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Résumés des communications – Presentation abstracts

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MEDECINS SANS FRONTIERES

Sesion: Cancer

Moderators: Pauline Byakika-Kibwika, MUST & Claire Rieux, MSF France

- Huiwu Chen & Isabel Amoros Quiles
- David Goore & Hélène Marjiron
- Barnabas Atwiine

Implementing HPV screening in a high burden of cervical cancer setting - MSF experience of PAVE in Malawi

Huiwu Chen, Epicentre, France; Isabel Amoros Quiles, MSF France

Background

Cervical cancer remains a leading cause of cancer-related mortality among Malawian women. Despite national efforts, incidence and mortality rates are still among the world's highest. Since 2017, Doctors without Borders (MSF) has partnered with Malawi's Ministry of Health to implement a comprehensive cervical cancer program. Recent integration of HPV testing, thermal ablation, and decentralized care aims to improve screening, precancer treatment coverage and reduce preventable deaths.

Methods

As part of the multi-country PAVE study led by the U.S. National Cancer Institute, we conducted a preliminary sub-analysis embedded within MSF's ongoing comprehensive cervical cancer program in Blantyre and Chiradzulu Health Districts, Malawi. Among HPV-positive women aged 25–49, we assessed the clinical accuracy of different triage strategies: Visual Inspection with acetic acid (VIA), HPV16/18/45 genotyping, and the combined approach (HPV16/18/45 plus VIA), using histologically confirmed and externally reviewed CIN2+ as the reference standard. Stratified analyses were performed among women living with HIV (WLWH).

Results

Self-sampled HPV test was done to 6,076 women, 43.3% of the recruited have known HIV infection. The overall prevalence of HPV infection was 40.7%, slightly higher among WLWH (52.5%). 788 pathology diagnosis were confirmed by external review. Of the CIN2+ cases (N=116), 49.1% were HPV16/18/45-positive, else 35.3% were HPV31/33/35/52/58-positive. The sensitivity of the triage methods to detect histologically confirmed CIN2+ was 21.5% for VIA, 53.5% for HPV16/18/45 genotyping, and 60.5% for the combined approach. No significant difference in triage sensitivity was seen by HIV status.

Conclusion

HPV16/18/45 genotyping, alone and in combination with visual evaluation, showed improved detection of precancer among HPV-positives as compared to VIA alone. Better risk stratification is expected when using extended genotyping (including HPV31/33/35/52/58) and/or AI-assisted visual evaluation. This preliminary finding urges the adaptation of WHO and national recommendations to the unique context of High HPV and HIV prevalence, and HPV genotype distribution.

HPV genotyping improves precancer lesion detection. Enhanced triage strategies are expected to answer the need for context-appropriate cervical cancer screening guidelines in such high-burden settings.

Survival of patients with cervical or breast cancer followed up from 2019 to 2024 in three university hospital centers (CHU) in Bamako, Mali

David Goore, Epicentre, France; Hélène Marjiron, MSF France

Background

Cervical (UCC) and breast cancers are the main cancers in terms of incidence and mortality in Mali. Since 2018, Doctors Without Borders has been supporting the Malian Ministry of Health in its fight against these cancers. Five years after the launch of the “Oncology Project”, a study was conducted to assess the overall survival and factors associated with mortality of women followed up under this partnership.

Methods

We conducted a retrospective observational study using medical records of patients diagnosed with UCC or breast cancer in Bamako between 2019 and 2022. Overall survival at 1, 2 and 3 years was estimated using the Kaplan-Meier method, and factors associated with mortality were determined using the cox model and restricted mean survival time.

Results

75.2% of 341 UCC patients and 77.1% of 623 breast cancer patients were diagnosed with advanced disease. Overall survival at 1, 2 and 3 years was 88%, 70% and 55% for women with UCC and 91%, 80% and 72% for women with breast cancer.

The risk of death was influenced by stage at early diagnosis (aHR: 0.47 for UCC and 0.57 for breast cancer). Survival of patients diagnosed at an advanced stage was significantly better when multimodal treatment (chemotherapy +/- surgery +/- radiotherapy) was performed.

Conclusion

This study reports some of the highest 3-year survival rates in resource-limited countries and highlights the importance of early detection and multidisciplinary management.

This retrospective study in Mali assessed 3-year survival and mortality in cervical and breast cancer, showing high survival rates achievable through early and appropriate management.

The challenge of delayed and missed cancer diagnosis in children at Mbarara Regional Referral Hospital (MRRH)

Barnabas Atwiine, Mbarara Regional Hospital-MUST, Uganda

Background

Childhood cancer in low- and middle-income countries faces challenges such as late diagnosis and poor treatment outcomes. To guide future research on barriers to early diagnosis, we described a cohort of patients admitted to the only Pediatric Cancer Unit (PCU) of the Mbarara Regional Referral Hospital (MRRH) in Western Uganda.

Methods

This was a retrospective cohort of children <18 years diagnosed with cancer at the PCU of the MRRH, which admits an average of 110 children newly diagnosed with cancer per year. Demographic, clinical, and outcome data of children admitted between 2022 and 2024 were collected from the children's medical files. Descriptive statistics and Kaplan-Meier survival curves were computed. A waiver of ethical approval was obtained from the Research and Ethics Committee of Mbarara University of Science and Technology.

