Cover photo:
On the Greek island of Samos, volunteers and MSF staff carry a wounded boat passenger on land to receive medical care.

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Bart Janssens
Tom Ellman
MSF OPERATIONAL RESEARCH DAY 2016

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Dear Friends,

It is a real pleasure to welcome you to our fifth OCB Operational Research Day; this is an anniversary year, five years ago we took the initiative to have a day at the end of the Head of Mission/Medical Coordinators week and as a kick-off to the OCB Gathering where we present part of our work.

The work we present is related to feasibility of operational approaches adapted to field realities, to the piloting of new medicines, tools, operational models and to better understand the needs of the people we treat. We often work in very difficult situations; our research is to show that good care is possible and to convince other organisations and decision-makers that this is feasible. We need good data, analysis and good written reports to share our results.

Over the last five years our OR Day has developed with more field staff involved in the research and presenting the results. We also created more space for debate the last years by developing the last slot into a panel discussion about one of the main issues of today.

This year forced displacement has been one of our main interventions, inside Europe and elsewhere. We will have a slot presenting some of the results and we will also have a discussion about our operations. The needs of the people are not primarily medical, the political positioning is changing constantly, humanitarian aid is used for political goals and the priority for the states is deterrence rather than care. Is our approach adapted? Do we respond to the needs of the people?

This year our trauma centre in Kunduz has been brutally attacked. During our OR Day we will present the data of the important work done in the hospital just until the attack and also our work on physiotherapy we do together with Handicap International. We have exciting presentations about Hepatitis C treatment, new treatment for drug-resistant Tuberculosis, treatment of acute myocardial infarction and the contribution of community ART groups in reaching the 90-90-90 targets.

Let us today listen and learn from our work of the past year in order to do better next year. Let us use our results to influence others and continue to document even better in the future our successes and failures.

Meinie Nicolai
President MSF Belgium and MSF Operational Centre Brussels
AGENDA

09.00  OPENING REMARKS
Meinie Nicolai

09.15  Slot 1: Emerging operational challenges with HIV, TB and Hepatitis C
Chairs: Nathan Ford and Marc Biot

- Hepatitis C treatment in a primary care clinic in the high HCV burden setting in Karachi, Pakistan
  Rosa Auat

- Reaching 90-90-90 targets: the role of community antiretroviral therapy (ART) groups in Mozambique
  Ruggero Giuliano

- Community-based testing strategies among sex workers along a transport corridor in Mozambique
  Caroline Rose

- “Too little, too late”: new anti TB drugs for patients with complex drug-resistant tuberculosis in Mumbai
  Sylvie Jonckheere

How do low birth-weight neonates fare two years after discharge from a low technology neonatal care unit in a rural district hospital in Burundi?
Brigitte Ndelema

Introducing fibrinolysis as emergency therapy in Timergara hospital, Pakistan — what happens beyond the emergency department?
Stefano Malinverni

Psychological suffering among Ebola Virus Disease survivors in Monrovia, Liberia, 2014-2015 (including elements from qualitative study)
Ionara Rabelo

Averted health burden over four years at Médecins Sans Frontières (MSF) Trauma Centre in Kunduz, Afghanistan, prior to its destruction in 2015
Esmatullah Esmat

11.00  COFFEE

11.30  Slot 2: Pushing the limits of medical care in unstable environments
Chairs: Sebastien Spencer and William Etienne

13.00  LUNCH

14.00  Slot 3: Health consequences of forced migration and restrictive migration policies
Chairs: Marietta Provopoulos and Tom Ellman

- Interdisciplinary care for survivors of sexual violence, torture, and traumatic experiences - lessons learned from a clinic in a capital city in North Africa

Refugee crisis in Europe: health status, life experiences, and mental health problems of transiting refugees and migrants on the Balkan route in 2015
Iro Evlampidou

Traumatizing journeys and inhospitable stays: mental health conditions among migrants/refugees and asylum seekers in transit countries and upon arrival in Europe
Aurelia Barbieri

15.20  TEA/COFFEE

15.40  Slot 4: Panel discussion: What is the operational role of MSF for migrants and refugees arriving in Europe, how far should we go?
Chairs: Leen Verhenne and Stephan Oberreit

Presentation
State of affairs of MSF’s operations
Federica Zamatto

Discussion
Medical operational responses, dilemmas, strategies, etc
Panel: Loris de Filippi, Franz Luef and Luka Juranic

17.00  CLOSING
Bertrand Dragnez

RECEPTION

How do low birth-weight neonates fare two years after discharge from a low technology neonatal care unit in a rural district hospital in Burundi?
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RECEPTION
Hepatitis C treatment in a primary care clinic in the high HCV burden setting in Karachi, Pakistan

Introduction
The burden of Hepatitis C (HCV) infection in Pakistan is among the highest in the world with national HCV prevalence reported to be 4.9%. However in urban communities in Karachi the prevalence is suspected to be higher. Interferon INF-free treatment for chronic HCV (CHC) infection with direct acting antivirals (DAAs) could allow scale up, simplification and decentralization of treatment to these communities. Since May 2015 MSF has been supporting the diagnosis and treatment of hepatitis C, using sofosbuvir and weight-based Ribavirin in Machar Colony, Karachi, Pakistan. Treatment was initiated and followed up by general practitioners in the primary care clinic. We describe initial outcomes of this programme.

