



MSF - OPERATIONAL CENTRE BRUSSELS - **MEDICAL DEPARTMENT**

OCB MEDICAL ACTIVITY REPORT 2015

MSF-OCB - BELGIUM - BRAZIL - DENMARK - HONG KONG - ITALY - LUXEMBOURG -
NORWAY - SOUTH AFRICA - SWEDEN



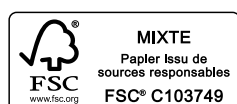
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CONTENTS

	PAGES
01. INTRODUCTION	7
02. EXECUTIVE SUMMARY	9
03. LIST OF ABBREVIATIONS	11
04. A YEAR IN SNAPSHOTS	12
05. BIOMEDICAL EQUIPMENT	15
06. EMERGENCY UNIT	17
07. EPIDEMIOLOGY/EPICENTRE	23
08. EVALUATION UNIT	26
09. HEALTH INFORMATICS	28
10. HEALTH PROMOTION AND SOCIO-ANTHROPOLOGY	31
11. HIV/AIDS AND TUBERCULOSIS	33
12. INFECTION PREVENTION & CONTROL AND NURSING CARE	39
13. INTENSIVE CARE	41
14. LABORATORY	43
15. MALARIA	44
16. MENTAL HEALTH	47
17. NUTRITION	50
18. OPERATIONAL RESEARCH AND DOCUMENTATION	53
19. PAEDIATRIC CARE	57
20. PHARMACY	61
21. SEXUAL AND REPRODUCTIVE HEALTH	67
22. SURGICAL CARE ACTIVITIES	73
23. VACCINATION	77
24. WATER, HYGIENE AND SANITATION	80
25. ANNEX OF TABLES AND DATA	85



INTRODUCTION

As an international humanitarian aid organisation that provides medical assistance to populations around the world, the Medical Department of MSF-OCB is responsible for providing the medical core for operations, and for guiding and supporting its medical activities in the field.

This is the eighth edition of the OCB Medical Activity Report, which provides an overview of 19 technical domains of the Medical Department. The report serves to 1) highlight the role of the Medical Department in the OCB operations, 2) compile a memory document of the activities and lessons learned over time, 3) enhance reflection and critical review of the department and its activities, and 4) demonstrate the scope and relevance of our medical activities to partners and donors around the world.

My gratitude extends to all the members of the Medical Department for their hard work over the past year, and for their support and collaboration in compiling this report. Any formal feedback in improving this report is most welcome and should be sent to rony.zachariah@brussels.msf.org.

Finally, I wish to thank all OCB staff on the field, at headquarters and particularly to all our OCB partner sections and other partners, for their continued support of MSF activities around the world.

With compliments



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EXECUTIVE SUMMARY

In 2015, Médecins Sans Frontières – Operational Centre Brussels (OCB) was involved in 33 missions with a medical component, comprising 89 projects. Overall, there were 1,815,626 consultations in the outpatient department (OPD), of which 6558 were children under five years old, and 71,849 admissions to the inpatient department (IPD) of which 29,522 were children of 1-59 months and 6558 were neonates.

Major emergency interventions included the assistance to internally displaced persons, refugees and war wounded and the general population in Syria, assistance to IDPs in Nepal after the earthquake, Search and Rescue – SAR operation for asylum seekers in the Mediterranean and the continuation of the Ebola outbreak activities in West Africa. Geographically, sub-Saharan Africa continued to be the main focus of intervention, but important activities were also performed in North Africa, Asia and the Middle East (figure).

Overall, there were:

1,170,508 doses of vaccines administered (EPI, campaigns and PEP)

