in chronic lung diseases (CLD).

Aims: We investigated the impact of 48 weeks of AZM on the carriage and antibiotic resistance of common respiratory bacteria among children with HIV- associated CLD.

Methods: Nasopharyngeal (NP) swabs and sputa were collected at baseline, 48 and 72 weeks from participants with HIV-associated CLD randomised to receive weekly AZM or placebo for 48 weeks and followed post-intervention until 72 weeks. The primary outcomes were prevalence and antibiotic resistance of Streptococcus pneumoniae (SP), Staphylococcus aureus (SA), Haemophilus influenzae (HI), and Moraxella catarrhalis (MC) at these timepoints. Mixed-effects logistic regression and Fisher's exact test were used to compare carriage and resistance respectively.

Results: Of 347 (174 AZM, 173 placebo) participants (median age 15 years [IQR=13–18], females 49%),NP carriage was significantly lower in the AZM (n=159) compared to placebo (n=153) arm for SP (18% vs 41%, p<0.001), HI (7% vs 16%, p=0.01), and MC (4% vs 11%, p=0.02); SP resistance to AZM (62% [18/29] vs 13%[8/63], p<0.0001) or tetracycline (60%[18/29] vs 21%[13/63], p<0.0001) were higher in the AZM arm. Carriage of SA resistant to AZM (91% [31/34] vs 3% [1/31], p<0.0001), tetracycline (35% [12/34] vs 13% [4/31], p= 0.05) and clindamycin (79% [27/34] vs 3% [1/31], p<0.0001) was also significantly higher in the AZM arm and persisted at 72 weeks. Similar findings were observed for sputa.

Conclusions: The risk of drug resistance should be considered during long-term AZM use. The clinical significance of antibiotic resistance needs investigation.

LUNG FUNCTION IS IMPAIRED IN ADOLESCENTS WITH PULMONARY TUBERCULOSIS DURING TB TREATMENT

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Keywords: Paediatrics, Post TB lung disease, Tuberculosis, adolescents, lung health

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Abstract ID: 480 / **Publication ID:** OP004

Topic: AS08 Global Child Health

Background: Despite accumulating data on the nature and burden of post-tuberculosis (TB) lung disease (PTLD) in adults, little is known about PTLD in adolescents.

Aims: To assess lung function in adolescents with pulmonary TB (PTB) during anti-tuberculosis treatment.

Methods: In a prospective cohort study, we enrolled adolescents aged 10-20 years routinely diagnosed with bacteriologically confirmed PTB and healthy TB-exposed adolescent controls, between October 2020 and July 2021 in Cape Town, South Africa. Spirometry, plethysmography and diffusion capacity lung function tests were completed according to ERS/ATS guidelines following 2 months of TB treatment (cases) and in healthy controls. Global initiative reference ranges were used to calculate z-scores.

Results: Eighty-six adolescents were enrolled; 42 (49%) with PTB and 44 (51%) healthy controls. The mean age was 14.9 years (SD 2.7), 6 (5.5%) were living with HIV and 9 (10.5%) had a previous history of TB. Post bronchodilation, spirometry z-scores for Forced Expiratory Volume in 1 second (FEV1), Forced Vital capacity (FVC) and FEV1/FVC were significantly lower in TB cases compared to controls. Plethysmography showed a significantly lower vital capacity in TB cases vs. controls, with slightly lower total lung capacity. Diffusion capacity was similar between TB cases and healthy controls.

Conclusions: The lung function in adolescents with PTB following the intensive phase of TB treatment was significantly impaired compared to that of healthy peers. Further follow-up is important to assess the long-term impact of PTB on lung function in adolescents and to correlate these findings with symptoms, imaging, functional assessments, and disease severity at diagnosis.

LONG-TERM IMPACT OF SARS-COV-2 INFECTION IN CHILDREN PRESENTING TO TYGERBERG HOSPITAL DURING THE COVID-19 PANDEMIC IN CAPE TOWN, SOUTH AFRICA

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Abstract ID: 524 / **Publication ID:** OP005

Topic: AS17 Viral Infections / AS17i Other virus infections

Keywords: Paediatric, antibodies, COVID-19, SARS-CoV-2, Long COVID

Background: Little is known about long-term impact of COVID-19 in children in low- middle income countries.

Aims: To determine long-term consequences in SARS-CoV-2 PCR positive children versus SARS-CoV-2 negative children.

Methods: In this prospective observational cohort study, children aged 0-13 years were recruited from Tygerberg Hospital in Cape Town, South Africa between June 2020 and September 2021, presenting with either 1) an acute respiratory illness, 2) confirmed COVID-19 PCR or 3) a COVID-19 contact. Clinical data and serum samples were obtained at baseline and children were followed 3 months and 1 year later.

Results: A total of 100 children were enrolled, median age 7 months (interquartile range 2.0-31.5 months), 61 (61%) male; 2 (2%) HIV-infected and 25 (25 %) HIV-exposed. A total of 44 (44%) children tested COVID-19 positive on PCR. Underlying comorbidities were seen more frequently in COVID PCR positive cases (40.9%) compared to COVID negative cases (33.9%). One year after initial enrolment 12/41 (29.3%) children had persistent or recurrent symptoms and were more likely to be COVID-19 PCR positive (p=0.01). A total of 40/100 (40%) children were readmitted, with no significant difference between children with or without previous COVID-19 diagnosis. At baseline SARS-CoV-2 antibodies were found in 43/85 (50.6%) and after one-year 31/39 (79.5%) were SARS-CoV-2 antibody positive.