Results

The medical files of 294 children were retrieved; 52% male, with a median age of 8 (interquartile range 3-13) years. Most (87.1%) resided in Western Uganda. The most common clinical characteristics on admission were body swellings (89.7%) and anemia (58.4%). The median delay between the onset of symptoms and presentation at the PCU was 91 days, and children started their treatment within a median of 4 days after admission. Wilms tumor (20%), Burkitt lymphoma (12%), and acute lymphoblastic leukemia (11%) were the commonest diagnoses. The 3-year overall survival was 40% for the whole cohort, 51% for Wilms tumor, 51% for Burkitt lymphoma, 31% for acute lymphoblastic leukemia, and 75% for Hodgkin lymphoma.

Conclusion

This study shows a significant delay between the onset of symptoms and presentation to the PCU of the MRRH, contributing to low three-year survival rates. There's a need to support early referral and diagnosis to improve outcomes for children with cancer in Western Uganda.

Delayed diagnosis and poor outcomes are challenges for childhood cancer care in Uganda. Improving early referral and diagnosis is crucial to improving survival rates.

Session: Tuberculosis

Moderators: Cathy Hewison, MSF France & Marc Biot, APH-MSF

- Helena Huerga & Emily Briskin
- Lorenzo Guglielmetti
- Gino Agbota

New treatment decision algorithms for TB in children: diagnostic accuracy, impact, and considerations for implementation

Helena Huerga, Epicentre, Belgium; Emily Briskin, Epicentre, France

Background

Tuberculosis (TB) remains underdiagnosed in children, with nearly half of cases missed globally. In 2022, the World Health Organization (WHO) recommended new treatment decision algorithms for TB in children, including laboratory testing and a score based on clinical, and where available, chest X-ray features. We assessed the diagnostic accuracy, the feasibility and acceptability of these algorithms as well as TB case rates prior to and after their implementation in 5 sub-Saharan African countries.

Methods

This multi-country study included three components, a prospective diagnostic study, a mixed-methods study and a review of programmatic data. The prospective diagnostic study and review of programmatic data included children under 10 years with signs and symptoms of TB. The mixed-methods study included health providers, policy makers, key informants and caregivers. Study sites included primary and higher health care facilities, nutritional centres, and HIV services in Guinea, Niger, Nigeria, South Sudan, and Uganda. Children were followed for 2 months. .

Results

Among 1613 children enrolled, 27% were diagnosed with TB (79% at their first assessment). Clinical and clinical-radiological scores drove most treatment decisions (69%). Sensitivity was 91.3% (95%CI 88.3-94.3) and specificity was 87.6% (95%CI 85.5-89.6). Following algorithms' introduction, TB treatment rates increased across all sites (adjusted effect = 2.23, p=0.012). Qualitative findings revealed high acceptability of the algorithms, enhancing decision-making legitimacy. Challenges included increased workload and the need for effective communication with caregivers.

Conclusion

The new treatment decision algorithms for TB in children showed high accuracy, enabling prompt TB diagnosis in children. Implementation led to a two-fold increase in TB treatment rates. The algorithms were well accepted by healthcare workers, and provided autonomy, particularly in health facilities with less skilled staff and ambulatory care. These findings endorse the algorithms' adoption by MSF and Ministries of Health, and will contribute to the upcoming WHO guideline review in 2026.

New treatment decision algorithms for tuberculosis in children had good accuracy, led to increased tuberculosis treatment and helped health workers diagnosing tuberculosis in children.

endTB-Q: final results of a Phase 3 randomized controlled trial in pre-XDR tuberculosis

Lorenzo Guglielmetti, MSF France

Context

Pre-extensively drug-resistant tuberculosis (pre-XDR-TB), that is tuberculosis resistant to rifampicin and fluoroquinolones, is difficult to treat. endTB-Q evaluated the efficacy and safety of a regimen comprising bedaquiline, delamanid, linezolid, and clofazimine (BDLC) compared to WHO-recommended longer individualized regimen (control) in people with pre-XDR-TB.

Methods

endTB-Q was a randomized, controlled, open-label, non-inferiority, stratified Phase 3 trial conducted in six countries. Participants aged 15 years or older with pulmonary pre-XDR-TB were randomized 2:1, stratified by country and disease extent, to BDLC or the control (individualized, longer regimens). BDLC duration was 6 months, extended to 9 months for extensive disease or in case of positive culture at 2 months or later. The primary outcome was bacteriological favorable outcome or favorable bacteriological, radiological, and clinical evolution at 73 weeks post-randomization. We report the risk difference adjusted for stratification variables, with a non-inferiority margin of -12%, in the modified intention-to-treat (mITT) and per-protocol (PP) populations. We report serious adverse events and deaths in the safety population at 73 weeks. This trial is registered with ClinicalTrials.gov, NCT03896685.

Results

Between 2020 and 2023, 324 participants were randomized: 219 (68%) to BDLC and 105 (32%) to control. In mITT, extensive disease was present in 105/163 (64%) and 52/84 (62%) of BDLC and control groups, respectively. At 73 weeks, favorable outcomes were observed in 141/163 (87%) BDLC and 75/84 (89%) control participants in the mITT population (adjusted risk difference [aRD] mITT: 0·2% [95%CI: -9·1%;9·5%]), and in 138/157 (88%) BDCL and 71/76 (93%) control participants in the PP population (aRD PP: -3·5% [95% CI: -12·8%,5·9%]). In a prespecified subgroup analysis, the RD in mITT was -7·5% [95% CI: -18·3%,3·2%] for extensive and 5·6% [95% CI: -7·6%,18·8%] for limited disease. At 73 weeks in the safety population, at least one serious adverse event occurred in 42/213 (20%) BDLC and 23/105 (22%) control participants, including 8 (4%) and 2 (2%) all-cause deaths, respectively.

