MEDECINS SANS FRONTIERES
DOCTORS WITHOUT BORDERS

SCIENTIFIC DAYS

MSF SCIENTIFIC DAY SOUTHERN AFRICA

2018

HIV Self-test Kit
Credit: Sean Christie

We would like to thank the MSF Scientific Days editorial reviewers. We are very grateful for their time and effort.

Medical Research

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All presentations and posters will be available on the F1000 website: https://f1000research.com/channels/msf/sciday-uk

Welcome to the 2018 MSF Southern Africa Scientific Day

Launched in 2004 in London, MSF Scientific Days aim to connect audiences – across countries, organisations, specialties, and disciplines – to promote debate and exchange around the evidence underpinning our medical humanitarian operations. Valuable exchanges with partner organisations, medical and policy audiences help guide our field operations, influence policy and ultimately improve the quality of care for our patients.

MSF field teams are asked to submit abstracts that reflect operational research being conducted across a range of medical specialities. All abstracts must have both local and MSF ethical approval to be accepted. Final selection is made by editorial committees comprised of academics, researchers and medical practitioners.

MSF Scientific Day Southern Africa was held for the first time in 2015 in Harare, Zimbabwe and since then events have been held in Johannesburg, South Africa and in Blantyre, Malawi. Last year MSF staff, researchers and Ministry of Health colleagues came together to share challenges faced in the fields of HIV, infectious disease and providing medical care in the context of the Syrian Crisis. This year, MSF Scientific Days have taken place in London, New Delhi and today in Eswatini where we hope to share with you the successes and challenges brought to us by our field teams over the last year.

Abstract sessions will include a focus on HIV and TB, examining how despite recent success towards reaching the 90-90-90 targets, new strategies are still needed to address prevention, testing and the integration of care for comorbidities. MSF's work in acute humanitarian crises will be discussed in today's second session, highlighting the provision of diabetes care for Syrian refugees and the violence faced by Rohingya refugees. Finally, a look at infectious disease, where we see the need for the essential role for prevention and the impact of infectious disease on maternal and child health.

While the content of today's meeting seeks to highlight the work of MSF within the field of HIV in the Southern African region, we hope that the discussions will allow reflections on the global reach of MSF's work.

The MSF Southern Africa Scientific Day 2018 is the result of a large collaborative effort – not least from the editorial committees who reviewed the 150 plus abstracts submitted, the MSF Eswatini team for hosting the event and the MSF UK team who have supported our plans. We are very grateful for the help of all involved.

We hope that you enjoy the conference and welcome your participation during the discussions. This day will contribute to raising awareness of the plight of vulnerable populations that MSF works with and we hope will improve the quality of their medical care.

Finally, please complete your feedback forms to allow us to keep improving this event.

Regards

Helen Bygrave, Bernard Kerschberger and Serge Kabore

MSF Southern Africa Scientific Day Coordinator and MSF Eswatini Operational Research Coordinator and Head of Mission

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Cover photo: HIV testing Mozambique
Credit: Gianluigi Guercia

MDR care in Eswatini
Credit: Alexis Huguet

AGENDA SOUTHERN AFRICA SCIENTIFIC DAY 2018

8.30-9.00 **Registration**

8.45-9.15 **Welcome and Introduction**

General Director MSF Southern Africa

Ministry of Health Eswatini

World Health Organisation Eswatini

SESSION 1 HIV/TB: OLD FRIENDS WITH NEW CHALLENGES

9.15 – 11.00

Successful implementation of HIV self-testing in rural Shiselweni, Eswatini
Lorraine Rusike Pasipamire

Provision of oral pre-exposure prophylaxis for female sex workers and men who have sex with men in Beira, Mozambique
José Carlos Beirão

Report of non-communicable disease treatment services integrated into outpatient and HIV care in Matsapha, Eswatini
Éimhín Ansbro

"They share more than we think they are sharing": a mixed-methods evaluation of post-natal clubs in South Africa
Aurelie Nelson

What next after treatment failure for multidrug-resistant tuberculosis with the short course regimen?
Debrah Vambe

11.00 – 11.30 **Morning Break**

SESSION 2 ADDRESSING THE NEEDS OF REFUGEES: MSF ACTION IN HUMANITARIAN CRISES

11.30 – 12.30 **Panel chair: Guilhem Molinie** (General Director MSF Southern Africa)

Introduction to MSF's work in conflict settings
Guilhem Molinie

Rohingya crisis in Bangladesh: summary of findings from six pooled mortality surveys
Ruby Siddiqui

Care for Syrian refugees with diabetes: outcomes from Médecins Sans Frontières programmes in the Levant
Jamil Qasem

12.30 – 13.15 **Lunch**

SESSION 3 MSF OPERATIONS PREVENTING AND RESPONDING TO INFECTIOUS DISEASE: WHAT HAVE WE LEARNT?