Conclusions: Children who had confirmed SARS-CoV-2 infection were more likely to have symptoms 1 year later. The vast majority of this cohort had evidence of SARS-CoV-2 infection by 1 year after enrolment.

CAMPYLOBACTER INFECTION: A CROSS SECTIONAL COMPARATIVE STUDY AMONG CHILDREN AGED 2 TO 59 MONTHS IN DAR ES SALAAM, TANZANIA

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Abstract ID: 39 / **Publication ID:** OP015

Topic: AS03 Bacterial Infections / AS03e Gastrointestinal tract infections

Keywords: Campylobacter, Campylobacter infection, Campylobacter in children, Campylobacter with diarrhoea, Drinking unboiled water

Background: Campylobacter species have been recognized as the leading cause of bacterial enteritis in both developed and developing countries, and the prevalence of Campylobacter infection in children under five years has been reported to be higher than in adults.

Aims: This study aimed to determine the prevalence and risk factors for Campylobacter infection in children with diarrhoea and those without diarrhoea in Dar es Salaam Tanzania.

Methods: A hospital based cross sectional comparative study was conducted from October 2016 to April 2017. A total of 617 children (312 with diarrhoea and 305 without diarrhoea) at the main hospitals and their respective Reproductive and Child Health (RCH-1) clinics were enrolled. Stool samples were collected and tested for Campylobacter infection, while blood samples were collected and tested for malaria and HIV.

Results: We found no significant difference in the prevalence of Campylobacter infection among children with diarrhoea (16.7%) and those without diarrh0ea (16.4%) (p-value = 0.927). Drinking unboiled water was significantly associated with Campylobacter infection among children with diarrhoea (p-value=0.045), while chicken keeping and HIV infection were significantly associated with Campylobacter infection in children without diarrhoea (p-value=0.025 and 0.001 respectively)

Conclusions: Campylobacter infection is prevalent in both children with and without diarrhoea. Consumption of unboiled water increases the risk of developing diarrhoea in children with Campylobacter infection.

BIODIVERSITY AND DISTRIBUTION OF FLEA (SIPHONAPTERA), RODENT (RODENTIA), AND CROCIDURA (INSECTIVORA) SPECIES ASSOCIATED WITH PLAGUE EPIDEMIOLOGY IN EASTERN ZAMBIA

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Abstract ID: 34 / **Publication ID:** OP053

Topic: AS06 Emerging and Zoonotic Infections

Keywords: Fleas, Biodiversity, Plague, Zoonotic, Rodents

Background: Fleas (Siphonaptera) are important vectors of several animal and human disease pathogens, while rodents are considered as reservoirs of most pathogens, including *Yersinia pestis*. Factors that influence the parasitism rate of fleas, ecological aspects that modulate their distribution, and host-flea relationship in Eastern Zambia remain unknown. Furthermore, there is little information on the biodiversity and abundance of rodents and fleas in the study area.

Aims: The was to determine the close association of fleas, rodents and the plague disease

Methods: The rodents were trapped using the live traps. The captures were taken to the mobile laboratory where fleas, blood and organs were collected. The fleas were also collected from the domestic animals. The fleas were identified, and the sera tested for the IgG antibodies of the F1 antigen of the *Yersinia pestis* using ELISA technique. The Organs and fleas were processed following the protocal. The DNA was extracted using DNA extraction kit. The PCR was run to detect the pla gene of *Yersinia pestis*.

Results: The results showed that 27(8.2%) and 19(5.8%) rodents and 8(7.0%) and 2(1.8%) Crocidura were positive for antibodies and pla gene for *Y. pestis*, respectively. Echidnophaga larina were the most mean abundant (MA=8.58), while Xenopsylla cheopis had the least mean abundant (MA=0.14), nevertheless it was the most infected with *Y. pestis*. Mastomys. natalensis was highest in plague positivity 31/56, followed by Crocidura spp 10/56 and Rattus rattus 6/56.

Conclusions: It has been established that rodents were more biodiversified than fleas while both were unevenly distributed.

ABSTRACTS ACCEPTED FOR E-POSTER PRESENTATIONS

A FIVE- YEAR RETROSPECTIVE STUDY REVEALS MALARIA AS THE MAJOR CAUSE OF CHILD MORTALITY IN REFERRAL HOSPITALS IN FAKO DIVISION, CAMEROON

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Abstract ID:431 / **Publication ID:** EP109

Topic: AS14 Public Health and Epidemiology/ AS14c Healthcare-associated infections

Keywords: child mortality rate, case fatality rate, proportionate mortality, Fako division, Cameroon

Background: Child mortality (CM), which refers to the death of children less than five years of age can be used as an indicator of health status and the availability and effectiveness of health services in a country.