Conclusion

Although non-inferiority was not established, endTB-Q demonstrated excellent outcomes with a shortened BDLC regimen for pre-XDR-TB with limited disease. Accumulating evidence suggests that individuals with extensive pre-XDR-TB may require longer, reinforced regimens.

endTB-Q trial demonstrated excellent outcomes with a shortened experimental regimen for pre-XDR-TB with limited disease; individuals with extensive pre-XDR-TB may require longer, reinforced regimens.

Medium- long-term post-tuberculosis sequelae burden and health-related quality of life in sub-Saharan Africa

Gino Agbota, IRD, France

Background

There is still limited information on the mid-long-term burden of post-tuberculosis lung disease (PTLD) and its effect on quality of life. The Post-TB SIQ study (ANRS405s), assessed the medium- long-term burden and health-related quality of life (HRQoL) in sub-Saharan Africa.

Methods

Former clinical trial adults (≥18years) in Benin, Guinea and Uganda were contacted 2-20 years after TB cure and invited for a comprehensive evaluation for PTLD. We conducted clinical assessment, spirometry, six-minute walk test, chest X-ray, and administered the St George Respiratory Questionnaire (SGRQ) and the 36-item Short Form Health Survey (SF-36) for HRQoL assessment. A chest high resolution computed tomography (CT) scan was done for participants with clinical suspicion of bronchiectasis. We used the consensus definition of PTLD (according to GLI 2022 standards): presence of pulmonary functional impairment on spirometry and/or the presence of symptomatic bronchiectasis. Characteristics between PTLD and non-PTLD were compared using Chi-squared, Wilcoxon rank sum or Fisher's exact tests depending of the type of variable.

Results

A total of 600 participants were included. The median delay between TB cure to evaluation were 11.1 years, 204 (35%) participants were living with HIV and 72 (12%) presented a dyspnea scale 2. Of the 551 participants that underwent spirometry, the patterns were: 45% (250/551) normal, 21% (118/551) obstruction, 25% (138/551) restriction and 8% (45/551) mixed. Symptomatic bronchiectasis was diagnosed in 14% (84/598) participants. The proportion of PTLD was 57% (339/600). PTLD patients were more likely to have lower BMI, recent history of hemoptysis, poorer exercise tolerance, higher proportion of cough and abnormal chest X-ray, and poor HRQol (Table). About 34% (116/339) with PTLD had FEV1< -2.5 zscore.

Conclusion

PTLD, 2-20 years after TB treatment is highly common in sub-Saharan Africa. A poor HRQoL in people with past-TB treatment history is more prominent among those with PTLD.

There is still limited information on the mid to long term burden of post-tuberculosis lung disease (PTLD) and its effect on quality of life. Our study showed that PTLD, 2-20 years after TB treatment is highly common in sub-Saharan Africa and associated with a poor quality of life.

Session: Outbreak

Moderators: Steve Ahuka, INRB-RDC & Yap Boum II, Africa CDC, MSF-WaCA

- Jonathan Polonsky
- Sophie Meakin & Cheick Oumar Doumbia
- Isidro Carrion-Martin

Retrospective study of diphtheria outbreak, Kano state, Nigeria 2023-2024

Jonathan Polonsky, Epicentre, Switzerland

Context

Kano State, Nigeria, has been the epicentre of a large-scale, ongoing diphtheria outbreak since January 2023, with over 18,000 cases and 850 deaths so far reported. MSF-WaCA supported clinical care in diphtheria treatment centres (DTCs) and, in response to a rapid upsurge in cases that overwhelmed bed capacity, introduced a novel home-based care (HBC) strategy to manage mild cases.

Methods

We conducted a population-based retrospective mortality and morbidity survey (n=4,500) and a matched retrospective cohort study comparing outcomes among patients managed in HBC (n=367) versus DTC (n=311). Primary outcomes included attack rate (AR), case fatality ratio (CFR), long-term sequelae, secondary attack rate (SAR), and acceptability of care. The recall period spanned from January 2023 to October 2024.

Results

The crude AR was 1.1% (95% CI 0.81–1.41), peaking at 2.1% in children aged 6–10 years. Diphtheria accounted for 7.3% of all deaths and 9.8% among children under five. CFR among confirmed cases was 9.0%, with significantly higher mortality in children under five (Mortality Rate Ratio (MRR) 8.6, 95% CI 6.0–12.2) and unvaccinated individuals (MRR 2.3, 95% CI 1.5–3.5). Delayed care-seeking (>3 days) increased mortality risk 17-fold, and mortality was 40% lower among those who sought formal healthcare.

HBC performed comparably to DTC care, with no evidence that HBC patients had higher CFR, increased risk of sequelae, or SAR compared to DTC patients. Both models of care were highly acceptable.

Conclusion

This was a high-impact outbreak with high AR and CFR, particularly among young children. There was substantial under-detection of cases, with a large proportion of cases never reaching formal health structures and orthodox treatment. Any, and early, care-seeking reduced risk of death. The HBC model proved safe, effective, and well-accepted for mild diphtheria cases and offers a scalable alternative in resource-constrained outbreak settings.

A diphtheria outbreak in Kano, Nigeria, caused high mortality. Early care-seeking reduced deaths, while home-based care for mild cases reduced pressure on resources and was effective.

Multidimensional study of the epidemiology and prevention practices of Mpox in Budjala Health Zone in the Democratic Republic of the Congo : Track - MPOX

Cheick Oumar Doumbia, MSF WaCA, Côte d'Ivoire ; Sophie Meakin, Epicentre, France

Introduction

Mpox remains a major public health concern in the Democratic Republic of the Congo (DRC), particularly in endemic regions such as South Ubangi, where clade Ia circulates. In 2024, Budjala Health Zone experienced a notable rise in suspected Mpox cases. The TRACK-MPOX study aimed to generate critical evidence on Mpox transmission, clinical outcomes, and community prevention practices in this context.