13.30 – 14.45

Single-dose oral ciprofloxacin prophylaxis in response to a meningococcal meningitis epidemic in the African meningitis belt: three-arm cluster-randomized trial
Matthew E Coldiron

Pregnancy and Ebola: survival outcomes for pregnant women admitted to MSF Ebola treatment centres in the West Africa outbreak
Séverine Caluwaerts

Integration of hepatitis B prevention strategies within PMTCT programmes, Maputo, Mozambique
Natalia Tamayo Antabak

14.45 – 15.00 **Closing remarks**
Ministry of Health Eswatini
MSF Eswatini

15.00 **Poster exhibition with tea and refreshments**

SESSION 1

FROM HIV INNOVATIONS TO NEW TB DRUG COMBINATIONS – NEW TOOLS FOR OLD CHALLENGES

Community DRTB treatment in Eswatini
Credit: Sven Torfinn

Successful implementation of HIV self-testing in rural Shiselweni, Eswatini

***Lorraine Pasipamire**[1], Lenhle Dube[2], Edwin Mabhena[3], Muzi Nzima[3], Paula Lopez[1], Marie Luce Tombo[3], Linda Garcia Abrego[3], Sindi Mthetwa[3], Noziswe Rugongo[3], Mduduzi Dlamini[3], Robin Nesbitt[3], Serge Mathurin Kabore[1], Munyaradzi Pasipamire[2], Roberto De la Tour[4], Nomthandazo Lukhele[2], Javier Goiri[4], Iza Ciglenecki[4], Bernhard Kerschberger[1]

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Introduction
Current healthcare worker-led HIV testing approaches are failing to reach all people in need, and groups such as men and young people are hard to reach. WHO recommends HIV self-testing (HIVST), however this has not previously been applied in Eswatini. Since 2008, decentralization by the Eswatini Ministry of Health has involved shifting provision of HIV and TB services into primary health care clinics throughout the country, with MSF providing support in the predominantly rural Shiselweni region. We aimed to assess the feasibility of HIVST as an innovative testing strategy in this setting.

Methods
From May to Oct 2017, HIVST kits were provided through targeted testing strategies at nine government health facilities and community sites. In assisted HIVST, clients carry out testing in the presence of a health worker; in unassisted HIVST, clients take 1-2 test kits home. We provided HIVST education and information, established a toll-free phone line, and performed structured follow-up calls to monitor possible adverse events, guide clients on interpreting test results, and advise on HIV services. Frequency statistics and proportions were used to describe outcomes.

Ethics
This research fulfilled the exemption criteria set by the MSF Ethics Review Board (ERB) for a posteriori analyses of routinely collected clinical data and thus did not require MSF ERB review. It was conducted with permission from Micaela Serafini, Medical Director, Operational Centre Geneva, MSF.

Results
1462 people were reached through HIVST; 681 (47%) were male; median age was 29 (IQR 24-35) years. 1817 HIVST kits, averaging 1.2 per client, were distributed through six strategies. 810 (45%) were provided at workplaces, 582 (32%) and 191 (11%) at targeted event-based testing for young people and men, 64 (4%) in facilities for pregnant/lactating women, 41 (2%) at safe spaces for key populations, and 129 (7%) undefined. Overall, 1615 (89%) tests were unassisted and 202 (11%) assisted. Of the 1462 people who had direct contact with healthcare workers, 750 (51%) reported HIVST results, with 24 (3%) reporting a reactive result. Among those, 12 (50%) are known to have had a confirmatory follow-up test. All clients (12, 100%) had concordant HIVST and standard HIV rapid test results, and 11 (92%) were enrolled into HIV care. No adverse events were reported through 521 follow-up calls. The toll-free phone line was used 167 times, mainly to disclose results and was more often used by men (95 times, 57%).

Conclusion
Implementation of HIVST was feasible within the public health sector in rural Eswatini. This pilot informed national health policy and HIVST was subsequently adopted as an additional national testing strategy in Eswatini.

Conflicts of interest
None declared.

Provision of oral pre-exposure prophylaxis for female sex workers and men who have sex with men in Beira, Mozambique

***José Carlos Beirao**[1], Ivan Alejandro Pulido Tarquino[1], Sarala Nicholas[2], Ana Torrens[1], Emilie Venables[3], Gianluca Ferrario[1], Ruggero Giuliani[4], Tom Ellman[3]

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Introduction
In 2014 MSF initiated the corridor project, comprising HIV outreach services (prevention, testing, and treatment) to female sex workers (FSW), men who have sex with men (MSM) and long-distance truck drivers. Outreach took place at truck stops along the trucking corridor between Beira and Tete, Mozambique. In order to strengthen these activities, MSF together with the Ministry of Health, initiated a pilot study in 2016 to evaluate the feasibility and acceptability of oral pre-exposure prophylaxis (PrEP) amongst FSW and MSM.

Methods
FSW and MSM attending HIV services in Beira between Mar 2016 and Dec 2017 were invited to participate by community counsellors and peer-educators. Inclusion criteria were self-identified FSW/MSM; use of MSF services; resident in the area; HIV-negative status. Exclusion criteria included age <18 years and/or pregnancy. Sample size was based on the totals of FSW and MSM in the project, and participants were recruited by convenience sampling. We report descriptive statistics, including proportions at screening, enrollment and retention in PrEP. Reasons for dropout and loss to follow up were collected.

Ethics
This study was approved by the MSF Ethics Review Board.

Results
252 FSW and 58 MSM were offered PrEP. 184 (73%) FSW and 58 (100%) MSM accepted screening, from which 169 (92%) FSW and 54 (93%) MSM were eligible for the study. We recruited 119 (70%) FSW and 42 (78%) MSM. Mean participant age was 24 years (SD 6). Among those excluded, 5 (6%) were HIV positive, and 4 (5%) were pregnant. 50 FSW and 11 MSM did not return to clinic after confirming eligibility. Aggregated retention rates in PrEP at month 1, 3, 6, 9 and 12 were 73% (117/161); 49% (79/161); 40% (46/115); 29% (24/84); and 25% (14/56), respectively. Higher dropout rates were observed amongst FSW (84/118; 71%), as compared with MSM (24/43; 56%). Main reasons for withdrawal included change of residence (55/104; 53%) and lack of awareness about HIV infection risks (5/47; 11%). Only one HIV sero-conversion was observed, after 6 months, in a FSW.