Aims: It is therefore important to determine the rate and causes of CM as a mechanism to evaluate the availability and effectiveness of our health system.
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Methods: A retrospective cross-sectional study design, which involved review of records of children (1-59 months) from January 2012 to December 2016 in referral hospitals in Fako Division. Association between rates, causes of child mortality and the independent variables were assessed by cross tabulations and the strength of the association was ascertained using the Crammer's V test.

Results: Child mortality rate in the referral hospitals in Fako Division was 26 deaths per 1000 live births. Over this five-year period, the child mortality rate was highest in the Buea Regional Hospital (29 deaths per 1000 live births). The child mortality rate in the Limbe Regional Hospital was 25 deaths per 1000 live births and the CDC Cottage hospital Tiko was 24 deaths per 1000 live births, the difference was not statistically significant. From this study, the major causes of child mortality include malaria (73; 39.9%), pneumonia (27; 14.8%), and malnutrition (19; 10.4%). The case fatality rates for the major causes of mortality were pneumonia (27; 8.2%), malaria (73; 1.6%) and malnutrition (19; 6.4%).

Conclusions: Malaria is a major cause of CM in referral hospitals in Fako Division amongst other preventable diseases.

BREASTFEEDING AND EMPLOYED MOTHERS IN ETHIOPIA: LEGAL PROTECTION, ARRANGEMENT, AND SUPPORT

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Abstract ID: 197 / **Publication ID:** EP105

Topic: AS14 Public Health and Epidemiology / AS14c Healthcare-associated infections

Keywords: Employed mothers, Law, Ethiopia, Commentary, Breastfeeding

Background: Breastfeeding is the single, most cost-effective intervention to reduce worldwide child mortality. Women empowerment interventions have positive impacts on child and maternal nutritional, and health status. However, consistent evidence indicated that maternal employment is often negatively associated with optimal breastfeeding in Ethiopia. The existence and enforcement of breastfeeding law, arrangement, and support in the workplace have vital roles in protecting employed mothers' ability and right to breastfeed upon return to work from maternity leave.

Aims: To assess the breastfeeding laws, policies, and arrangements in Ethiopia

Methods: This commentary compared the breastfeeding laws, policies, and arrangements in Ethiopia with international standards, recommendations, and evidence-based practices

Results: Public legislations of Ethiopia poorly protect the breastfeeding right of most new mothers. Ethiopian revised Labour Proclamation (No.1156/2019) incorporates most of the International Labour Organization maternity protection recommendations. However, it poorly safeguards breastfeeding rights and abilities of employed women. So far, there are no notable workplace breastfeeding arrangements and support for employed mothers by employers and other initiatives. The ILO recommendation and experience of other middle income and low-income countries can be legal and practical grounds for the establishment of breastfeeding-friendly workplaces in Ethiopia.

Conclusions: The lack of workplace breastfeeding laws, arrangements, and supports in Ethiopia limits mothers' right to practice optimal breastfeeding. Policymakers, the government, and all concerned bodies should give due attention to enacting and enforcing sound laws and arrangements that will enable employed mothers to practice optimal breastfeeding upon return to work.

CLINICAL SYMPTOMS OF ASYMPTOMATIC STRONGYLOIDIASIS AMONG SCHOOLCHILDREN IN NORTHWEST ETHIOPIA

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Abstract ID: 509 / **Publication ID:** EP061

Topic: AS04 Common and neglected tropical Infections and parasitic infections

Keywords: Skin rash, Strongyloidiasis, Urticaria, Asymptomatic, Abdominal Pain

Background: *Strongyloides stercoralis* infection is one of the most frequently encountered parasitic infections in the tropics and sub-tropics. Strongyloidiasis is a common infection among children since they frequently play with contaminated soil. Although its infection is devastating, it is under-reported in endemic countries.

Aims: This study aimed to study the prevalence of strongyloidiasis and associated clinical symptoms among schoolchildren.

Methods: A cross-sectional study was conducted among 844 schoolchildren in Amhara Region from April to December 2019. A stool sample was collected from each study participant and processed using formol ether concentration technique (FECT), spontaneous tube sedimentation technique (STST), Baermann concentration technique (BCT), agar plate culture (APC) and real-time polymerase chain reaction (RT-PCR). Prevalence of *S. stercoralis* infection was determined using descriptive statistics. Association of clinical variables with *S. stercoralis* infection was assessed by logistic regressions and variables with $p<0.05$ were considered statistically significant.

Results: The total prevalence of *S. stercoralis* infections was 39.0%. The highest prevalence, 45.0% of S. stercoralis was recorded in boys. Among the clinical symptoms, having abdominal pain (AOR=2.48; 95% CI:1.65-3.72), cough (AOR=1.63; 95%CI:1.09-2.42), skin rash (AOR=2.49; 95%CI:1.50-4.01) and being malnourished (AOR=1.44; 95%:1.10-2.01) were significantly associated with strongyloidiasis.

Conclusions: Prevalence of *S. stercoralis* infection was high among schoolchildren in Amhara Region. Clinical syndromes that included abdominal pain, cough, skin rash and malnourishment were significantly associated with strongyloidiasis. Therefore, deworming programs using ivermectin should be implemented in Amhara Region.