332,390 confirmed malaria cases of which 14,000 severe malaria cases

71,169 deliveries of which 4,588 Caesarean sections

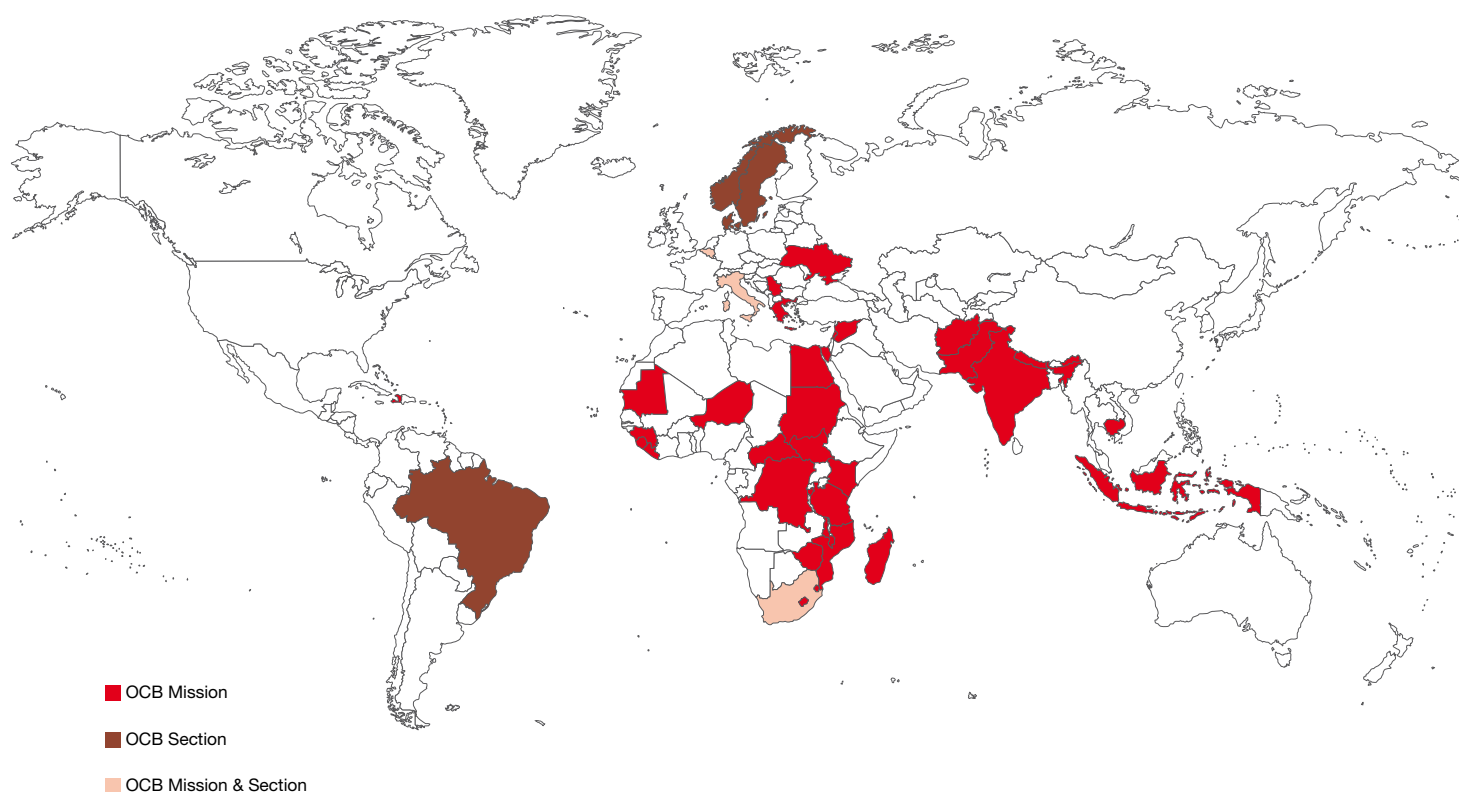
24,664 new HIV patients initiated on ART of which 1,868 were paediatric

13,570 new surgical cases

12,390 people assisted during SAR intervention in the Mediterranean

452 new MDR-TB patients initiated MDTB treatment

Figure: Global OCB sections and missions, 2015



1. YEAR IN REVIEW

2015 will be remembered as the year in which the EU failed in its responsibility to respond to the urgent need for assistance and protection of over a million migrants/refugees trying to cross to Europe. OCB opened several migration related operations: multiple 'Search and Rescue' operations in the Mediterranean, providing first medical and psychological assistance in Greece and Italy, as well as working at multiple points along the Balkan's overland routes (health care, food and non-food items).

2015 has witnessed the shocking event of the destruction of Kunduz Trauma Centre (KTC) in Afghanistan by US air force. This has cancelled operational ambitions to invest in hospital care including: emergency department activities, surgery, intensive care, physiotherapy and related operational research.