Conclusion
We observed high uptake of PrEP. Despite the acceptability of PrEP, dropout rates were high and mostly related to changing residence and lack of awareness of infection risks. Limitations include the lack of a control group and the potential for selection bias during recruitment. Specifically, participants may have had greater awareness of health issues, as compared to those not engaged with HIV services. This study provides baseline data, which may inform future implementation of PrEP in MSF projects, as well as potentially influencing national policies.

Conflicts of interest
None declared.

Report of non-communicable disease treatment services integrated into outpatient and HIV care in Matsapha, Eswatini

***Éimhín Ansbro**[1], Inga Meyer I[2], Velephi Okello[3], Maria Verdecchia[2], Kees Keus[2], Turid Piening[4], Zia Sadique[1], Bayard Roberts[1], Pablo Perel[1], Kiran Jobanputra[5]

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Introduction
Eswatini faces a growing burden of non-communicable diseases (NCD), alongside HIV and tuberculosis (TB) epidemics. MSF has provided primary care services including HIV and TB programmes within a Ministry of Health (MOH) clinic in Matsapha, Eswatini, since 2011. Integration of NCD care into general outpatient (OPD), HIV and TB services was begun in April 2016. We carried out a retrospective cohort study in order to evaluate this integrated NCD model of care. Specific objectives were to: a) examine programme processes and effectiveness; b) examine predictors of NCD treatment outcomes, including HIV status; c) determine the incremental total and unit costs incurred by the NCD service.

Methods
We carried out a retrospective analysis of routine cohort data, including clinical data from adults enrolled July 2016 to June 2017 and costs derived from budget and activity data. Analysis of the cohort involved descriptive statistics and logistic regression modeling. A descriptive costing analysis from the provider perspective utilised both ingredients-based and step-down accounting approaches.

Ethics
This research fulfilled the exemption criteria set by the MSF Ethics Review Board (ERB) for a posteriori analyses of routinely collected clinical data and thus did not require MSF ERB review. It was conducted with permission from Sidney Wong, Operational Centre Amsterdam, MSF.

Results
895 patients with a mean age of 55 years (IQR 5.3-10.6) were enrolled; 66% were women, of whom 54.6% were obese. Mean follow up was 8 months (IQR: 5.3 to 10.6) with 16.3% annual loss to follow up. The most common diagnoses were hypertension (85.7%) and diabetes type 2 (37.4%). 17.2% were HIV positive. 60.4% (n=608) of hypertensive and 63.3% (n=289) of diabetic patients were on target at last visit. Uncontrolled hypertension was associated with obesity (OR 1.9, 95%CI 1.1-3.2), and weakly associated with HIV positivity (OR=1.6, CI: 1.0-2.6). Doctors undertook significant additional workload partly because task sharing to nurses did not occur as intended. Specific health literacy or adherence support groups or counselling were lacking. Total incremental financial costs for 2016 were INT$ 394,784; per patient per year costs (INT$ 441.10) were similar to those from chronic HIV programmes.

Conclusion
NCD care can be integrated into OPD and HIV departments as part of MSF-supported primary care by utilising pre-existing structures, and can achieve acceptable intermediate clinical outcomes and retention rates at a cost similar to HIV programmes. Streamlined, algorithm-driven protocols may facilitate task sharing to nurses. Future inclusion of treatment support and adherence counselling as part of care has the potential to improve outcomes further. These findings may inform MSF and MOH policy and further scale up of integrated NCD care.

Conflicts of interest
None declared.

"They share more than we think they are sharing": a mixed-methods evaluation of post-natal clubs in South Africa

Hélène Duvivier[1], Tom Decroo[1], *Tali Cassidy[2], Zodwa Mbakaza[2], **Aurelie Nelson**[2], Laura Trivino Duran[2], Virginia de Azevedo[3], Jude Igumbor[4], Amir Shroufi[2], Emilie Venables[2], Ana Hoxha[2], Kate Buchanan[2], Rinako Uenishi[2], Mpumi Mantangana[2], Leticia Mdani[2], Shariefa Abrahams[3], Clare Hofmeyr4, Beryl Sibanda[2], Nopinky Matinise[2], Nikiwe Mkhosana[2], Petros Isaakidis[2], Pauline Pieters[5], Mark Cotton[6], Jean Maritz[6]

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Introduction
Post-natal mother-to-child transmission of HIV in South Africa is high, (4.3% at 18 months), and uptake of infant HIV testing is poor. Data from the infant diagnosis cascade in Khayelitsha between Nov 2014 and Jul 2016 (781 tested at birth) has shown poor retention in care, with only 25% of infants being tested at 18 months, and 38% after contact tracing. To address these problems, since July 2016, we have established an integrated PMTCT model of care. Post-natal clubs (PNCs) provide maternal and child healthcare together with HIV services to HIV-positive mothers and their infants. PNCs enroll groups of two to ten mother-infant pairs each and meet 1-3 monthly until 18 months.

Methods
We present descriptive statistics using routinely collected data from the intervention. Qualitative data derive from 10 in-depth interviews, 3 focus group discussions, and participant observations conducted during 2017. Interviews and discussions were conducted in isiXhosa or English, transcribed and translated into English where necessary, then coded using NVivo. We used a thematic analysis approach.

Ethics
This study received ethical approval from the ethics committees of the Institute of Tropical Medicine Antwerp; Stellenbosch University; University of Cape Town; Foundation for Professional Development; and the MSF Ethics Review Board.