CLINICAL FEATURES OF CHILDREN WITH CORONAVIRUS DISEASE-2019 AT A SINGLE ISOLATION CENTRE IN GHANA

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Abstract ID: 133 / **Publication ID:** EP149

Topic: AS17 Viral Infections: / AS17h Influenza infection and respiratory virus infections

Keywords: Isolation centre, Ghana, Asymptomatic COVID-19, Mild COVID-19, Children

Background: Children with Coronavirus disease- 2019 (COVID-19) who do not require hospitalisation must isolate to prevent the virus spreading.

Aims: To describe the prevalence, characteristics and treatment outcomes among children with asymptomatic and mild COVID-19 admitted to an isolation centre in Ghana.

Methods: A retrospective descriptive study was conducted among children 0-18 years, admitted to Ghana's largest isolation centre, over a 3-month period. Their clinical details and patient outcome information was extracted from their medical records.

Results: Fifty-seven children were enrolled, 15(26.3%) males and 42(73.7%) females. There were 50.9% children who were asymptomatic. The median age for participants with asymptomatic infection was 16 years (IQR 14-16) and 17 years (IQR 11-16) for those with mild disease. There was no known exposure to COVID-19 in 41.4% participants with asymptomatic infection and 32.1% with mild disease. The most common symptom was headache 50.0%, followed by cough 35.7%. The mean lymphocyte count was normal, 2.9x109L (SD 1.7). Majority, 89.5%, were treated with azithromycin. Of those who knew their infection source, 61.2% thought it was from a school colleague. Only one patient required transfer to a hospital.

Conclusions: The use of repurposed isolation centres can reduce hospital care load during this pandemic. As schools re-open fully, school authorities must collaborate closely with public health institutions for rapid testing of suspected cases of COVID-19 to initiate early contact tracing and isolate those who are positive. Routine use of azithromycin or other antibiotics for COVID-19 must be discouraged

ANTIMICROBIAL STEWARDSHIP AND ANTIBIOTIC PRESCRIBING PRACTICES AMONG A POTENTIAL AUDIENCE OF A GLOBAL E-LEARNING PORTAL ON PEDIATRIC INFECTIOUS DISEASES

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Abstract ID: 247 / **Publication ID:** EP003

Topic: AS01 Antibiotic Stewardship and Infection Control

Keywords: Antimicrobial stewardship, antibiotics, online training, infection prevention and control, E-learning Portal

Background: Antimicrobial resistance (AMR) is a global concern, and the World Society for Pediatric Infectious Diseases (WSPID) promotes antimicrobial stewardship (AMS) through online education on the WSPID Global E-learning Portal.

Aims: To assess the background of a potential learning audience, their common antibiotic prescribing practices and AMS practices and attitude

Methods: An anonymous survey was conducted online among the Young WSPID Online Portal Antimicrobial Stewardship Task Force members and their professional networks

Results: Nineteen pediatric infectious diseases specialists from 15 countries were interviewed. The mean age of the

responders was 38.9 years (68.4% were under 40 years). All continents were represented except Australia; 21.1% of respondents resided in lower-middle-income countries. Hospital-based healthcare professionals were the majority (89.4%). National pediatric AMS programs were established in 53.9% of the represented countries. Only 42.1% of the participants admitted having a pediatric AMS service at work, and 36.8% had AMS training during residency. Most of the participants were interested in additional online AMS training. Crucial AMS interventions to be established at any pediatric service were listed as: organizational measures (AMS teams) - 57.9%, surveillance - 52.6%, implementation of internal guidelines- 42.1%, education - 36.8% and infection control - 31.6%. Pneumonia was the most common indication for antibiotic prescription (63.2%), followed by urinary tract infections and sepsis. Intravenous cephalosporins were the most prescribed antibiotics.

Conclusions: Online education on AMS is required and this survey data will be considered when developing educational materials for the WSPID Global E-learning Portal.

EVALUATION OF *MYCOPLASMA PNEUMONIAE* AND *CHLAMYDIA PNEUMONIAE* INFECTIONS IN MOROCCAN CHILDHOOD COMMUNITY ACQUIRED PNEUMONIA AND ASSESSMENT OF THE ASSOCIATED RISK FACTORS

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Abstract ID: 156 / **Publication ID:** EP021

Topic: AS03 Bacterial Infections: / AS03d Community-acquired bacterial infections (respiratory)

Keywords: *Mycoplasma pneumoniae*, *Chlamydia pneumoniae*, Moroccan Children, Pneumonia, community acquired pneumonia

Background: Pneumonia remains the leading cause of infection related morbidity and mortality especially among children less than five years.

Aims: In Morocco, data regarding atypical pathogens involved in child's pneumonia are scarce. Our purpose is to explore the role of *Mycoplasma pneumoniae* and *Chlamydia pneumoniae* in childhood Community-Acquired Pneumonia in Morocco and risk factors associated.

Methods: Children less than 15 years with confirmed pneumonia were enrolled. After informed consent obtaining from parents or guardians, clinical information was recorded, and nasopharyngeal samples were collected to investigate the presence *of Mycoplasma pneumoniae* and *Chlamydia pneumoniae* using polymerase chain reaction.