The year 2015 was also a transitional year from the overwhelming Ebola outbreak response to the restoration of the regular projects support. However, there was an increase of activities related to post Ebola phase such as: Ebola review process by the evaluation unit, and launching of the vaccination trial (phase III) on safety, efficacy and effectiveness of the VSV-EBOV vaccine in Guinea.

In the regular projects, 2015 saw an increase in OCB medical activities across a number of domains including surgery, vaccination, HIV, TB, intensive care, and mental health, whilst other domains such as nutrition, sexual and reproductive health, health promotion, malaria and paediatrics, noted reductions in their activities. The main reasons for reduction were generally project closures or handovers.

Innovations included the specific MH activities for transiting populations, the "Nutritional Surveillance Caravans" approach in Madagascar, the use of "Risk Surgical Kits" in Nepal, viral load and early infant diagnosis at point of care in HIV/AIDS projects and an easy deployable laboratory container.

Efforts continued towards standardising the quality of care and ensuring a minimum standard across the spectrum of OCB projects: more missions had the minimum requirements in place to be able to independently manage their biomedical equipment; there was a greater focus on ensuring that the essential Water, Hygiene and Sanitation (WASH) requirements were respected in established missions; a proxy quality indicator of anaesthesia care (proportion of spinal pro-

cedures for Caesarean sections) is successfully used and assessed in projects; and a full set of key performance indicators of medical stocks allowed to overview of medical stocks in all OCB projects.

At the level of data monitoring and evaluation by the end of the year, the in-house data collection system MINOS (Medical Information Network for Operational support) accounted for 53% of all OPD data and 35% of all IPD data. However, the EPI tools still account for 49% of all IPD data. Overall, there seemed to be a stronger level of commitment towards quality of data collection and a more proactive mind-set towards utilising routine data to identify knowledge and implementation gaps in OCB programmes. This increased culture of reflecting on and questioning the status quo also helped to drive the expansion of the OCB operational research (OR) portfolio to include new areas such as EVD, trauma care, migrant health, neonatology and victims of torture and sexual violence. Besides, there was an increased demand for qualitative research. OCB, in collaboration with Epicentre and partners, continued to contribute to an extensive profile of clinical and operational research in EVD, vaccine preventable diseases, HIV, TB, Hepatitis C virus, nutrition, and malaria.

Finally, continued efforts were made to consolidate and improve links between Operations and the field, through field visits, Mobile Implementation Officer (MIO) support, briefings and trainings; between different technical domains, as reflected by improved integration of interventions - e.g. HP and MH integration in medical activities; and between different MSF sections, as a result of the Ebola outbreak. Many domains have intersectional working groups and there are a large number of intersectional trainings.

2. CHALLENGES AND PROSPECTS

In 2015, the main challenges were related to OCB's evolution towards more complex projects, with higher technical needs, higher standards, and more activities included, and the complexity of the different contexts where OCB works, related to logistics, security, politics and human resources. However, there are also challenges related to project closures for example: the "forced" KTC closure; the handover of Niger might impact paediatric and in particular nutritional care activities; and the obstetric fistula project in Burundi with the risk of losing our expertise in this domain.

Despite marked improvements at the level of data monitoring and data collection, data capture, data quality, and standardization of indicators continued to be highlighted as areas that need to be improved.

The prospects for 2016 are to sustain OCB investment in specialized IPD capacity, aiming for a greater shift towards more ambulatory and community-based care, essentially developing a new equilibrium between primary health care (PHC) and referral care. Closely linked to this, there will be a stronger emphasis on comprehensive approaches that address the health-related needs of communities in a more holistic manner – this, particularly in the case of non-communicable chronic diseases (NCDs), HIV, TB and Hepatitis C virus.

Priority areas for investment and specific capacity building will continue in the fields of surgery (particularly in emergencies), HIV (with OCB remaining an engine for political, technical and public health change, and remaining a watchdog for system failures), TB (with a particular focus on drug resistant TB, and hospital care. Alongside the technical and operational capacity that will be invested into these areas, operational research will play a substantial role in guiding the way that OCB tackles some of these areas.