Methods

TRACK-MPOX is a multidimensional study with four components: (1) a retrospective clinical survey of suspected Mpox cases recorded in health facilities; (2) a prospective cohort of new Mpox cases; (3) a population-based household survey estimating Mpox attack rates, mortality, and MVA-BN vaccine coverage; and (4) a KAP survey on Mpox awareness and prevention. Data were collected from January 2024 to April 2025 via structured interviews, medical record reviews, and community surveillance. Risk factors for infection and severe disease were assessed through univariate and multivariable logistic regression.

Results

A total of 527 Mpox cases were interviewed, of which 52% were female, and 65% were children under 15. Rash/lesions and fever were the most reported (100% and 87%, respectively), and 83 (16%) reported widespread lesions (defined as affecting 5 or more areas of the body). 87 (17%) were hospitalized: this was significantly more likely among cases with widespread lesions (univariate logistic analysis OR 28, 95% CI [13.1, 66]). The community attack rate was 210/10,000/day overall. Crude and Mpox-specific mortality rates were 0.53/10,000/day (95% CI [0.33–0.72]) and 0.01/10,000/day (95% CI [0.00–0.02]), respectively. Adults had a vaccination coverage of 17.2% (95% CI [16–18.5]). Risk factors for Mpox illness include living in households with >5 members, living in high-density health areas, being 14 or younger.

Conclusion

Mpox continues to pose a significant burden in endemic communities. These findings support the urgent need for enhanced case detection, targeted vaccination, and community engagement to reduce transmission and severity of outcomes.

TRACK-MPOX reveals high attack rates and low vaccine coverage in Budjala, with key risk factors including crowded households, living in high-density areas, and young age.

Mpox clade Ib: epidemiological highlights from the Uvira outbreak, South Kivu, Democratic Republic of Congo, 2024-2025

Isidro Carrion-Martin, MSF Holland

Background

A novel clade Ib monkeypox virus emerged in South Kivu Province (Democratic Republic of the Congo) in 2023, causing an ongoing mpox outbreak. Médecins Sans Frontières (MSF) Operational Centre Amsterdam supported mpox case management in collaboration with the Ministry of Health (MOH). We describe main clinical and epidemiological characteristics of patients.

Methods

MOH case definitions were used. All confirmed and probable mpox cases seen at MSF-supported facilities between 3 June 2024 and 31 March 2025 were included. Samples were tested with qPCR. Data were collected using the MSF-linelist, and included demographic and clinical information and risk factors for transmission. We calculated frequencies and percentages for the main epidemiological indicators.

Results

4,614 cases were treated, 1327 (28%) as inpatients, 2398 (51%) were female (including 42 (1%) pregnant women), 2869 (62%) were under 15 years of age, and 1530 (33%) were under 5 (17% of Uvira population are under 5). There were 8 deaths (case fatality 0.2%), including five in children aged less than one year. A total of 17/3689 patients (0.5%) had HIV infection, 8/4416 (0.2%) self-reported TB and 29/562 (5%) had severe/moderate acute malnutrition. Laboratory results were available for 934 cases (20%), of which 565 were confirmed (positivity: 60%). Forty-nine samples tested for subclade were all confirmed as Ib. Overall 912/1793 patients (51%) reported physical non-sexual contact with another case, and 48/1779 (3%) reported sexual contact. Median time from symptom onset to presentation was 4 days (IQR: 2-6), and among inpatients, median length of stay was 5 days (IQR: 4-7).

Conclusion

We describe a large case series of mpox clade Ib patients for whom transmission appears largely non-sexual. Despite low fatality and severity, the high proportion of cases and deaths among children and the high burden of cases remains a concern in areas with an already fragile population health and overwhelmed health-care systems.

We describe key indicators to better understand the epidemiology of the novel monkeypox virus clade Ib and to inform outbreak response activities.

Session: Violence

Moderators: Tristan Le Lonquer & Jean-Guy Vataux, MSF-France

- Gaston Komanda & Pascale Lissouba

Mixed-methods approach to describing violence and mortality among Malian refugees and host populations: a cross-sectional and participatory study in the Bassiknou district, Mauritania

Gaston Komanda & Pascale Lissouba, Epicentre, France

Introduction

Since 2012, Mauritania has hosted Malian refugees, with renewed displacement since 2023 concentrated in Bassikounou department. Many refugees have fled violence and find themselves in precarious living conditions in host villages. This mixed-methods study was carried out to assess the context of violence and mortality among Malian refugees, while exploring the experiences and living conditions of refugees and host communities.

Methodology

A retrospective survey employing two-stage cluster sampling (126 clusters) was conducted using satellite imagery of refugee and host shelters in Bassikounou (excluding Mbera camp). Families within selected clusters were included. Mortality data spanned 17 months (August 2023–January 2025). A peer-led qualitative approach contextualized violence dynamics.

Results

- Mortality: Refugee crude mortality rate (0.33/10,000/day) was twice that of the host population (0.17/10,000/day). Violence caused 58.3% of refugee deaths, with two-thirds occurring in Mali.
- Violence: 5.9% of refugees said they had experienced violence versus 0.5% of hosts. Firearm- and knife-related violence occurred exclusively among refugees in Mali.
- Population estimate: excluding Mbera camp, there are around 29,739 refugees, 692 returnees and 94,898 residents in the area hosting refugees in Bassikounou.
- Context: Refugees described extreme violence - massacres, looting and intimidation - experienced before or during exile, which caused deep collective trauma, with the precarious conditions of exile exacerbating the mental load.