Results: Since 2019, 111 patients were recruited; 88.3%were less than 5 years and 57.7% are male gender. Most 97.3% have intermediate economic status, 27.9% have had mixed feeding, and 61.3% were living with fraternity Clinical results revealed 4.5% had cyanosis and 85.6% had high fever. Tachypnea and dyspnea were diagnosed in 13.5% and 57.7% respectively, 80.2% had severe respiratory distress and 81.1% had superficial breathing. 89.2% are exposed to air pollution, 10.8% were exposed to humidity and 9% have contact with domestic animals. *Chlamydia pneumoniae* was detected in 11.4% and none tested positive for *Mycoplasma pneumoniae*. Tachypnea and dyspnea were diagnosed in 80% and factors significantly associated with *Chlamydia pneumoniae* infection were spring season and cough (P=0, P=0.032) respectively.

Conclusions: Only *Chlamydia pneumoniae* was detected, further associations can be explored with the increase of sample size and can provide more information about pneumonia in Moroccan children.

ACUTE KIDNEY INJURY (AKI) REQUIRING RENAL REPLACEMENT THERAPY (RRT) IN PICU

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Abstract ID: 276 / **Publication ID:** EP082

Topic: AS08 Global Child Health

Keywords: Sepsis, hemolytic uremic syndrome, AKI, RRT, Peritoneal dialysis

Background: Acute kidney injury (AKI) is a common complication in PICU. Hemolytic Uremic Syndrome (HUS) is the main etiology in our context. Peritoneal dialysis is the most commonly used technique in low-middle income countries.

Aims: To describe pediatric population with AKI requiring RRT in a low-middle income PICU.

Methods: We describe children admitted to PICU for AKI requiring RRT.

Results: Ten patients were admitted. The mean age was 4 years (3 months - 11 years). AKI was secondary to HUS in 6 cases (60%), Sepsis related AKI was noted in 2 cases (20%) and hypertensive encephalopathy in 2 cases (20%). On admission, neurological distress (seizures, coma) was noted in 6 cases (60%), respiratory distress in 3 cases (30%), diarrhea and vomiting in 7 cases (70%). On RRT initiation, mean serum creatinine was 55,1mg/l (24,5-81), mean urea level was 1,96g/l (0,74 – 2,72), mean potassium level was 5,5 mEq/l (3,60-7,4), mean hemoglobin level was 7,45g/l (4,60-11), mean platelets level was 170000 E/mm3 (31000-535000). Decision to initiate dialysis was made due to anuria in 4 cases, fluid overload in 4 cases, hyperkalaemia in 4 cases and Hypertension with neurological distress and uncontrolled seizures in 3 cases. Peritoneal dialysis was initiated in all children. Catheter dysfunction was reported in 2 cases (20%) that were switched to intermittent hemodialysis. Mean PICU stay was 7 days, overall mortality was 40% (4 cases).

Conclusions: AKI is mainly due to HUS and Sepsis. Peritoneal dialysis is a safe and efficient technique in children. Nevertheless, second line therapies such as hemodialysis and hemodiafiltration must be developed in low middle income PICUs.

LATE ONSET GROUP B STREPTOCOCCUS MULTIFOCAL ARTHRITIS WITH PULMONARY INVOLVEMENT

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Abstract ID: 517 / **Publication ID:** EP037

Topic: AS03 Bacterial Infections / AS03g Neonatal infections

Keywords: Pneumonia, PICU, Group B Streptococcus, Late-onset neonatal infection, arthritis

Background: Group B Streptococcus (GBS) is one of the leading causes of invasive neonatal infections. Maternal colonization and therefore vertical transmission to the neonate is the most identified risk factor.

Aims: Raise awareness about the importance of early recognition and adequate treatment of GBS infections.

Methods: We report a case of a neonate admitted to PICU for respiratory distress after joint lavage and drainage of multifocal arthritis.

Results: A 20-days-old male neonate, born full term after home delivery, was admitted to the orthopedic ward for movement asymmetry. Physical examination revealed impotence of the left upper and the right lower limbs with painful mobilization. The ultrasound revealed an arthritis of the right hip with dislocation and of the left shoulder. Arthrotomy with lavage and drainage of the pus of both articulations was performed. Postoperatively, he presented with a respiratory distress motivating transfer to the PICU. On admission, he was febrile (39°C), pulse oximetry was 85%, heart rate was 180 bpm, Blood pressure was 65/40mmHg. Chest auscultation revealed crackles on the right hemithorax. Chest X-Ray revealed pneumonia on the upper right lobe. Biological assessment showed elevated C reactive protein (218.6mg/l), leukocytosis (13740/mm^3). Synovial fluid culture isolated a Group B streptococcus. Blood culture was negative. Management consisted of oxygen-therapy, bi-antibiotic therapy and respiratory kinesitherapy. A good clinico-biological improvement was noted. He was transferred to the surgical ward on Day 5.

Conclusions: Multifocal arthritis and pneumonia are two manifestations of blood stream infection due to GBS. Screening of maternal carriage and antibiotic prophylaxis may reduce the incidence of these serious infections.

INTRAVENOUS IMMUNOGLOBULINS IN PICU

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Abstract ID: 522 / **Publication ID:** EP088

Topic: AS09 Host-Pathogen Interactions

Keywords: Guillain Barré syndrome, Myasthenia, Immunomodulatory therapy, Acute disseminated encephalomyelitis, IVIG

Background: Intravenous immunoglobulins (IVIG) have seen their indications increased recently. Their efficiency has been demonstrated in many autoimmune and inflammatory diseases.