In the amendment of the operational prospects of 2015, some areas were identified as not yet a significant part of the operational portfolio which need more emphasis. This includes: learning and development, in particular for (para)-medical professionals; WASH in health facilities, emergencies and vertical projects (e.g. innovative vector control); antimicrobial resistance; cancer in particular in the Middle East; epidemiological surveillance in outbreaks; preparedness for an epidemic of an airborne infection with high mortality or for a chemical disaster; mental health especially in psychiatric care and acute care for NCDs.

Finally, OCB's presence in more challenging and complex settings (e.g. conflict settings, settings with challenging supply processes), the shift towards community-based approaches, the expectations on MSF as a leading humanitarian organisation, together with the fact that OCB projects globally are encompassing a much more diverse package of integrated activities, will necessitate the development and implementation of more innovative models of care delivery, which in turn will need operational research.

LIST OF ABBREVIATIONS

ACF: Action Contre la Faim	HTC: HIV Testing and Counselling	OTFP: Outpatient Therapeutic Feeding Programme
AIDS: Acquired Immune Deficiency Syndrome	ICU: Intensive Care Unit	PCR: Polymerase Chain Reaction
ALSO: Advanced Life Support in Obstetrics	IDP: Internally Displaced Persons	PAC: Post abortion care
ANC: Antenatal Care	IEG: International Evaluation Group	PCV: Pneumococcal Vaccine
ART: Antiretroviral Therapy	ILS: Immediate Life Support	PEPFAR: President's Emergency Plan For AIDS Relief
ASB: Ahmad Shah Baba hospital	IM: Intramuscular	PFA: Psychological First Aid
ATFC: Ambulatory Therapeutic Feeding Centre	IPC: Infection Prevention and Control	PHC: Primary Health Care
ATLF: Advanced Trauma Life Support	IPD: Inpatient Department	PHU: Primary Health care Unit
BASIC DHS: Basic Assessment and Support of Seriously Ill Patients in Developing Healthcare Systems BCG: Bacille Calmette-Guérin (TB vaccination)	IPT: Isoniazid Preventive Therapy	PICC: Peripherally Inserted Central Catheter
BEmONC: Basic Emergency Obstetric and Neonatal Care	IPTc: Intermittent Preventive Treatment for children	PITC: provider initiated counselling and testing
BLoC: Basic Logistics Course	IPTpd: Intermittent Preventive Treatment post discharge	PLW: Pregnant and Lactating Women
BSFP: Blanket Supplementary Feeding Programme	ITC: International Technical Coordination	PLWHA: People Living With HIV/AIDS
BraMU: Brazilian Medical Unit	ITFC: Inpatient Therapeutic Feeding Centre	PMC: Project Management Course
CAR: Central African Republic	IUD: Intra-Uterine Device	PMTCT: Prevention of Mother-To-Child Transmission
CDC: Centres for Disease Control	IV: Intravenous	PNC: Postnatal Care
CEmONC: Comprehensive Emergency Obstetric and Neonatal Care	KAP: Knowledge, Attitude and Practice	POC: Point Of Care
CMAM: Community Management of severe Acute Malnutrition	KPI: Key Performance Indicators	PPD: Preparation for Primary Departure
CS: Caesarean section	LCC: Logistics Coordinator Course	PPE: Personal Protective Equipment
CTC: Controlled Temperature Chain	LEEP: Large Loop excision of the transformation zone	PSP: Populations in Precarious Situations (course)
CTC: Cholera Treatment Centre	LLIN: Long-lasting Insecticide Treated Nets	PUC: Pool d'Urgence Congo
CU: Compassionate use	LMIC: Low and Middle Income Countries	RDT: Rapid Diagnostic Test
DOC: Direct obstetric complications	LRTI: Lower Respiratory Tract Infection	REPEPI: Responding to Epidemics (course)
DBS: Dried Blood Spot	LTFU: Loss To Follow-Up	RIC: Remaining In Care