Methods
Patients screened for hepatitis C and those found positive were included in the analysis. Routine demographic and clinical outcome data was collected prospectively.

Results
2539 patients were tested for HCV antibody. 719 (28%) were positive and of these, 646 (89%) were found to have CHC. 176 (27%) of patients with CHC had APRI >1.0. 111 HCV genotype (GT) results were available: 99 (89%) had GT 3, 9 (8%) GT1, and 3 (3%) GT2. 111 patients initiated treatment. To date, 6 patients have completed treatment, all with negative HCV RNA at completion.

Conclusions
Interim results suggest feasibility of CHC treatment with DAAs prescribed by general practitioners at a primary care clinic. Simplified diagnostic algorithms and availability of less toxic, shorter and more effective treatments has greatly facilitated access to HCV treatment in this setting. Ongoing advocacy to ensure access and price reductions for such drugs must be supported.
Reaching 90-90-90 targets: the role of community antiretroviral therapy (ART) groups in Mozambique

Introduction
The UNAIDS 90-90-90 targets are that by 2020: 90% of HIV-positive people should know their status; 90% of HIV-positive people who know their status should be on antiretroviral therapy (ART); and 90% of people on ART should achieve virological suppression. Community ART groups (CAGs) are groups of patients who collect ART drugs for each other. CAGs, self-formed by patients in Tete, Mozambique since 2008, have been shown to support scale up of ART, reduce the burden for patients and facilities, and increase patient retention. Other potential impacts of CAGs (promoting testing, linkage to care, viral load [VL] uptake, and adherence) were explored in Changara, Mozambique.

Methods
A retrospective analysis was performed of: routine, community-based, HIV-testing data from July 2012 to Dec 2014; and virological outcomes of patients receiving ART for >6 months from Dec 2013 to Dec 2015. HIV prevalence and linkage outcomes were stratified by referral method: immediate CAG family member; other CAG contact (non-immediate family member or neighbour); and non-CAG contact. VL coverage and outcomes were stratified by CAG or non-CAG membership.

Results
16,750 people were tested, including 9192 (55%) identified via CAG contacts. Overall, the HIV positivity rate was 5%. CAG family members had higher positivity compared with other CAG and non-CAG contacts (combined) among adults (18% [108/608] vs. 6% [600/10869]; p<0.01) and children (4% [41/994] vs. 1% [40/3741]; p<0.01). No significant differences in positivity were observed between ‘other CAG contacts’ and ‘non-CAG contacts’. Linkage to care was high (77%; 597/772) among all groups, no significant differences were observed between referral methods. Linkage within 6 months was achieved for 84% of children (<15 years) who tested positive, 75% of youth (15-24 years), and 78% of adults (≥25 years). VL coverage was higher among CAG than non-CAG patients (77% [1688/2182] vs. 52% [708/1354]; p<0.01). Overall 39% (946/2396) had VL ≥1000 copies/mL, with no significant difference in proportion with elevated VL by CAG status.

Conclusion
Index case testing of CAG members including relatives and extended family and friends is a simple way to identify a high-risk population. High linkage to care was observed; while no significant difference was observed by referral method, a reduction in stigma within the community may, arguably, have indirectly resulted from the long-term CAG presence. CAGs facilitated improved VL coverage, although VL results are worryingly high, mirroring other sites in Mozambique, regardless of CAG status, providing no evidence that CAGs have improved adherence in this context. Further work is necessary to maximise the benefit of differentiated ART delivery models across the 90-90-90 targets.

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Community-based testing strategies among sex workers along a transport corridor in Mozambique

**Background**

The MSF Corridor project aims to implement a comprehensive intervention for sex workers (SW) along the transport corridor in Mozambique and Malawi. The community-based model incorporates outreach services, HIV testing and counseling, condom distribution, quarterly follow-up testing for HIV negative SW, and access to STI and HIV care. Sex worker peer educators (SWPE) play an important role in supporting outreach activities, health education and linkage to care. This analysis describes testing, retesting and seroconversion among SWs in Tete and Sofala, Mozambique and explores SWPE perspectives on their role.

**Methods**

Retrospective analysis of routinely collected data included SWs enrolled in the outreach program between January 2014 and June 2015. The proportion HIV positive among SWs who initially tested between January 2014 and June 2015, and the proportion of those initially negative who retested within 6 months was assessed. Seroconversion was determined among those who retested within 6 months. Participant and non-participant observations were conducted during SWPE outreach activities in four project sites, along with nine in-depth interviews and two focus group discussions.