Aims: To describe IVIG indications, prescription modalities and side effects in pediatric patients admitted in our PICU.

Methods: We performed a retrospective descriptive study including all pediatric patients who received IVIG in our unit. The study was conducted over a period of 3 years (2019 - 2021). We studied the following elements of the records: age, gender, medical history, indications, paraclinical findings (Biology, ENMG, Radiology), side effects and outcome.

Results: We identified 17 patients who were hospitalized in the pediatric intensive care unit and had received IVIG. Mean age was 8 years (4months-14 years). Gender ratio was 1.42. There was no significant medical history in all cases. Clinical symptoms presented were respiratory distress (8 cases) and neurological dysfunction (4 cases). Indications for IVIG were the following: Guillain Barré syndrome (7 cases), post-infectious encephalitis(4 cases), Pediatric multisystemic syndrome related to SARS-COV-2 (2 cases), Myasthenia (1 case), Acute disseminated encephalomyelitis(2 cases), Botulism (1 case). The two prescription modalities of IVIG are shown as follows: (0.4 g/kg) for 5 days in 14 cases, and (1 g/kg) for 2 days in 3 cases. No side effects requiring discontinuation of IVIG infusion were reported in our case series. The outcome was favourable in 9 cases. Mortality occurred in 8 cases.

Conclusions: IVIG are used in variant clinical situations whether as a substitutive therapy in primary immune deficiencies or as immunomodulatory therapy in autoimmune diseases. IVIG administration is usually well tolerated. Protocols for prescription modalities and actualised indications are necessary.

COVID-19 OUTBREAK AND CONTAINMENT AMONG HEALTHCARE WORKERS IN A TERTIARY HOSPITAL IN NIGERIA

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Abstract ID: 255 / **Publication ID:** EP096

Topic: AS11 Infectious Diseases in Natural and Social Disaster situations

Keywords: COVID-19, Outbreak, Containment, Hospital contacts

Background: Globally, health services have been strained due to the crippling effect of coronavirus disease 2019 (COVID-19) pandemic and outbreaks among healthcare workers (HCWs). This study describes COVID-19 outbreak and containment among HCWs in a Paediatric unit in a tertiary hospital.

Aims: To describe the pattern, risk factors and outcome of COVID-19 infection among HCWs in the Paediatric unit of the University College Hospital, Ibadan, Nigeria.

Methods: This was a retrospective review of outbreak containment effort among HCWs during the second wave of the COVID-19 pandemic between December 2020 and January 2021. Demographic, exposure, clinical and laboratory details and outcomes were recorded

Results: A total of 110 HCWs were included, 53 (48.2%) HCWs were symptomatic, most had body ache (51.9%) and fatigue (51.9%). A nasopharyngeal swab PCR test for SARS-Cov2 was done by 107 HCWs, 52 (47.3%) were positive, and of these, 32 (61.5%) had contact with a confirmed case. Of the positive cases, 37 (70%) were symptomatic, and 15/57 (23.3%) were asymptomatic. Most cases occurred among house physicians and staff in the newborn unit. Majority (61.5%) of positive cases had mild illness and no HCW was hospitalised.

Conclusions: This study highlights the risk encountered by HCWs and the importance of timely COVID-19 outbreak response in healthcare settings.

PHENOTYPIC IDENTIFICATION OF CANDIDA STRAINS FROM BLOOD STREAM INFECTION FROM FEBRILE CHILDREN IN FEDERAL CAPITAL TERRITORY NIGERIA

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Abstract ID: 298 / **Publication ID:** EP071

Topic: AS07 Fungal Infections

Keywords: Bloodstream Infection, neonates, candida species, febrile children less than 5 years, Candidemia

Background: Candidemia is an important cause of bloodstream infection and is often associated with high mortality and morbidity in health care settings.

Aim: The aim of this study was to identify the Candida species isolated from bloodstream infection from children in tertiary and secondary hospitals in Federal Capital Territory (FCT) Nigeria.

Methods: Blood culture samples were collected from febrile children less than 5 years, presenting at health facilities in the FCT from January 2010 to July 2016. Blood cultures were incubated using BacT/ALERT and positive cultures were plated on MacConkey, chocolate and blood agar plates. Gram-stained cultures showing yeasts were identified to species level using Phoenix M50

Results: Candida strains were isolated from 64 children, of which the majority were neonates (41/64) and half were females (32/64). The most common Candida species identified were *C. guilliermondii* (13; 20.3%), *C. parasilopsis* complex (11; 17.2%) and *C. albicans* (9; 14.1%). Other species identified include *C. pelliculosa* (8; 12.5%), *C. tropicalis* (8; 12.5%), *C. melibiosica* (3; 4.7%), *Cryptococcus neoformans* (2; 3.1%) and (1; 1.5%) each of *C. firmentaria*, *C. pulcherima, C. utilis*, *Rhodotorula mucillaginosa*, *Geotrichum* species, *Trichosporon inkin* and *Trichosporon asahii* respectively. Three (4.7%) of the candida species were unidentified.

Conclusions: Among febrile children in this study, non-albicans candidemia may be more prevalent.