Discussion

Malian refugees faced disproportionate mortality and violence, underscoring insecurity in Mali. Refugee deaths are predominantly linked to violence in origin areas. Despite risks, many refugees express intent to return. Findings emphasize urgent advocacy for civilian protection and targeted interventions addressing the consequences of violence suffered, to respond to psychosocial, health and economic needs.

Malian refugees faced extreme violence and high mortality, mainly due to conflicts in Mali. Interventions are required to address trauma, health, protection and economic needs.

Session: Cholera

Moderators: Christopher Mambula, MSF France & Kate Alberti, OMS

- Wendelin Moser
- Abou Aissata Soumah

Multi-site pilot study on the deployment of cholera rapid diagnostic tests in the Democratic Republic of Congo and Niger

Wendelin Moser, Epicentre, Switzerland

Introduction

Integrating rapid diagnostic tests (RDT) into surveillance systems could improve early detection of cholera, strengthen monitoring and guide vaccination decision-making. This study investigated different aspects of the integration of RDTs into routine surveillance.

Methods

In six health zones in DRC, consenting, over one-year suspect cholera cases admitted to CTCs were asked to provide stool samples, which were analyzed with direct and enriched RDTs (Crystal VC O1/O139 and for a subset SD Bioline and Crystal VCO1), cultures, and qPCR. The RDT-positive incidence based on different sampling schemes were computed and statistically compared with the incidence based on exhaustive RDT data. In two health zones in DRC and Niger, the integration of RDTs into the surveillance system according to new Global Taskforce on Cholera Control (GTFCC) surveillance guidelines (threshold of a probable cholera outbreak and sampling scheme) was evaluated under real-world conditions.

Results

All RDTs reached similar sensitivity (76%-81%) and SD Bioline highest specificity (87%, 95% CI, 80%-92%), which was significantly higher compared to Crystal VCO1. Enrichment reduced sensitivity significantly (SD Bioline and Crystal VCO1) and increased specificity (significantly only for Crystal VCO1). In high-incidence areas, applying the best performing sampling scheme (testing the first 3 cases per day per CTC), provides accurate incidence estimates and conserves up to half the RDTs. In a surveillance unit with minimal study team involvement in DRC and Niger, a probable cholera outbreak was correctly identified using the GTFCC threshold.

Conclusion

RDTs are an essential tool to improve cholera surveillance, particularly for rapid outbreak detection and monitoring. The new RDT based threshold proved to be a valuable tool for independent detection and for monitoring, a sampling scheme saves RDTs and still provides robust incidence estimates. However, providing RDTs to cholera affected countries is not enough, only with regular training and supervision, solid RDT data can be obtained.

The integration of RDTs into cholera surveillance systems improved rapid outbreak detection and accurate outbreak. For a successful integration, regular training and supervision is needed to obtain correct RDT data.

Cholera outbreak dynamics and reactive vaccination campaigns in South Sudan: key insights and challenges

Abou Aissata Soumah, Epicentre, RDC

Background

Following the confirmation of cases in Renk, Upper Nile State, a cholera outbreak was declared in South Sudan on 28 October 2024. By 11th May 2025, a total of 58,977 cases and 1,177 deaths have been reported (CFR 2.0%) by the Ministry of Health (MoH). MSF France supported the cholera response in Juba, Aweil, Akobo, Old and New Fangak.

Methods

Based on cholera treatment center (CTC) line list data, weekly macrospatial analysis was used to detect newly affected payams and guide exploration, while microspatial mapping in IDP camps helped identify intra-camp hotspots and prioritize localized interventions. Following rapid field assessments, Oral Rehydration Points (ORPs) were installed in strategic locations to improve access to care and decrease caseload at CTCs. Several reactive Oral Cholera Vaccine (OCV) campaigns were performed in high-risk areas in Juba from 18th December 2024 to 5th February 2025. A survey of knowledge, aptitude and practice (KAP) and two focus group discussions were conducted in Old and New Fangak to explore community knowledge, perceptions and care-seeking behavior.

Results

ORPs and a referral system led to early care: over 80% of moderate/severe cases reached CTCs within 24 hours, and mild cases were managed locally. A total of 119,875 individuals were vaccinated in Juba, exceeding the target population (93,200) with an administrative coverage of 128.6%. The KAP survey showed that despite 76% of respondents having good general knowledge about cholera transmission and 60% about protective measures, stigma remained high. Cholera was commonly referred to as “stomach-ache” and perceived as a shameful “child’s disease”, especially among male adults.

Conclusion

Through detailed surveillance data and epidemiological analysis, decentralized care was implemented in areas with high caseloads to improve access to care, and targeted vaccination campaigns were conducted. To reduce admission delays at CTCs and ORPs, targeted sensitization campaigns should be implemented, coupled with interventions aimed at reducing the stigma associated with cholera.

Spatiotemporal surveillance and decentralized care improved MSF’s cholera response in South Sudan. Specifically adapted sensitization is needed for decreasing CTC and ORP admission delays and address stigma.

Session: Malaria

Moderators: Prof. Saschveen Singh, MSF France & Mahamat Saleh Issakha Diar, PNLP Tchad, Antoinette Demian Mbailamen, MoH, Chad

- Erwan Piriou
- Jessica Sayyad Hilario & Nicholas Putney

Prevalence of pfhrp2/3 deletions in South Sudan: results of a 10-site national survey

Erwan Piriou, MSF Holland

Background

pfhrp2/3 deletions are recognized as a major threat to malaria control, particularly in the Horn of Africa. Data on South Sudan is lacking. Therefore, MSF conducted a cross-sectional survey at 10 geographically distinct sites across South Sudan to estimate the prevalence of P. falciparum with pfhrp2/3 gene deletions, and their impact on diagnosis of P. falciparum by HRP2 RDT.