**Results**

1461 female SWs were enrolled in Tete, with a median age at first contact of 28 years [23-32]. Among 1008 SWs tested, the HIV positivity at initial test was 48%. Of an additional 384 who had previously tested but were not tested within the program prior to July 2015, 67% reported a positive HIV status. Overall HIV positivity rate was approximately 59%; 40%, 64%, and 78% among SWs < 25 years, 25-34 years and ≥35 years, respectively. 40% of SWs initially HIV negative retested within 6 months and 7 (3%) seroconverted (median time: 136 days). Of 349 SWs enrolled in Sofala with a median age at first contact of 27 [23-31], 52% were positive overall; 44%, 51%, and 77% among SWs < 25 years, 25-34 years and ≥35 years, respectively. Of 148 who tested negative, 49% retested within 6 months and 7 (10%) seroconverted (median time: 85 days). SWPEs described their ability to reach out to their peers, to engage new and ‘informal’ SWs with health-care services including HIV testing. Challenges included experiencing prejudice and being undervalued by non-SWs on the team.

**Conclusion**

Despite stigma and mobility challenges, the majority of SWs contacted agreed to be tested. Among those negative, almost half retested within 6 months. However, retention for retesting remains a major challenge. HIV prevalence and apparent incidence demonstrate the extreme risk among this group and importance of community strategies to access testing, treatment and prevention, including PREP. SWPEs have a key role in developing trust among their peers and supported the uptake of testing and re-testing. Greater efforts are needed to develop their role within SW programs.

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“Too little, too late”; new anti-TB drugs for patients with complex drug-resistant tuberculosis in Mumbai

Introduction
Mumbai has a large burden of pre-extensively, extensively and extremely drug-resistant tuberculosis (pre-XDR-TB, XDR-TB, XXDR-TB). The composition of an effective treatment regimen with four working anti-TB drugs is nearly impossible for patients with complex resistance patterns. Two new anti-TB drugs—bedaquiline (BDQ) and delamanid (DLM)—have renewed hope for improved individual outcomes and stopping DR-TB transmission. However, until early 2016 co-administration of BDQ-DLM was strictly discouraged. Médecins Sans Frontières (MSF) has been treating DR-TB and HIV in Mumbai since 2006, and introduced BDQ and DLM through compassionate use (CU) in 2013 and 2015 respectively. The aim of this study is to describe programmatic experiences with BDQ and DLM in the treatment of complex DR-TB patients.

Methods
This was a retrospective cohort study among DR-TB patients who were registered for BDQ or DLM use between February 2013 and February 2015.

Results
Of 226 DR-TB patients, 26 were eligible for CU of new drugs (12-BDQ;14-DLM). Eighteen patients were female; aged between 17-47 years and two were HIV-co-infected (BDQ-group). Five patients had pre-XDR-TB and 21 XDR-TB. One pre-XDR-TB and two XDR-TB patients had no previous history of exposure to second-line anti-TB drugs. Eleven of 12 patients started BDQ but only 12/14 started on DLM; two patients died before treatment initiation and regimen for one could not be designed (only one working drug). BDQ or DLM was added to backbone-regimen in baseline culture-positive/negative patients (BDQ-group:9 culture-negative, 2 culture-positive; DLM-group:3 culture-negative, 9 culture-positive). Nine of 12 patients in BDQ and 12/14 in DLM-group had ≤2 likely working drugs in their regimen. By January 2016, 16/20 patients had sustained culture-conversion to negative. Serious adverse events possibly related to new drugs were recorded in 4 patients (2 in each BDQ/DLM-group); none had to permanently stop treatment. Three deaths were reported; cause of death was likely due to evolution of TB (BDQ), complication of surgical procedure (DLM) and one cause of death could not be ascertained (DLM).

Conclusions and Programmatic Implications
A large proportion of patients eligible for CU of new drugs have exhausted most likely working drugs; “they come to us too late”. Adding BDQ or DLM alone to a weak backbone regimen bears a high risk of adverse treatment outcomes and resistance amplification to newer drugs; “one drug is too little”. There is an urgent need for combination treatment with potent drugs such as BDQ and DLM together.

While a few patients benefit from new drugs, many likely die before accessing it (2/26 in our cohort) mostly due to complex and restricted access.

If patients remain undetected or inadequately treated, there is person-to-person DR-TB transmission in the community, as shown by the 2 primary XDR in our cohort. Implementation of new treatment modalities implies capacity-building in pharmacovigilance and intensified treatment monitoring. Rather than adopting a “too little, too late” approach in settings with complex TB resistance patterns we should treat DR-TB promptly and aggressively.
How do low birth-weight neonates fare two years after discharge from a low technology neonatal care unit in a rural district hospital in Burundi?