THE CONTRIBUTION OF INFECTIONS TO NEONATAL DEATHS IN A PEDIATRIC SURGERY UNIT

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Abstract ID: 208 / **Publication ID:** EP079

Topic: AS08 Global Child Health

Keywords: Neonatal deaths, Sepsis, neonates, Pediatric surgery, infections

Background: Infections leading to sepsis are responsible for about one-fifth of the world's annual 2.7 million neonatal deaths. Most of these deaths occur in low/middle income countries (LMICs) and are preventable. In South Asia and sub-Saharan Africa, it's about 25% of all neonatal deaths. Neonatal sepsis poses a massive public health for sub-Saharan Africa.

Aims: to determine the contribution of infections to neonatal deaths in a pediatric surgery unit of a referral hospital in a sub-Saharan country.

Methods: We reviewed retrospectively registration book records, patients files and department's database. All neonatal deaths registered between 2017 and 2019 were included in this study.

Results: There were 109 neonatal deaths in our Pediatric surgery unit between 2017 and 2020. This represents 36.1% of deaths in neonates. More than half (56.8%) of the neonates were male and 74 (64.2%) were in the age group 0–7 days (early neonatal period) and the rest 39 (35.8%) were from 8 to 28 days (late neonatal period). Infections were by far the most common cause of death (80.7%). Sepsis represented two-thirds of clinical presentations followed by respiratory infections. Infections occurred in preoperative time in 56% and postoperatively in 44%.

Conclusions: infections are the major cause of neonatal mortality in our African context, which does not regress over years. More studies should be done to identify risk factors of these infections.

CURRENT MICROBIAL TRENDS BASED ON POSITIVE BLOOD CULTURES IN A NEONATAL AND PAEDIATRIC COHORT IN THE EASTERN CAPE

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Abstract ID: 44 / **Publication ID:** EP007

Topic: AS01 Antibiotic Stewardship and Infection Control

Keywords: Blood Cultures, Contamination, Bloodstream Infection, Lower Middle-Income Country, Neonatal and Paediatric

Background: Bloodstream infections in children are the leading cause of morbidity and mortality globally. Despite recent studies describing the epidemiology of BSIs in South African children, there remains inadequate data from the Eastern Cape Province.

Aims: To describe the epidemiology of bloodstream infections in the neonatal and paediatric units of Frere hospital.

Methods: A retrospective, cross-sectional study of all culture confirmed BSI's, in admitted paediatric and neonatal patients, from the 1 January 2014 until 31 December 2018, was done at a tertiary level care hospital in the Eastern Cape, South Africa. The National Health Laboratory Services Central Data Warehouse identified children hospitalised at Frere hospital with positive blood culture specimens. The respective pathogen profiles and antimicrobial sensitivities were analysed.

Results: From a total of 5757 blood cultures over five years, 843 bacterial and fungal episodes were identified, equating to a blood culture positivity rate of 14.6%. Of the positive blood cultures,12.2% contained contaminants, with coagulase negative staphylococcus being the predominant isolate (98.7%; 699/708). The proportion of contaminated specimens was significantly higher in neonates ($p < .001$, 17.4% (263/1512) vs 10.9%, (445/4065); RR 1.50, 95% CI 1.30 – 1.73). Gram negative organisms predominated compared to gram positive organisms (54.6% vs 41.5%). *Klebsiella pneumoniae*, *Escherichia coli*, *Acinetobacter baumanii* and *Staphylococcus aureus* were the most prevalent organisms in both cohorts. There was a high incidence of extended-spectrum beta-lactamase (ESBL)-producing *K. pneumoniae* (183/199; 92%) and multidrug-resistant (MDR) *A. baumanii* in our population.

Conclusions: This study highlighted high contamination rates of blood cultures and increased antimicrobial resistance of gram-negative organisms. Blood culture sampling techniques and infection control measures will need to be strengthened.

PEDIATRIC TUBERCULOUS MENINGITIS: ROUTINE SURVEILLANCE DATA FROM SOUTH AFRICA

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Abstract ID: 184 / **Publication ID:** EP031

Topic: AS03 Bacterial Infections: / AS03f Meningitis

Keywords: tuberculous meningitis, Children and adolescents, surveillance, HIV, outcomes

Background: Tuberculous meningitis (TBM) is a serious form of childhood tuberculosis (TB) associated with substantial mortality and morbidity. Globally, surveillance data for TBM is poor. Current reporting indicators do not distinguish TBM from other forms of TB and hospitals frequently do not report TB data, resulting in under-reporting of TBM.

Aims: To characterize the burden and outcomes of pediatric TBM in South Africa using routine surveillance data.

Methods: All children and adolescents (<20 years) recorded with TBM in the South African national drug-susceptible electronic TB treatment register during 2013-2016 were included. Descriptive analyses included age, gender, HIV status and treatment outcomes.