Results
227 mothers and 232 infants were recruited between Jul 2016 and Dec 2017. 83% (38/46) of mothers were still in care at 18 months. Among those still in care, uptake of infant testing was 134/148 (90.5%) at 9 months and 35/38 (92%) at 18 months, with 0% positivity rate. Of 52 mothers with viral loads completed at 18 months, 49 (94%) were virally suppressed. Mothers reported gaining knowledge about adherence, follow-up tests for babies, infant feeding and early childhood development activities through participation in PNCs. Participation facilitated disclosure and knowledge transmission, enhanced mothers' support networks and helped in coping with stigma by supporting mothers and their families to understand and accept their status. Perceived benefits of PNCs included complete care for mother-infant pairs, making time spent at the clinic more efficient and decreasing the number of consultations. Challenges included dedicated space and workload issues. Participants expressed disappointment about having to leave PNCs after 18 months.

Conclusion
PNCs achieve good retention in care for mothers and babies and have the potential to offer efficient integration of services. Comprehensive care is provided, with benefits to mothers of peer support and a high level of satisfaction. Given human resource constraints, streamlining the model could increase efficiency and some tasks could be shifted to participants. Peer networks generated by PNCs may provide a vehicle for antiretroviral treatment delivery after mothers leave.

Conflicts of interest
None declared.

What next after treatment failure for multidrug-resistant tuberculosis with the short course regimen?

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Introduction
In Eswatini, multidrug-resistant tuberculosis (MDR-TB) treatment guidelines recommend the short course regimen (SCR), following WHO 2016 recommendations. In Eswatini, a high MDR-TB/HIV prevalence country, MSF has examined outcomes with SCR at two treatment sites since 2014 in a study showing a 72.3% success rate. 12 (8.6%) patients in that study had microbiological failure as a final outcome. MSF, together with the Eswatini Ministry of Health, is currently supporting the roll-out of new TB drugs (bedaquiline and delamanid) for management of MDR-TB. We present here a sub-analysis of those 12 patients with microbiological failure, their management and early culture conversion interim results.

Methods
A retrospective analysis of routinely collected data was carried out on those patients experiencing microbiological failure on the SCR, defined as failure to convert by month 6 of treatment, or culture reversion during the continuation phase or first year post treatment. As this is a sub-analysis of a previous study, patients were included between 2014 and 2016. Treatment outcomes, including failure, were followed until August 2017. All patients with an outcome of failure on the SCR were included in this analysis.

Ethics
This research fulfilled the exemption criteria set by the MSF Ethics Review Board (ERB) for a posteriori analyses of routinely collected clinical data and thus did not require MSF ERB review. It was conducted with permission from Sidney Wong, Operational Centre Amsterdam, MSF.

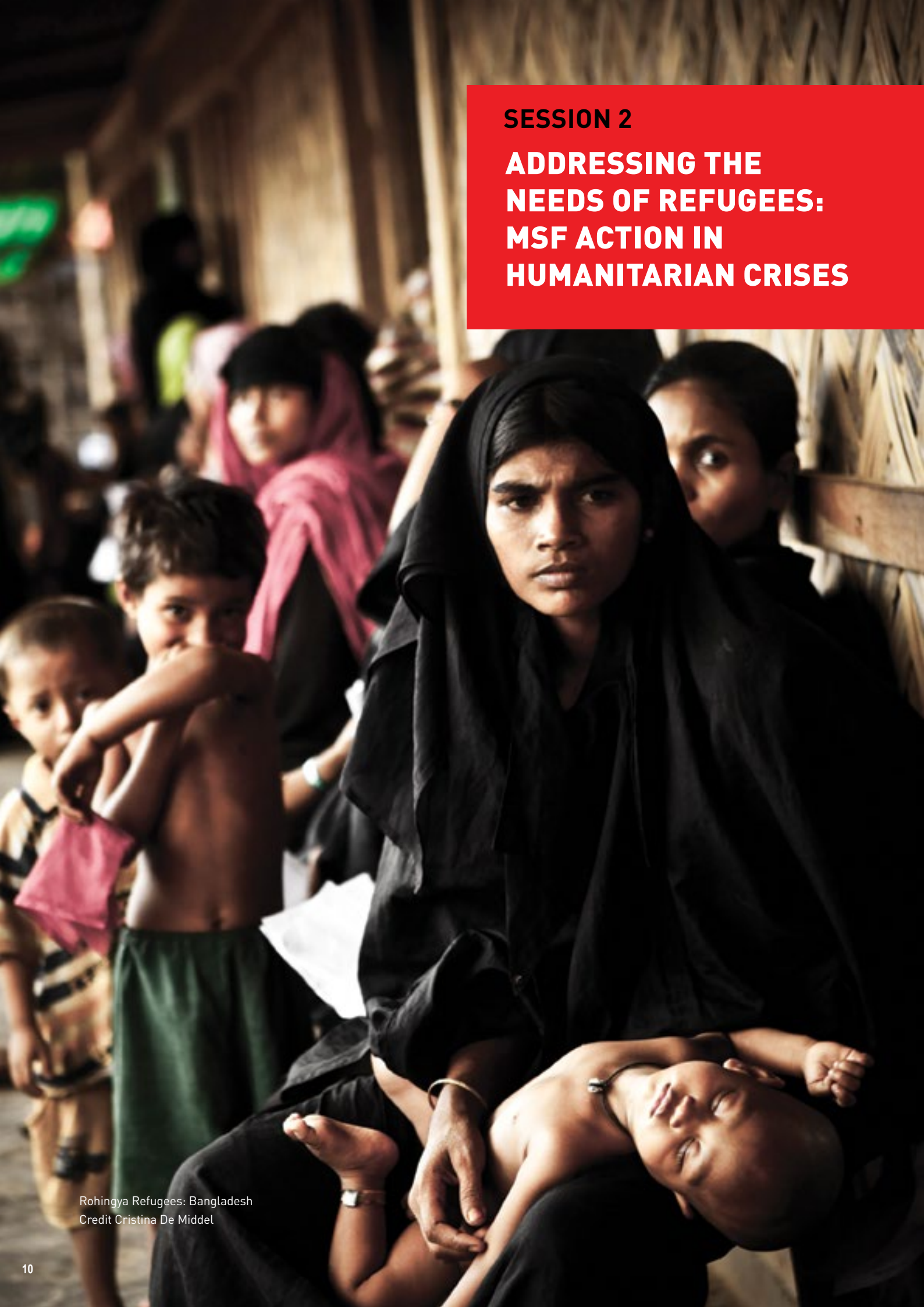
Results
12 patients with MDR-TB who started SCR experienced microbiological failure, comprising four failures to convert, and eight culture reversions. Baseline resistance to ofloxacin was identified in three patients and poor adherence during treatment was noted in four patients. Following failure there was no amplified resistance in six cases, three patients were subsequently classified as pre-extensively resistant (resistance to either aminoglycoside or quinolones), and one amplified from pre-extensively resistant to extensively resistant tuberculosis. A national committee in Eswatini defined individualized new treatment regimens comprising a combination of linezolid, together with bedaquiline and/or delamanid as the backbone of the new regimen. One patient was lost-to-follow-up. Of the remaining 11 patients, 8 (73%) and 9 (90%) showed culture conversion at 2 and 6 months respectively after treatment initiation. One patient died after one year of treatment, having had serious adherence issues.