Introduction
Neonatal mortality accounts for 40% of under-five mortality, and is associated with low birth-weight (LBW < 2500g). In 2008, MSF introduced a model of emergency-obstetrics and neonatal care in a rural MSF-hospital in Burundi. The model was unique in that it relied on low-technology. Mortality in the neonatal special care unit (NSCU) hovered around 15%. However, little is known on how such LBW babies fare in the longer-term. Two years after hospital discharge, we thus assessed: i) infant mortality, ii) prevalence of developmental impairment, and iii) the nutritional status of these children.

Methods
A structured questionnaire survey integrating a screening tool for the detection of disabilities or impairments (Multiple Indicator Cluster Survey) was used. We included LBW neonates discharged between January and December 2012, and who resided in Bujumbura Rural province. The survey was conducted between August and November 2014.

Results
Of 146 LBW neonates who were discharged from the NSCU, 39 (27%) could not be included in the survey; 16 (11%) were not known by the village chiefs nor the community (false addresses?); 12 (8%) patient-files were not found, five (3%) had left Bujumbura Rural province and six (4%) had died within a median of 183 days (ranges: 10–191) of discharge from infectious or respiratory causes. Of the remaining 107 (73 %) infants who were traced, median age was 27 months (Inter Quartile Range: 23-29). At least one developmental impairment was found in a total of 29 (27%) children and in 9 (8%) infants had five or more impairments. Main impairments included speech (25; 23%), delays in motor development (18; 17%), learning (13; 12%), abnormal movement of arms and/or legs (12; 11%) and being able to name at least one object (10; 11%).

Compared to LBW infants (1500-2500 grams, n=100; 93%), very low birth weight (V LBW, < 1500 grams, n=7; 7%) infants were found to be at significantly higher risk of developmental impairments including marked intellectual impairment (P=0.001). The need for constant assistance creating a burden on the household was also associated with VLBWs (P= 0.009). Alarming levels of malnutrition were observed in all infants with 19% having acute (moderate to severe) malnutrition. The risk of acute malnutrition was 3 ½ times higher in VLBWs. (P=0.02).

Conclusions
In this first prospective study assessing the longer-term status of LBWs infants in rural Africa, we found that seven in ten infants had no impairments detected on screening. However, the remainder with developmental impairments (and particularly VLBWs) would need continued individual and household support. We found alarming rates of acute malnutrition and this needs focused attention. A study limitation is that a considerable number of very vulnerable infants who may have needed additional care and support could not be traced. This highlights the need for improved surveillance and follow-up systems after hospital discharge.

Operational implication
Innovative ways of addressing these operational challenges including closer collaboration with other stakeholders are urgently required.
Introducing fibrinolysis as emergency therapy in Timergara hospital, Pakistan – what happens beyond the emergency department?

Introduction
Since 2009, Médecins Sans Frontières (MSF) has supported the emergency department (ED) of the district headquarter hospital in Timergara, Pakistan. The high numbers of patients presenting with acute coronary syndrome (ACS) and especially ST Elevation Myocardial Infarction (STEMI) prompted MSF to introduce fibrinolysis with Streptokinase (SK) as ED intervention. As this represented the first experience of MSF fibrinolytic therapy in an emergency context, and as adequate post-fibrinolysis care cannot necessarily be ensured in this context, we conducted a study to assess the short- and mid-term outcomes of patients receiving fibrinolysis.

Methods
This is a descriptive study using routine retrospective programme data and follow-up phone interviews. The study included patients who presented with acute STEMI and received SK in the ED between July 2015 and February 2016. A structured follow-up questionnaire was administered by phone to gather information on patient outcomes (alive/dead, presence of heart failure, recurrence of chest pain, compliance to pharmacological treatment) one and three months post hospital discharge. Two trained national ED doctors performed the follow-up calls in the local language and encoded the results in English.

Results
Between July 2015 and February 2016, a total of 453 patients presented with ACS at the Timergara ED, of whom 322 (71%) had STEMI. Of 322 patients with STEMI, 185 (57%) were male and 242 (75%) had no contraindication to fibrinolysis and received SK. 24 (10%) developed complications after SK in the form of transient hypotension/anaphylactic shock (9), bleeding (7), and arrhythmia (6). Among the 242 patients receiving SK in the ED, 192 (79%) were discharged home after admission to the cardiac ward, 28 (12%) died – 18 in the ED and 10 in the cardiac ward – 5 (2%) were lost to follow-up, 5 (2%) were referred and 12 (5%) had missing records at the cardiac ward. By February 2016, 208 patients were eligible for follow-up, of whom 107 (51%) and 73 (35%) were contacted one month and three months post-discharge, respectively. After one month, 6 (7%) patients have died, and no further deaths had occurred by the third month post-discharge. Seven (7%) and 4 (5%) patients respectively had signs of heart failure (swelling in ankle, dyspnea) and at least one episode of chest pain at one and three months post-discharge. Overall, only 10 (9%) of patients sought medical advice for follow-up one and three month after discharge, and none required re-admission.