Results: Of 176,936 children and adolescents reported with TB during 2013- 2016, 1,668 (0.9%) had an ICD-10 diagnosis code of TBM (0-4 years: 560 [33.6%], 5-9 years: 299 [17.9%], 10-14 years: 265 [15.9%] and 15-19 years: 544 [32.6%]). The HIV prevalence was lowest amongst <5-year-old children (110, 19.6%) and highest amongst 15–19-year-olds (266, 48.9%). TBM staging was not available. Favourable treatment outcomes (treatment success/cure) were reported in 1,183 (70.9%). Amongst children with known vitality status (1,290; 77.3%), mortality was highest amongst children <2 years (28/244, 11.5%) and HIV+ children (54/463; 11.7%).

Conclusions: Despite effective preventive strategies including neonatal BCG and TB preventive therapy, the burden of TBM and HIV-associated TBM in children and adolescents in South Africa is substantial with high mortality. These data underestimate true TBM numbers and deaths due to incomplete hospital reporting and undiagnosed TBM-related deaths. Improved prevention and surveillance of TBM is critical.

TREATMENT RESPONSE IN PAEDIATRIC PULMONARY TUBERCULOSIS – A PROSPECTIVE LONGITUDINAL STUDY

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Abstract ID: 457 / **Publication ID:** EP101

Topic: AS13 Miscellaneous

Keywords: Child, pulmonary tuberculosis, Treatment response, symptoms, clinical resolution

Background: Data are limited on the resolution of symptoms and signs in children treated for pulmonary tuberculosis (PTB) and whether this differs from other lower respiratory tract infections (LRTI).

Aims: To longitudinally investigate treatment responses in children with PTB, compare to those with other LRTI, and identify factors associated with persistent symptoms or signs.

Methods: Children aged ≤15 with features suggestive of PTB were categorized into 3 groups, confirmed PTB, unconfirmed PTB and unlikely PTB. At enrolment and follow up (1, 3 and 6 months) symptoms and signs of PTB were recorded using a standardized questionnaire. Univariable and multivariable logistic regression modelling was done to investigate predictors of persistence of symptoms or signs.

Results: Amongst 2019 participants, there were 427 (21%) confirmed, 810 (40%) unconfirmed and 782 (39%) with unlikely PTB. Of 1693/2008 (84.3%) with cough and 1157/1997 (57.9%) with loss of appetite at baseline, persistence at 3 months was reported in 24/1222 (2.0%) and 23/886 (2.6%) respectively. Of 934/1884 (49.6%) with tachypnoea and 947/1999 (47.4%) with abnormal auscultatory findings at baseline, persistence at 3 months occurred in 410/723 (56.7%) and 216/778 (27.8%) respectively. HIV infection and abnormal baseline chest radiography were associated with persistence of symptoms or signs at month 3 [aOR 1.6 (95%CI: 1.1, 2.3) and aOR 2.3 (95%CI: 1.5, 3.3) respectively]. Resolution of symptoms and signs was similar across groups.

Conclusions: Symptoms resolved rapidly in most children with PTB, but signs resolved more slowly. The timing and pattern of resolution of symptoms and signs was similar in PTB compared to other LRTI

IMPACT OF COVID-19 ON HEALTH OUTCOMES OF CHILDREN ON ANTIRETROVIRAL THERAPY IN CAPE TOWN, SOUTH AFRICA

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Abstract ID: 512 / **Publication ID:** EP148

Topic: AS17 Viral Infections: / AS17g HIV infection

Keywords: viral load, BMI, HIV, COVID-19, Lockdown

Background: Data on COVID-19 related disruption of care and impact on health outcomes of children and adolescents living with HIV (CALHIV) is limited. In South Africa, a nationwide shelter-in-place order, was in place from 27th March to 31 May 2020, followed by varying levels of restrictions that are still ongoing.

Aims: We aimed to assess the impact of these restrictions on health outcomes of CALHIV attending clinic at Tygerberg Hospital in Cape Town.

Methods: We conducted a retrospective descriptive analysis of CALHIV younger than 20 years. Pre- lockdown visit (V1) was defined as the visit within 6 months prior to 27 March 2021 and V2 as after 31 May 2020 but before and closest to 30 June 2021.We collected data on antiretroviral regimens, missed visits, body mass index (BMI) and viral load (VL). Viral suppression (VS) was defined as < 50 copies/ml. Analysis was performed in STATA 13.1. Ethical approval was granted by Stellenbosch University.

Results: Of 213 CALHIV attending clinic prior to lockdown, 9(4.2%) were lost to care and 18/204 (8%) were more than 1 month late. 102/204 (50%) were female, median age at V1 was 10.5 (7.1-13.3) years. Median time between V1 and V2 was 1.15 (IQR:1.05-1.25) years. 164/204 (80.4%) had VS at V1 with 23/164 (14%) developing detectable VLs during the study period. BMI at V1 was similar to V2, -0.31 (IQR: -1.1- 0.5) vs -0.2 (IQR: -0.9 - 0.46). Of 126 CALHIV eligible to switch to dolutegravir, 69 (54.76%) switched.

Conclusions: Lockdown restrictions did not affect viral suppression or BMI

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The AfSPID Bulletin is the official publication of the African Society for Paediatric Infectious Diseases. It was launched as an online newsletter in April 2013. In April 2022 it became a peer-review journal. It publishes educational and research articles on all aspects of infectious diseases in neonates, children, and adolescents. The journal publishes a wide variety of manuscripts including commentaries, reviews, research manuscripts, case reports, medical images, conference reports and editorials.

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