Conclusion
The short course regimen, with conventional second-line drugs, and regimens with newer TB drugs, are complementary therapeutic strategies to fight MDR-TB. Although study limitations include the retrospective nature of the analysis and the small number of patients, our study indicates promising early treatment outcomes after microbiological failure on the short course regimen.

Conflicts of interest
None declared.

SESSION 2

ADDRESSING THE NEEDS OF REFUGEES: MSF ACTION IN HUMANITARIAN CRISES



Rohingya Refugees: Bangladesh
Credit Cristina De Middel

Rohingya crisis in Bangladesh: summary of findings from six pooled mortality surveys

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Background
On 25 Aug 2017, a military operation in Rakhine State, Myanmar, led to the displacement of 626,000 Rohingya civilians into Bangladesh over the course of the following three months. To assess the scale of the emergency, MSF conducted retrospective mortality surveys in the Rohingya settlements in Cox's Bazar, Bangladesh. The surveys targeted an estimated population of 608,108, 82.8% of whom were newly displaced from Myanmar, having arrived after 25 Aug 2017.

Methods
Five surveys were performed in Nov 2017. Four surveys were carried out in the northern settlements (Kutupalong and Balukhali makeshift settlements, and extensions of these; estimated population 367,812), and one survey was done in the southern settlements (Balukhali 2 and Tasnimarkhola; covering approximately 135,980 people). In the north, the team used simple random sampling (sample size 905 households); in the south, systemic sampling (sample size 1,529 households). The recall period covered roughly equal periods before and after 25 Aug 2017 (27 May-30 Oct). Heads of households described the family structure and date, location and the cause of death of family members who died. A weighted analysis using population estimates for each survey's catchment area was performed.

Ethics
The Medical Director of MSF Operational Centre Amsterdam, Sidney Wong, assumes ethics responsibility for these surveys.

Results
Our findings are representative of approximately 504,000 (80.5%) of the newly displaced Rohingya population. We estimated the crude mortality rate (CMR) to be 7.57 deaths/10000/day (95%CI 6.36–9.00) during the first 31 days of the crisis (25 Aug to 24 Sept 2017), representing an estimated 2.21% of the total population (95%CI 1.86–2.62%). Direct cause of death for the majority of deaths in this time period was violence (73.4%, 95%CI 64.6-80.7); this included shooting (67.6%), being "burned to death at home" (9.9%), being beaten to death (7.8%), sexual violence leading to death (3.3%) and death by landmine (1.6%). Children were not spared violence; under-5 mortality rate estimate was 5.25 deaths/10000/day (95%CI 3.28–8.40) during the first 31 days. This represents approximately 1.53% of the under-5 population (95%CI 0.96–2.43%), with 71.1% (95%CI 44.8-88.2) dying as a result of violence, including shooting (53.2%), being "burned to death at home" (17.4%), being beaten (12.4%), and death by landmine (4.1%).

Conclusion
These surveys show high mortality due to violence in the 31 days after 25 Aug 2017, and suggest that the Rohingya faced mass killings prior to arrival in Bangladesh. The rates of mortality captured here are likely underestimates, as they do not account for people who could not flee Myanmar, nor for families who were killed in their entirety.

Conflicts of interest
None declared.

Care for Syrian refugees with diabetes: outcomes from Médecins Sans Frontières programmes in the Levant

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Presented by **Jamil Qasem**

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Introduction
MSF has been responding to the unmet health needs of displaced Syrians in the Middle East following the start of the Syrian crisis in 2011. As part of its operations, MSF provides care for non-communicable diseases, including diabetes mellitus (DM), to Syrian refugees living in urban and rural locations in Lebanon, Jordan, and previously Iraq. We aimed to a) describe the demographic and clinical characteristics of Syrian refugees affected by DM seeking care in MSF clinics in Lebanon and Jordan, b) assess DM treatment outcomes in these patients, and c) describe common operational challenges affecting diabetes care delivery in the Levant.