Methods

Patients under 15 years with suspected uncomplicated malaria were eligible for enrolment. Using the standard WHO protocol for surveillance of hrp2/3 deletions, 200 suspected cases per site were targeted in order to have at least 80 PfpLDH-positive cases per site. The main objective was to determine whether more than 5% of cases would be missed by HRP2 RDT, which is the cut-off recommended by WHO for considering an alternative RDT. HRP2 and PfpLDH-based RDTs were performed in parallel and dried blood spots prepared. Multiplex quantitative PCR was done to amplify pfhrp2, pfhrp3, pfldh and human tubulin genes.

Results

From January 22 to March 27, 2024, a total of 1842 participants (53% males) were enrolled, with a median age of 3 years (IQR 1-8). Overall HRP2 RDT positivity was 729/1842 valid tests (40%, site-specific range 13-65%). Overall PfpLDH RDT positivity was 584/1839 valid tests (32%, site-specific range 12-56%). A total of 14 of 584 (2.6%) PfpLDH-RDT positive samples were HRP2-RDT negative. Molecular analysis demonstrated pfhrp2/3 double deletion in 2 out of14 PfpLDH+/HRP2- RDT (0.34% overall, and 1.05%, 1.85% respectively in concerned sites), whereas the other PfLDH+/HRP2- results had alternative causes.

Conclusion

This survey showed reassuring results, with site-specific prevalence of pfhrp2/3 double deletions leading to missing cases when using HRP2 RDT, remaining well under the WHO recommended cut-off of 5%. These outcomes will inform diagnostic choices for the national malaria control program.

Genetic deletions in Plasmodium falciparum pfhrp2/3 genes affect diagnosis by HRP2 malaria RDT. A survey across 10 sites in South Sudan showed reassuring results.

Modelling malaria routine surveillance data to inform seasonal malaria chemoprevention strategy in Moïssala, Southern Chad

Nicholas Putney, Swiss TPH; Jessica Sayyad Hilario, Epicentre, Paris

Background

Seasonal Malaria Chemoprevention (SMC) has been implemented by MSF in collaboration with the national and local health authorities in the district of Moïssala, southern Chad to prevent malaria in young children during the high transmission season. The intervention started in 2013, with an interruption during the year 2019, and was expanded to include a fifth round since 2021. In response to updated WHO guidelines in 2022, which allow countries to tailor SMC strategies to local conditions, MSF sought to identify the most effective SMC timing and frequency in Moïssala using mathematical modelling.

Methods

A climate-informed malaria transmission model was developed using routine surveillance and household survey data from 2018–2023. This model simulated four SMC strategies: four or five rounds starting in either June or July. Bayesian inference techniques were used to calibrate the model and estimate the impact of each strategy.

Results

Results indicated that had SMC been delivered in 2019, approximately 11,200 (credible interval: 7720 - 14800) malaria cases in children under five could have been averted—a 19% reduction. Adding a fifth round of SMC since led to an average 6% further decrease in cases, corresponding to about 2,660 (1880-3550) fewer cases each year. Starting the first round in June instead of July reduced cases by an additional 580 (145-1140) in 2023. Overall, the optimal approach was five rounds starting in June, averting an estimated 2,570 more cases annually compared to the original strategy of four rounds starting in July.

Conclusion

The analysis supports the adoption of five SMC rounds starting in June to maximize impact. However, this recommendation may need to be adjusted in the future in response to shifts in rainfall patterns and climate change.

An optimal strategy for seasonal malaria chemoprevention in Southern Chad was identified using a mathematical model informed by routine surveillance and climate.

Session: Malnutrition

Moderators: Elizabeth Ledger & Stéphane Doyon, MSF France

- Kemi Ogundipe & Roisin Connon
- Giulia Scarpa
- Bryan Gonzales

GASTROSAM: Exploring the best rehydration strategies for malnourished children with moderate to severe dehydration

Kemi Ogundipe, MSF Belgium; Roisin Connon, University College London

Context

Children hospitalised with severe acute malnutrition (SAM) often present with gastroenteritis and dehydration. The current WHO guidelines restrict intravenous rehydration (IV) in this group due to safety concerns as they are perceived to be at risk of heart failure. For oral rehydration in children with SAM it is recommended to use Resomal instead of standard ORS. However, these recommendations are based on weak evidence.

Methods

A randomised controlled open-label factorial trial in 6 sites in Uganda, Kenya, Niger and Nigeria enrolled 415 children in 2 strata - severe and moderate dehydration - between 2019 and 2024. Children with severe dehydration (n=272) were randomised (2:1:1) to the control group (standard of care) or to one of two liberal IV strategies. All children were randomised (1:1) to receive Resomal or standard ORS. Children were followed up to 28 days. The primary outcome of the severe dehydration comparison was mortality at 96 hours, and for the oral rehydration comparison it was change in sodium at 24 hours.

Results

In the severely dehydrated children, there was no difference in mortality at 96 hours between the liberal and control groups (risk ratio 1.02 (0.41,2.52); p=0.69). Overall mortality at 96 hours was lower than anticipated (7%). No suspected pulmonary oedema or secondary heart failure events were reported in the trial, and there was no evidence of a difference in serious adverse events.