Conclusion
In the context of Timergara hospital in Northern Pakistan, fibrinolysis treatment with SK among STEMI patients was feasible in the ED: good immediate outcomes, as well as hospital outcomes and post-discharge outcomes were observed. In resources-limited settings where high numbers of ACS patients are seen, fibrinolysis can be considered, even when MSF cannot guarantee post-fibrinolysis follow-up. However, post-discharge monitoring of patients remains a bottleneck, and new approaches for improved monitoring – such as stronger links at health centre and community level – are required.

Introduction
The West Africa 2014-2015 Ebola outbreak produced an unprecedented volume of Ebola survivors. From August 2014 to March 2015, Médecins Sans Frontières-Operational Centre Brussels operated an Ebola Treatment Unit (ETU) in Monrovia, Liberia and provided medical and psychosocial support to patients and survivors. We undertook a mixed methods study to understand the mental distress experienced by survivors during hospitalization and community reintegration.

Methods
We present observational data of Ebola survivors (≥16 years) for 1) the first post-discharge individual psychosocial session (Nov 2014-Apr 2015) and 2) three focus group discussions (FGD) with 17 purposefully selected survivors (Feb-Apr 2015). We assessed depression and post-traumatic stress disorder (PTSD) using the Patient Health Questionnaire (PHQ9) and the Trauma Screening Questionnaire (TSQ) respectively. Qualitative data were analysed using the thematic analysis approach.

Results
Among 516 EVD survivors, 396 (77%) were ≥16 years of which 285/396 (72%) had ≥1 session; 152 (53%) were female; median age: 30 years (IQR: 24-42); Median time between discharge and first session was 87 days (IQR: 49-133). 229/279 (82%) survivors had relative(s) with EVD; 203/279 (73%) had at least one relative who died; 93/173 (54%) witnessed at least one death. Survivors in FGDs reported that the main sources of stress inside the ETU were: daily exposure to corpses; isolation from families; distance with staff due to infection control measures. However, employing of survivors as staff fostered hope and group prayer and singing brought comfort.

Following discharge, survivors reported experiencing stigma in their community (37%; 103/279); family (23%; 43/184); workplace (21%; 55/267); religious places (12%; 34/275); and how stigma affected their coping mechanisms. Some questioned the reasons left to live. 34% (87/255) survivors reported PTSD and 34% (62/184) depressive symptoms: 20 had severe/major, 42 mild/minimal symptoms; 10% (16/168) patients had both major/severe depression and PTSD. When available, the support of family, friends and other survivors, psychological counselling and prayer enabled survivors to cope with mental distress.

Conclusion
Suffering from Ebola and ETU hospitalization were traumatic experiences. Many survivors lost relatives and faced stigma. The confluence of these experiences likely led to the high prevalence and comorbidity of depression and PTSD.

Operational implications
To decrease mental distress in survivors, improved corpse management in the ETU, training in psycho-social support for ETU staff, regular communication between inpatients and their relatives, religion, peer and community support, stigma-reduction activities and timely psychosocial and clinical follow-up are needed.
Averted health burden and functional recovery at the Médecins Sans Frontières (MSF) Trauma Centre in Kunduz, Afghanistan, prior to its closure in 2015

Introduction
On October 3rd, 2015, a US airstrike hit Médecins Sans Frontières (MSF; Doctors Without Borders) Kunduz Trauma Centre in Afghanistan; 40 lives, including 14 MSF hospital staff, were lost. The 92-bed hospital was the only facility with comprehensive trauma care capabilities (including physical therapy and psychological counselling) for hundreds of thousands of people living in northern Afghanistan. We aimed to describe the care provided and to estimate the health burden averted by surgery and physical therapy at the hospital to report the benefit rendered by the Trauma Centre on the health of the local population prior to its destruction.

Methods
All operations performed in an operating theatre at the Trauma Centre from its opening in August 30th, 2011 to August 31st, 2015 were described. Disability-adjusted life years (DALYs) averted by surgery over the same period were estimated. Physical therapy of trauma through physiotherapy was described for patients admitted between January and June 2015.

Results
The Trauma Centre performed 13,970 operations, which included 17,928 procedures for 6,685 patients. The median age of patients who required surgery was 21 years (IQR 12 – 34 years). More than 85% of patients were male (12,034 patients; 86%). Of the 6,685 patients who required surgery, 4,387 suffered unintentional, non-violence-related injuries (66%) and 2,276 suffered violence-related injuries (34%). The perioperative death rate at the facility decreased from 7.2 deaths per 1,000 operations in 2011 to 1.3 in 2015 (p=0.03). More than 154,250 DALYs were averted by surgery (95% CI 153,042 – 155,465). Physiotherapy was provided to 1,410 out of 1,528 (92%) admitted patients between January and June 2015. Among patients with sufficient follow-up data, 33% were functionally independent at hospital exit, and 79% were independent at exit from outpatient services.