Methods
We carried out a retrospective analysis of programme data, including Syrian refugees who received DM care in MSF clinics in Lebanon and Jordan as of 30 Sept 2017. We analysed treatment outcomes for patients who had been followed in the programme for ≥6 but ≤12 months, for whom ≥two HbA1C results existed, with a repeat HbA1C after the first six months. We report statistics descriptively and calculated HbA1C means and proportions. Lists of key challenges were solicited from medical supervisors in the relevant projects.

Ethics
This research fulfilled the exemption criteria set by the MSF Ethics Review Board (ERB) for a posteriori analyses of routinely collected clinical data and thus did not require MSF ERB review. It was conducted with permission from Sebastian Spencer, Operational Centre Brussels, MSF.

Results
Amongst 13,118 Syrian refugees within the noncommunicable disease programmes in Lebanon and Jordan on 30 Sept 2017, 6923 (52.7%) had a diagnosis of DM. 4063 DM patients were female (58.7%), 4682 were aged 40 to 65 years (67.7%), and 6470 were diagnosed with type II DM (93.4%). 90.3% (n=5991) already had a diagnosis of DM at enrollment. 35.2% of the type II DM patients in Lebanon presented with >=2 comorbidities, compared with 20.8% in Jordan ($p<0.05$). In Lebanon, enrolled patients had a higher first HbA1C (9.5%) compared to those in Jordan (8.5%, $p< 0.05$). Out of the 781 (11.2%) DM patients in both countries followed up by the programme for ≥6 and ≤12 months by 30 Sept 2017, 195 (25%) had ≥two HbA1C tests done, with the repeat test ≥6 months after the first. Of these 195 patients, the mean of the first HbA1C was 8.47% (SD=1.88) and 9.51% (SD=2.25) and the mean of the second HbA1C was 7.74% (SD=1.7) and 7.75 % (SD=1.36) in Jordan and Lebanon, a reduction of 1.76% and 0.73% respectively. The main challenges included access to affordable and continuous DM care including access to insulin, difficulties affording an appropriate diet, modifying lifestyle and patient literacy.

Conclusion
A high number of Syrian refugees in this region are accessing diabetes care via MSF, with most individuals having a previous diagnosis. Despite the challenges faced in such settings good clinical outcomes can be achieved through provision of diabetes management at primary care level.

Conflicts of interest
None declared.

SESSION 3

MSF OPERATIONS PREVENTING AND RESPONDING TO INFECTIOUS DISEASE: WHAT HAVE WE LEARNT?

MSF Ebola Treatment Center In Conakry, Guinea.
Credit:Tommy Trenchard

Single-dose oral ciprofloxacin prophylaxis in response to a meningococcal meningitis epidemic in the African meningitis belt: three-arm cluster-randomized trial

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Introduction
Meningococcal meningitis epidemics are common in the African meningitis belt. Reactive vaccination campaigns may often be late, and therefore have limited impact. Vaccine supplies against newly emergent Neisseria meningitidis serogroup C are limited, therefore new epidemic response strategies are needed.

Methods
We conducted a three-arm, open-label, cluster-randomized trial of single-dose ciprofloxacin prophylaxis during a meningitis epidemic in Madarounfa District, Niger. Villages notifying a suspected meningitis case were randomly assigned (1:1:1) to standard care, single-dose oral ciprofloxacin for household contacts within 24 hours of notification, or village-wide distribution of ciprofloxacin within 72 hours of notification. Dosing was age-based and administration directly observed. The primary outcome was the overall attack rate (AR) of suspected meningitis during the epidemic. Comparisons were made using a cluster-level t-test of the log-transformed attack rates, using inverse variance weights to account for different cluster sizes and numbers of cases. To adjust the AR ratio for potential confounders that were not balanced between arms, we performed Poisson regression. A random sample of 400 participants across 20 villages was enrolled to describe any changes in prevalence of fecal carriage of ciprofloxacin-resistant Enterobacteriaceae before and after the intervention.

Ethics
This study was approved by the Comité Consultatif National d'Ethique, Niger, and the MSF Ethics Review Board. ClinicalTrials.gov number, NCT02724046.

Results
Between 22 April and 18 May 2017, 49 villages (total population 71308) were included and randomized; 17 to standard care, 17 to household prophylaxis, and 15 to village-wide prophylaxis. A total of 248 cases were notified in the study. AR was 451 per 100000 persons in the control arm; 386 per 100000 persons in the household prophylaxis arm (t-test versus control p=0.68); and 190 per 100000 persons in the village-wide prophylaxis arm (t-test versus control p=0.032). In adjusted analysis, the only potential confounder retained was whether the village was included prior to the first rainfall. Adjusted AR ratio between the village-wide prophylaxis arm and the control arm was 0.40 (95%CI 0.19–0.87). Baseline carriage prevalence of ciprofloxacin-resistant Enterobacteriaceae was 95% in both the control arm and the village-wide prophylaxis arm and did not change post-intervention.

Conclusion
Village-wide distribution of single-dose oral ciprofloxacin within 72 hours of case notification reduced overall meningitis AR. Given the low price of ciprofloxacin, and its ability to be stocked in-country, this strategy holds promise as a potential epidemic response. Broad application of these findings would require additional evidence, which should ideally include data from urban areas, and confirm duration of protection, and monitor potential impact on antimicrobial resistance.

Conflicts of interest
None declared.

Pregnancy and Ebola: survival outcomes for pregnant women admitted to MSF Ebola treatment centres in the West Africa outbreak

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Introduction
Data on pregnancy and Ebola virus disease (EVD) are scarce but suggest high maternal (90%) and neonatal (100%) mortality. During the 2014-2016 West Africa EVD outbreak, MSF managed nine Ebola treatment centres (ETCs) in Guinea, Sierra Leone, and Liberia. We compared survival outcomes for EVD-confirmed pregnant women with those of EVD-confirmed clinically and self-reported non-pregnant women of reproductive age (WRA) attending ETCs.