In the ORS comparison, the change in sodium at 24 hours was similar between standard ORS vs Resomal (mean difference -0.6 (-1.9, 0.7) mmol/L).

Conclusion

While there was no evidence for a difference in mortality, there was no evidence of harm with giving IV fluids for rehydration nor with using standard ORS instead of Resomal for children with SAM. The trial is an important addition to a limited body of evidence.

Investigating whether IV rehydration for severely malnourished children with dehydration is beneficial and whether standard ORS can be given safely to malnourished children with dehydration.

Understanding Medical Challenges in Diagnosing and Treating Bilateral Pitting Oedema in Children: A Qualitative Study

Giulia Scarpa, Epicentre, France

Background

Severely malnourished patients can present with bilateral pitting oedema, which is a common sign of Kwashiorkor. However, bilateral pitting oedema can also be an expression of other pathologies. In Mali and DRC, the number of children presenting with bilateral pitting oedema at MSF (Médecins Sans Frontiers/Doctors Without Borders) hospitals are up to 30% (Mali) and 49% (DRC) higher than in other countries, however, the reasons underlying this trend are unknown.

Methods

Through this qualitative study, we aimed to explore the perspectives and lived experiences of health professionals on the diagnosis and management of children with bilateral pitting oedema. Using a participatory approach, we conducted 21 in-depth interviews, and 2 focus groups with health professionals at MSF health facilities who had worked in the settings of Koutiala (Mali) and Rutshuru (DRC) for at least 6 months.

Results

The understanding of the bilateral pitting oedema phenomenon is complex. Health workers described clinical obstacles to reducing mortality, including: i) difficulties making the diagnosis due to a lack of specialized staff and insufficient resources, ii) challenges treating complications that may arise due to the complexity of the diseases associated with bilateral pitting oedema, and iii) lack of scientific evidence in the literature explaining the physiopathology of bilateral pitting oedema.

Conclusion

Key recommendations for reducing mortality among children presenting with bilateral pitting oedema included prevention of bilateral pitting oedema at the community level, standardization of the diagnostic process, strengthening of medical training, and better collaboration both within the medical teams and between teams and the children's families.

Little is known about Kwashiorkor, and the differential diagnosis of bilateral pitting oedema in children. Health workers must be central to shaping responsive strategies.

Understanding Kwashiorkor Better: New Clues from Advanced Biological Research

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Background

Edematous malnutrition, also termed kwashiorkor, is a phenotype of severe acute malnutrition characterized by bilateral edema, fatty liver, and skin and hair changes. Despite its high mortality, the etiology and pathophysiology of kwashiorkor remain poorly understood.

Methods

In this study, we employed plasma lipidomics, metabolomics, and proteomics with urine metabolomics and gut microbiome profiling to delineate molecular pathways specific to kwashiorkor in children aged 6–59 months from Niger compared to those with marasmus and non-malnourished children matched by age, sex, and clinical triage score. Features were defined as kwashiorkor-specific if they also correlated with edema severity and normalized following nutritional rehabilitation.

Results

Our analyses revealed that kwashiorkor is marked by increased extracellular matrix (ECM) degradation, evidenced by elevated plasma ECM proteins, and by disrupted sphingolipid homeostasis, evidenced by reduced plasma cholesterol- and sphingolipid-related lipids. Neither plasma nor urine metabolomic profiles, nor gut microbiome signatures, showed unique alterations associated with kwashiorkor.

Conclusion

These findings suggest that kwashiorkor may be a combination of malnutrition and an inflammatory syndrome leading to the disruption of the extracellular matrix and sphingolipid metabolism, with possible implications for capillary permeability and for the function of the lymphatic system.

Kwashiorkor may be a combination of malnutrition and an inflammatory syndrome leading to the disruption of the extracellular matrix and sphingolipid metabolism, with possible implications for capillary permeability and for the function of the lymphatic system.

Session: Diagnostics for Antibiotic Stewardship

Moderators: Rupa Kanapathipillai, MSF France & Didier Guillemot, Institut Pasteur

- Gerald Hangaika
- Emily Lynch
- Céline Langendorf

Integrating rapid and laboratory STI diagnostics tests into symptomatic management in an adolescent clinic, Zimbabwe

Gerald Hangaika, MSF Zimbabwe

Introduction

Sexually transmitted infections (STIs) pose significant health risks, especially among adolescents and young adults. In low- and middle-income countries (LMICs) like Zimbabwe, STI management primarily relies on syndromic approaches, which often miss asymptomatic cases and result in overtreatment. This study aimed to evaluate the added value of integrating rapid and laboratory based STI diagnostics into syndromic management among adolescents in Mbare, Harare.

Methods

We conducted a cross-sectional study at the Adolescent Corner of Mbare Polyclinic, a community characterized by high population density, poverty, and vulnerability. Participants aged 16–19 years, who reported sexual activity within the past 12 months, underwent routine syndromic assessment alongside diagnostic testing using GeneXpert assays for Chlamydia trachomatis (CT) and Neisseria gonorrhoeae (NG), and the OSOM test for Trichomonas vaginalis (TV). Treatment was provided based on syndromic diagnosis, with follow-up conducted for diagnostic test results.

Results

Revealed a high STI prevalence: 20% for CT, 18% for NG, and 9% for TV. Among females, 70% were overtreated and 20% missed treatment; for males, overtreatment was 55%, with 2% missed treatment. These findings highlight the limitations of syndromic management, especially among adolescent females.