Conclusions
The health burden averted by the hospital – both through surgery and physical therapy after surgical care – was large; absence of the hospital will be critically missed by those living in the region. No other actors are currently able to provide the level of comprehensive care that was offered in Kunduz. Access to essential trauma care for all victims of armed conflict is a human right; as directed by International Humanitarian Law, special protection for the wounded, sick, and medical personnel and facilities during war must be guaranteed.
Refugee crisis in Europe: health status, life experiences, and mental health problems of transiting refugees and migrants on the Balkan route in 2015

Introduction
In 2015, over 1 million refugees/migrants reached Europe, mainly through the Balkans. MSF provided medical and mental health (MH) care at entry/exit points in Greece and Serbia. We aimed to assess the medical and MH burden and document the experiences of transiting refugees/migrants.

Methods
We analysed routine outpatient (Jan-Dec 2015) and individual MH (May-Dec 2015) data from MSF clinics in Greece and Serbia. Patients were self-referred or were identified through MH group sessions, medical consultations, social networks, or referral. Collected information included socio-demographics, physical and MH symptoms, and traumatic life-events.

Results
We performed 81,868 medical consultations (Greece: 43,619 [53%]; Serbia: 38,249 [47%]). Of 81,768 consultations with available information, 22,165 (27%) were in <18 years and 15,852 (19%) in women. Most were Syrians (36,729; 45%), Afghans (26,332; 32%), and Iraqis (8,848; 11%). 12,796 (16%) were considered vulnerable (pregnant, young/unaccompanied children, disabled). Symptoms were mainly non-severe: respiratory tract infections (33,331; 41%), physical trauma (12,792; 16%), gastrointestinal (8965; 11%), and dermatological (8484; 10%) complaints. For 93% (74,232/79,784) symptoms developed during migration; 6% (n=4560) reported chronic diseases. We proposed referral to 680 (0.8%) of whom 129 (19%) were trauma cases; 77 (11%) refused referral.

We performed 1064 individual MH sessions (Greece: 733 [69%]; Serbia: 331 [31%]); 116 (11%) were <18 years and 330 (31%) women; 31% (n=329) were considered vulnerable. Patients had experienced a median (IQR) of 3 (2-4) traumatic life events: 866 (81%) forced to flee; 281 (26%) bombing; 210 (20%) life-threatening events; 170 (16%) family member(s) killed; 203 (19%) physical violence; and 156 (15%) ill-treatment. State authorities were the perpetrators for 12% (123/1064) of violence and 7% (74/1064) of ill-treatment reports. 831/1052 (79%) presented with MH symptoms: anxiety (246; 30%); adjustment/acute reactions (198; 24%); depression (165; 20%); post-traumatic symptoms (60; 7%). We followed-up only 120/1064 (11%) patients (median [IQR] follow-up sessions: 1 [1-2]), mainly due to patients’ need to move onwards: single orientation sessions/patient moved: 937/1064 (88%). We referred 356/1064 (33%) for social, medical/psychiatric care.

Conclusion
Refugees/migrants were fleeing conflict and many were belonged to vulnerable groups (minors, pregnant women, disabled). They experienced physical and mental trauma as well as life threatening events part of which have been accentuated by state authorities in transit countries. Follow-up of care is a challenge because of the high mobility of this population.

Operational implications
Authorities in transit/destination countries need to ensure safety, and engage with early vulnerability screening. Those needing medical care should receive free and accessible health services, including MH care throughout their journey and at the final destination. Innovative ways are needed to provide follow-up care for patients as they leave transit centres to continue their journey(s). Such care will need to be provided along a continuum.
Traumatizing journeys and inhospitable stays: mental health conditions among migrant/refugees and asylum seekers in transit countries and upon arrival in Europe

Background
More than a million refugees/migrants have attempted to reach Europe over the course of 2015, often fleeing conflict and insecurity. For such individuals, the trauma of flight may be compounded by the stress of detention and uncertain prospects. MSF has provided medical care, including mental health (MH) care, in detention centres along the Mediterranean coast of North Africa, and in reception centres for recently-landed asylum seekers (AS) in Italy.

Methods
A retrospective review of routine program data collected from nine detention centres (DCs) at the Mediterranean coast of North Africa and from 15 reception centres in Sicily, Italy between October 2014 and December 2015. Care included group and individual therapeutic sessions. All those who received individual care were included in the study.