Methods
We retrospectively analyzed data from March 23rd 2014 to October 23rd 2015. ETCs reported cases of women with confirmed EVD during pregnancy to the lead researcher; patient files were also searched manually to retrieve missing data. Confirmation of pregnancy was done clinically or with urine hCG testing, which became standard during late 2014. Gestational age was estimated clinically by abdominal palpation. EVD was confirmed using RT-PCR. We compared survival for EVD-confirmed pregnant women versus EVD-confirmed WRA and estimated differences in trimester of gestation and cycle threshold (CT) values using chi-squared tests for trend.

Ethics
This research fulfilled the exemption criteria set by the MSF Ethics Review Board (ERB) for a posteriori analysis of routinely collected clinical data and thus did not require MSF ERB review. It was conducted with permission from Bertrand Draguez, Medical Director, Operational Centre Brussels, MSF.

Results
3959 of 4967 patient files (80%) were available for analysis, including 77 EVD-confirmed pregnant women, of whom 36 survived (46.8%, 95%CI 35.3-58.5). Survival rates were not different between pregnant women (n=77) and WRA (n=1204; p=0.27). Survival was associated with low viral load on admission (CT<18, 0% survived, CT≥18; 58%, n=34; p<0.001) and with first trimester (75%, n=12) versus second (53%, n=14) or third trimester (35%, n=10; p=0.04) of pregnancy. Amongst the 77 pregnancies, 22 women died undelivered; there were 52 deliveries or miscarriages, for two women data on delivery or miscarriage were missing, and one woman delivered a stillbirth at home. All but two foetuses were stillborn; one neonate died two days after birth and one survived congenitally-acquired EVD. In 22 women, RT-PCR was positive for EVD in amniotic fluid, placenta, or other products of conception after birth.

Conclusion
We report on the largest series of pregnant women with confirmed EVD. Maternal survival appeared higher than previously documented, and was associated with lower viral load at admission and earlier trimesters of pregnancy. We did not see survival differences between EVD pregnant and non-pregnant women. We noted persistent EVD RNA positivity in amniotic fluid and products of conception in some women. We strongly recommend routine pregnancy testing at admission for suspected EVD in WRA. Limitations include missing patient data, the absence of routine pregnancy testing during the epidemic's peak, and potential inclusion of more first trimester pregnancies in comparison with historical data.

Conflicts of interest
None declared.

Integration of hepatitis B prevention strategies within PMTCT programmes, Maputo, Mozambique

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Introduction

Hepatitis B infection (HBV) in endemic areas is most commonly spread from mother to child at birth, or from person to person during early childhood. For prevention of mother to child transmission (PTMCT) of HBV, WHO recommends antenatal HBsAg screening when HBV prevalence is above 2%, together with identification of pregnant women with high HBV viraemia, assessment of need for prophylactic antiviral therapy in the third trimester, incorporation of birth dose (BD) vaccination into universal schedules, and implementation of full HBV vaccine coverage. WHO has estimated HBV prevalence in the African region as 6.1% in 2017, and prevalence in Mozambique may be as high or higher. Screening, BD vaccination, and HBV treatment, are not available as part of PMTCT in the Mozambique public health system. Since Nov 2017, MSF has supported the Mozambique Ministry of Health in piloting the integration of HBV diagnosis, care and prevention into existing HIV PMTCT services within Chamanculo Maternity Hospital, Maputo, Mozambique.

Methods

As part of routine antenatal care and delivery services, all pregnant women are offered screening with the HBsAg rapid diagnostic test (RDT; Alere). If the HBsAg RDT is positive, blood is collected for HBeAg, HBV viral load (VL) and AST/platelet ratio (APRI), and non-invasive liver fibrosis assessment is done. Women fulfilling WHO criteria are offered treatment, and all exposed newborns are given BD vaccination.

Ethics

This research fulfilled the exemption criteria set by the MSF Ethics Review Board (ERB) for a posteriori analyses of routinely collected clinical data and thus did not require MSF ERB review. It was conducted with permission from Micaela Serafini, Operational Centre Geneva, MSF.

Results

Between Nov 2017 and Jan 2018, 1473 pregnant women were screened for HBsAg, median age 27 (IQR 22-30). 50 women (3.4% of 1473) were HBsAg positive. Three HBsAg positive women (6%) were detected during the first trimester, 24 (48%) in the second, 19 (38%) in the third, and 4 (8%) were detected at delivery. Out of 48 serological and virological results available, 3 (6.3%) patients were HBeAg reactive, all with VL≥104IU/ml. 29 (60.4%) had VL detectable at any level; out of those detectable, two (6.9%) had VL>20000IU/ml, and one with VL≥106IU/ml. APRI score was calculated in the first consultation for 37 patients: 32 (86.5%)< 0.5, 4 (10.8%)≥0.5<1, 1 (2.7%)≥1<1.5. No patient had an abnormal ALT level, and no patients fulfilled treatment criteria.

Conclusion

We documented an HBV prevalence of 3.4% in a cohort of pregnant women in Maputo. This highlights the need to implement routine HBsAg screening in antenatal and maternity services, include HBV BD vaccination in the national immunization schedule and provide access to HBV treatment.

Conflicts of interest

None declared.