Conclusion

While integrating diagnostic testing showed clear clinical benefits, implementation faced logistical challenges including cost, delayed result turnaround, and difficulty ensuring follow-up. Nonetheless, the study supports prioritizing diagnostic testing access for adolescent females, regardless of symptoms, to reduce missed and inappropriate treatments. Incorporating STI diagnostic testing in adolescent clinics can significantly improve treatment accuracy.

Prioritizing access to diagnostic STI testing and ensuring rapid result delivery is essential to guide accurate, timely treatment, reducing overtreatment and missed cases.

Cumulative antibiogram and retrospective chart review of pediatric antibiotic stewardship at Barnersville Junction Hospital: Monrovia, Liberia

Yvonne Schmiedel, Epicentre, Liberia; Emily Lynch, Epicentre, France

Background

Sepsis and antimicrobial resistance are major causes of pediatric mortality ((Rudd KE, 2020 Jan 18)((Y, 2025)). Cumulative hospital antibiograms can provide crucial insight into antimicrobial resistance patterns, yet important gaps remain in understanding how to use these findings to update empiric treatment for suspected sepsis.

Methods

A retrospective chart review was conducted on bacteraemic children (1 month–15 years) admitted to Barnersville Junction Hospital in Monrovia, Liberia (July 2019–September 2022). The WHONET laboratory database supplemented clinical data. The study evaluated the appropriateness of empiric and targeted treatment (based on adherence to guidelines, or clinical review), and the origin of infection (community versus nosocomial).

Results

The study included a total of 444 patients, of which 53% (n=235/444) were male, and 50% (n=219/444) were <1 year of age. Of these, 377/444 (85%) of charts had sufficient clinical data for appropriateness of treatment analysis. The cohort was severely ill [39% (n=86/223 of MUAC eligible) severely malnourished and 72% (n=259/377) admitted to the ICU] and faced a very high mortality rate at 36% (n=137/377). Suspected sepsis was the primary reason for blood culture.

Treatment was appropriate in 78% of empiric and in 66% of targeted prescriptions. Community-acquired infections accounted for 53% (n=248/444) of the cohort, whereas nosocomial infections accounted for 31% (n=143/444). Multi-drug-resistant organisms were present in 20% of patient samples, of which 63% were resistant to penicillin/cephalosporin (ESBL) and 22% to carbapenem (CRO). The most common pathogens were Klebsiella spp (n=107, 23%), Escherichia coli (n=45, 11%) and Staphylococcus aureus (n=42, 9%).

Conclusion

Clinicians successfully followed empiric treatment guidelines but there is room for improvement in appropriately administering targeted treatment. Nosocomial infections as well as multi-drug-resistant infections were both very common. The study findings support changing first line empiric treatment of suspected sepsis in this population and more closely monitoring implementation of antibiotic stewardship programs.

Cumulative antibiograms are a crucial tool in understanding antimicrobial resistance but additional clinical information is needed to effectively update empiric treatment for suspected sepsis. Among a high burden of multi-drug resistant, and nosocomial infections, clinicians at BJH in Liberia effectively follow empiric treatment guidelines but support is needed to correctly implement targeted treatment.

Evaluation of a laboratory rapid test for confirmation and characterisation of carbapenemase-producing bacteria in MSF laboratories

Céline Langendorf, Epicentre, France

Background

Carbapenemase-producing Gram-negative bacilli (CP-GNB) have emerged as a major global health concern. Confirmation and characterisation of CP-GNB are crucial for infection prevention and control (IPC) and antimicrobial stewardship (AMS). However, MSF laboratories rely solely on phenotypic detection of carbapenem resistance. This study evaluated the accuracy and ease-of-use of the rapid laboratory test Carba 5 (NG-Biotech) in confirming and detecting the five most common carbapenemases (NDM, VIM, KPC, IMP, OXA-48 like) in CP-GNB isolated in MSF laboratories.

Methods

The retrospective evaluation included carbapenem-resistant Enterobacterales (CRE, n=252) and Pseudomonas aeruginosa (CRPA, n=32) isolated from blood and bone cultures collected in MSF-supported hospitals in DRC, Niger and Jordan between 2019 and 2024. Results were compared to a composite reference method: (i) carbapenem inactivation method (CIM); and (ii) whole genome sequencing (WGS) performed at the American University of Beirut (analyses still ongoing). Trained laboratory technicians performed the Carba-5 test and CIM in the MSF laboratories. We evaluated the usability of the Carba-5 test and CIM through self-administered questionnaires completed post-training and at the end of the study.

Preliminary results

Among CRE, Carba-5 test showed a 98% (152/155) positive and 98% (92/95) negative agreement with CIM. According to partial WGS results, NDM is the main carbapenemase produced by the CP-Enterobacterales in DRC (20/20) and Niger (49/49). In Jordan, we observed NDM (52/54), VIM (1/54) and KPC (1/54). Among CRPA, Carba-5 test showed a 100% (11/11) positive and 100% (18/18) negative agreement with CIM and WGS. According to partial WGS results, NDM and OXA are the most frequent carbapenamases in DRC and Jordan.
The Carba-5 test was reported as easy to use and interpret, while CIM was time-consuming and challenging to perform and interpret.

Conclusion

This study contributes to the knowledge of CP-GNB epidemiology in 3 MSF projects. Preliminary results showed Carba-5 test as an acceptable and easy-to-use diagnostic tool. However, additional confirmatory results are needed to estimate accuracy for carbapenemase typing, and define the optimal diagnostic algorithm for screening and confirmation of CP-GNB.

The Carba-5 test is a promising laboratory tool to confirm carbapenemase-producing Enterobacterales and P.aeruginasa in MSF laboratories according to preliminary results. Complementary results will allow to evaluate its potential integration in routine lab activities.

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