Results
In detention centres (DCs) in North Africa, MH care was provided in group (n=215) and individual (n=680) sessions. Of the 493 detainees who received at least one individual session, 57% were males, and 33 (7%) were younger than 13 years old. The most common countries of origin were Somalia (158;32%), Sudan (116;24%) and Syria (91;19%). Traumatic experiences included witnessing killing (experienced by 153; 31%); family killed/missing (144; 29%), detention/incarceration (140;28%). 256 (52%) had experienced some type of physical violence by civilians or armed forces. 196 (40%) clients scored their condition as moderate (“it’s hard, sometimes I manage, sometimes not”) or severe (“I feel overwhelmed”). The probability of having moderate or severe symptoms was five-fold (OR 5.6; 95%CI (3.8-8.4)) higher among clients who reported physical violence, 70% (OR 1.7; 95%CI (1.1-2.8)) higher among clients detained for more than one week and less than one month, and two-fold (OR 2.0; 95%CI (1.1-3.6)) higher among clients detained one week to a month, and doubled (100% higher) (OR 2.0; 95%CI (1.1-3.6)) among clients detained for more than one month.
In Sicily, among 385 AS presented for MH screening, 193 (50%) were diagnosed with MH conditions and received individual MH care. Most were young West African males mainly from Nigeria, Gambia and Senegal. The duration of the journey from the country of origin to Italy was for nearly six out of ten (110; 57%) more than 12 months. Traumatic events were experienced frequently in the home country (117; 60%) and during migration (172; 89%). During migration the most common ones were detention/incarceration (102; 53%) and combat situations or being at risk of death (127; 66%). The latter was also the most commonly experienced in the host country (64; 33%). The most common MH conditions were Post Traumatic Stress Disorder (65; 34%) and depression (38; 20%). Lack of activities, worries about home, loneliness and fear of being sent home were the main living difficulties at the AS centres.

Conclusion

In migrant detention and reception centres in transit points and upon arrival, mental health needs were considerable. Adverse effects of sustained detention were documented.

Operational implications

MSF does not have control of activities offered at detention and reception centres. Given the high burden of MH conditions and traumas experienced by migrants and refugees in transit points and upon arrival in Europe, MH care with cross-cultural sensitivity and improved living conditions should be provided by authorities to meet their humanitarian responsibility. Last but not least, what is MSF’s role when authorities continue to fail their responsibilities?
Rosa Auat is an Argentinian MD with a Master in public health. She started working with MSF as a practitioner in Guatemala in 1995, and continued gaining experience as a Field Coordinator, Medical Coordinator and Head of Mission, mainly in Central America and Africa until 2007. From 2008 until 2011, she became Medical Polyvalent with cell 4 OCB, for missions in Zambia, Niger, DRC, Morocco, Syria and Greece. Since 2014, she is Medical Coordinator in Pakistan.

Aurelia Barbieri is a psychologist with a degree from the Catholic University of Milano, Italy. She has a specialization in Cognitive Behavioural Psychotherapy with a specific training in Eye Movement Desensitization and Reprocessing (EMDR) for the treatment of trauma. She joined MSF in 2015 and is still working in Sicily with asylum seekers and refugees.

Marc Biot first worked with MSF in 1989 in Afghanistan, followed by the Philippines. In 1992, he came back to Afghanistan before joining the Operations Department in 1994, where he concentrated his focus on the Horn of Africa and Central Asia. After a Master in Public Health (1998), he was appointed as first HIV/AIDS focal person in the Medical Department, to provide support for starting HIV care & treatment program in Africa, Asia and the Americas. Rich with this experience, he left to Mozambique in 2002, where he supported the beginning HIV treatment programs till 2009. After a short stay with ICoP (2009/10) in Maputo, he returned to the Operations Department at the end of 2010 to focus on the large HIV treatment programs in Southern Africa as Operational Coordinator. A position he is still holding up to today.

Wilma van den Boogaard worked 10 years as a nurse in Holland before leaving for humanitarian aid in Indonesia and deciding to join with MSF, more than 20 years ago. After joining several emergencies in Liberia and South Sudan, she worked as a health promoter, field coordinator followed by medical coordination mainly in longer term projects, where deciding on change of strategies and national health policies was of high importance. She has experience of OR in Luxembourg in 2010/2011 after doing her Master in Public Health, but returned to the field as epidemiologist and medical coordinator in 2012/2013. She returned to the OR unit in Luxembourg to support and coach the field in performing OR in order to improve the performance of their project which allows having greater quality access to care to those in need.

Bertrand Draguez graduated as a medical doctor from Louvain Catholic University. He started working with MSF in east Timor, and continued gaining experience as a doctor and then a Field Coordinator in Angola, South Sudan and Afghanistan. From 2002 until 2004, he was Medical Coordinator for projects in DRC and then in Ivory Coast. He became Medical Polyvalent for missions in Rwanda, Burundi, DRC and CAR since 2008, he is the Medical Director of OCB.

Tom Ellman is director of the Southern Africa Medical Unit (SAMU). Since first working for MSF in Rwanda in 1995, he has over 15 years of experience in humanitarian medical work mostly with MSF. His focus has been on HIV, TB, and malaria in Africa and South-East Asia, apart from a three-year ‘break’ working on Chagas disease in Bolivia. Tom received his medical training in Edinburgh, has a Diploma from the School of Tropical Medicine and Hygiene (Liverpool), and a Masters in Communicable Disease Epidemiology from the School of Tropical Medicine and Hygiene (London). He is a member of the Royal College of Physicians, UK and a beekeeper.