BIOGRAPHIES
PRESENTERS

MSF's Irbid NCDs project - Jordan
Credit: Maya Abu Ata

BIOGRAPHIES

SESSION 1

Lorraine Pasipamire

Lorraine joined MSF OCG Eswatini mission in 2013 as a data processing specialist. Currently she is working as a monitoring and evaluation data manager. She is responsible for providing technical leadership in HIV, drug sensitive and drug resistant TB data management for the two MSF Shiselweni projects. She is a holder of a Bachelor's degree in Health Education and Health promotion, awarded by the University of Zimbabwe (2007) and also holds a Master's degree in Business Management (MBA) in Health Care Management. Currently she is pursuing her Master's degree in Public health with Atlantic International University.

José Carlos Beirão

José Carlos Beirão was born in Mozambique. He holds a degree in veterinary medicine, and is currently studying for a Masters degree in Public Health. He has been working in HIV and TB research projects, working in the clinical research laboratory at the Catholic University of Mozambique Research Center in Beira since 2011. In 2015, he went to Liberia for the Ebola response, working with an NIH project as Laboratory Manager in a clinical research laboratory. He joined MSF in 2016 in the Beira-Mozambique HIV project and has been involved in the implementation of PreP.

Éimhín Ansbro

Currently, Éimhín is a research fellow in NCDs in humanitarian settings at the London School of Hygiene and Tropical Medicine. Her post is funded by MSF to evaluate some of the current MSF NCD programmes. She is a specialist in General Practice with an interest in public health, chronic disease care and travel medicine. She has worked as a project doctor with MSF, and an NCD consultant with the MSF Manson Unit in the UK, working on the organisation's NCD guidelines, amongst other projects. Éimhín is interested in helping to design streamlined, algorithm-driven care for NCDs in humanitarian settings and, in particular, in the role fixed dose combination drugs may play in this area.

Aurelie Nelson

Aurelie Nelson studied medicine at Oxford University, after completing a BSc in Microbiology at McGill University. Since then, she has been working in South Africa for the last 8 years, first in a rural hospital in KZN and then in obstetrics in Cape Town. She joined MSF in 2014 as the Maternal and Child Health manager. She has been involved in implementing the PMTCT programme in Khayelitsha with previous work focusing on early infant diagnosis including birth testing. She is currently working on the evaluation of the PMTCT post-natal clubs that will be presented today.

Debrah Vambe

Debrah Vambe attained her bachelor of medicine and surgery degree from the University of Zimbabwe. She has a Masters in Philosophy in HIV/AIDS Management from Stellenbosch university and is currently studying for an MPH with the University of Witwatersrand, specializing in Health Systems and Policy. She has been a clinician for twelve years and has been in public health for three years dealing mainly with drug resistant TB. She has assisted with the implementation of the short course DRTB regimen, new TB drugs and with strengthening health systems and pharmacovigilance. She has also developed and implemented TB mortality audits with the hope of reducing avoidable deaths through improvement of TB management. She is an advocate for TB policies and wants to ensure patient centered care as a key strategy in providing quality TB care, making sure people infected and affected with tuberculosis do not suffer unnecessarily.

SESSION 2

Ruby Siddiqui

Ruby works as an operational epidemiologist in the Manson Unit of MSF-UK. She supports MSF field projects with emergency response, medical surveillance and monitoring, outbreak investigation, and operational research. This includes specific support for infectious and tropical diseases and sexual and gender-based violence (SGBV). She also supports GIS mapping, qualitative research, community-based surveillance, and humanitarian affairs issues. Her current research interests include mathematical modelling of hepatitis E and measles outbreaks, exploring community perceptions and health-seeking behaviour around SGBV, and risk mapping of visceral leishmaniasis in Bangladesh and human African trypanosomiasis in Central Africa. Previous research includes leprosy in India and Ethiopia, HIV in South Africa, visceral leishmaniasis in Brazil, and polio in Ghana as well as mathematical modelling of hepatitis B vaccination and influenza interventions in the UK.

Jamil Qasem

Dr Jamil Qasem is a general practioner from Jordan. He has been working with MSF for the last 15 months in the non communicable disease project in Irbid and has previously worked for many years providing primary care with the Jordanian ministry of health.

BIOGRAPHIES

SESSION 3

Matt Coldiron

Matt is a medical epidemiologist. Based in Paris, he joined Epicentre after completing training in internal medicine at Bellevue Hospital/New York University School of Medicine in New York, USA. His main areas of interest include meningococcal meningitis, malaria and neglected tropical diseases.

Séverine Caluwaerts

Séverine Caluwaerts is an obstetrician-gynaecologist from Belgium who has been working with MSF since 2008 in different contexts, including Sierra Leone, Burundi, Democratic Republic of Congo, Afghanistan, Pakistan, Niger, Central African Republic). Since 2011 she has been the gynaecology coordinator for MSF, Operational Centre Brussels. She also continues to work as a clinician at the Institute of Tropical Medicine (ITM) in Antwerp, Belgium, and is involved in teaching of medical doctors and nurses. She acquired a diploma in Tropical Medicine from ITM and a Masters in Public Health from Liverpool University, UK.

Natalia Tamayo Antabak

Natalia Tamayo Antabak is a medical doctor, specialising in internal medicine. She has a Masters degree in International Health and Cooperation and lectures on research methodology in the Autonomous Barcelona University, Spain. She has been working with MSF since 2010 on HIV, MDRTB and Hepatitis in Eswatini, Kyrgyzstan and Myanmar. Since 2017 she has been the medical activity manager for chronic viral hepatitis in the OCG Chamanculo Project in Maputo, Mozambique, implementing treatment for Hepatitis C. The project is a collaboration with the MoH and is focused on providing care for people who inject drugs and implementing the HBV PMTCT programme being presented today.

Living With Diabetes - Syrian Refugees in Lebanon
Ghazal Sotoudeh

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