Eric Goemaere is a medical doctor and economist by training. His career with MSF started in 1982, working in Chad and afterwards in several field MSF missions, with some ‘interruptions’ to be OCB’s medical director (1988 to 1991) and General Director (1994 to 1999). In 1999 Eric migrated to South Africa to pioneer MSF’s first public health ARV programme in Khayelitsha. Since then Eric has occupied...
numerous positions in running MSF’s projects in South Africa, finally joining SAMU in 2009 where he is currently the HIV/TB Unit Coordinator. Eric has received an Honoris Causa doctorate from University of Cape Town (UCT) for his work in HIV, as well as being appointed honorary senior lecturer in the School of Public Health and Family Medicine. He is a member of the South African AIDS Council and on the WHO guidelines advisory board.

Petros Isaakidis is a medical doctor with a doctoral degree in epidemiology. He joined MSF in 1997 and has worked in Kenya, Gaza and West Bank, Greece (migrants), Cambodia and India in different positions, from field doctor to medical coordinator to regional epidemiologist. He has also worked as clinician in the public and private sectors and as epidemiologist in disease surveillance, outbreak investigations and planning for mass gatherings. Since 2012 he has been facilitating Operational Research courses as part of the MSF/ UNION/ WHO SORT-IT initiative. He’s currently based in Mumbai, India.

Franz Luef joined MSF in 2003 and worked since then with MSF in various positions and missions, including as Administrator, Financial and Logistical Coordinator, Project Coordinator, Emergency Coordinator and Head of Mission in countries like Columbia, Angola, South Sudan, Sudan, Guinea Bissau, Sri Lanka, Nigeria, Zambia, Yemen, Syria and Jordan. In June 2015 Franz joined MSF Austria in the position of Advocacy & Humanitarian Affairs Representative.

Brigitte Ndelema is medical doctor and mother of five children from DRC, who lives and works in Burundi. She was the Medical Director for the MSF maternal and neonatal project in Kabezi from 2008 until its handover in 2013. She moved to the Urumuri centre in Gitega to become an obstetric fistula surgeon and became the Medical Director at the Ministry of Health after the handover. Today she continues to collaborate with MSF on operational research on maternal and neonatal health in Burundi.

Meinie Nicolai first worked with MSF in 1992, as a supervising nurse in Liberia. She has since gained a decade of field experience in Angola, the Democratic Republic of the Congo, Ethiopia, Rwanda, Somalia and South Sudan. Meinie returned to the Netherlands to coordinate the national network on sexual and reproductive health and AIDS between 2002 and 2003, but her involvement with MSF continued as she became a board member of the Belgian association. In 2004, Meinie became director of operations in the Brussels office until she was elected president of MSF Belgium and of MSF’s operational directorate in Brussels in October 2010.

Stephan Oberreit has taken up the position of OCB South East Asia migrants Coordinator this May, based in the Hong Kong section. He holds two Economics degrees from Paris and graduated in International Relations at Southampton University. He first joined MSF in 1993 and has had various positions in the field and at the Operational centre Paris. Most of the programs he worked on were related to refugees or internally displaced people (South Sudan, Former Yugoslavia, Iran, DRC, Burundi and Kosovo). From 2000 to 2007 he was the director for communication and fund-raising in MSF Paris. He then became the director of Amnesty International in France until March 2016.

Marietta Provopoulou is the General Director of MSF Greece. She started working for MSF in 2001 in Malawi and continued on humanitarian missions in Africa (Burkina Faso, Ethiopia, Malawi), but also in Asia (Pakistan, Afghanistan), in Latin America (Peru) as well as in Greece. She has had long-term experience with both directly managing and overseeing migrant/refugee projects in Greece, Turkey and Morocco.

Ionara Rabelo graduated as psychologist and has a Doctoral Degree in Social Psychology from Sao Paulo State University in Brazil. She has worked as psychologist for 22 years in Brazilian mental health services and is also professor and researcher at Goiás Federal University. She joined MSF in 2010 and worked on six missions, mainly in conflict areas. She has been in occupied Palestinian territories (2010), Brazil (2012), Syria-Turkey (2014 and 2015), Liberia (2015) and Ecuador (2016).

Leen Verhenne, medical doctor, started with MSF in 2002 and since 2005 has combined MSF work with general medicine. In 2006, she worked in the Brussels and Antwerp MSF projects and later in De Kai public primary health care clinic. She joined the Belgium board in 2014, and temporarily was the Medical Coordinator post in Greece this year.

Federica Zamatto is a medical doctor. She started working with MSF in 2006 assisting migrants at landings in Lampedusa and then continued working as a clinician in Italy, Sierra Leone, Niger, Yemen, CAR, DRC and Chad. She was vaccination and malaria referent in the Paris section and since 2015 is OCBs Deputy Operations Coordinator in charge of Greece, Serbia, Egypt, Italy, Algeria and Mauritania and focal point for the thematic of torture.
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Cover photo:
A nurse is taking care of a mother and her son at the HIV department of Arua Regional hospital in Uganda
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