DPT: Diphtheria-Pertussis-Tetanus vaccine	MAM: Moderate Acute Malnutrition	RIF: Resistance to Rifampicin
DR-TB: Drug Resistant Tuberculosis	MC: Mobile Clinic	RNA: Rapid Nutritional Evaluation
DRC: Democratic Republic of Congo	MDGs: Millennium Development Goals	RUTF: Ready to Use Therapeutic Food
DS-TB: Drug sensitive Tuberculosis	MDR: Multi-Drug Resistant	RUSF: Ready to Use Supplementary Food
DST: Drug Susceptibility Testing	M&E: Monitoring & Evaluation	SAGE: Surgery/orthopaedics, Anaesthesia/reanimation, Gynaecology/obstetrics, Emergency/intensive care
EAC: Enhanced Adherence Counselling	MH: Mental Health	SAM: Severe Acute Malnutrition
ED: Emergency Department	MHS: Management of Health Services	SAMU: Southern African Medical Unit
EML: Essential Medicine List	MINOS: Medical Information Network for Operational Support	SAR: Search and Rescue
EPI: Expanded Programmes of Immunisation	MIO: Mobile Implementation Officer	SARS: Severe Acute Respiratory Syndrome
Eprep: Emergency Preparedness	MMC: Medical Management Course	SATS: South African Triage Score
EPTB: Extra pulmonary Tuberculosis	MoH: Ministry of Health	SDGs: Sustainable Development Goals
ERB: Ethics Review Board	MoU: Memorandum of Understanding	SFC: Supplementary Feeding Centre
ETC: Ebola Treatment Centre	MOV: Missed Opportunities for Vaccinations	SGBV: Sexual and Gender Based Violence
E-Unit: Emergency Unit	MPAC: Malaria Policy Advisory Committee	SIRC: Spinal Injury Rehabilitation Center
EU: European Union	MPH: Masters in Public Health	SMC: Seasonal Malaria Chemoprevention
EVD: Ebola Virus Disease	MSF: Médecins Sans Frontières	SOP: Standard Operating Procedure
FDA: Food and Drug Administration	MSM: Men who have sex with men	SORT-IT: Structured OR Training Initiative
FLMT: First Line medical training	MUAC: Mid-Upper Arm Circumference	SRH: Sexual and Reproductive Health
FP: Family Planning	NA: Not Applicable	SSI: Surgical Site Infections
GAM: Global Acute Malnutrition	NCD: Non communicable diseases	STI: Sexually Transmitted Infections
GAS: Gynaecology, Anaesthesia, Surgery	ND: No Data	SV: Sexual Violence
GCA: Governmental Controlled Areas	NDRA: National Drug Regulatory Authorities	SW: Sex workers
GDP: Good Distribution Practices	NFI: Non Food Items	TB: Tuberculosis
GFD: General Food Distribution	NGO: Non-Governmental Organisation	TBA: Traditional Birth Attendant
GP: General Practitioner	NICD/NHLS: National Institute of Communicable Diseases/National Health Institute	TFP: Therapeutic Feeding Programmes
GPP: Good Pharmacy Practice	NGCA: Non-Government Controlled Areas	ToP: Termination of pregnancy
GRC: Gondama Referral Centre	NTP: National Tuberculosis Programme	TSFP: Targeted Supplementary Feeding Programmes
HAI: Healthcare Associated Infection	OCA: Operational Centre Amsterdam	UN: United Nations
HC: Health Centre	OCBA: Operational Centre Barcelona	UNHCR: The United Nation Refugee Agency
HIB: Haemophilus Influenza B	OCB: Operational Centre Brussels	UNICEF: United Nations Children's Fund
HIV: Human Immunodeficiency Virus	OCG: Operational Centre Geneva	VHF: Viral Haemorrhagic Fever
HMTT: Hospital Management Team Training	OCp: Operational Centre Paris	VIA: Visual inspection using acetic acid
HP: Health Promotion	OD: Operating Department	VILI: Visual inspection using Lugol's iodine
HPV: Human Papilloma Virus	OPD: Outpatient Department	VL: Viral load
HQ: Headquarters	OPV: Oral Polio Vaccine	VOT: Victims of torture
HR: Human Resources	OR: Operational Research	WASH: Water, Sanitation, and Hygiene
	ORS: Oral Rehydration Solution	WHO: World Health Organisation
	OT: Operating Theatre	

A YEAR IN SNAPSHOTS

BIOMEDICAL EQUIPMENT

- The use of advanced medical equipment (specialised laboratory instruments and radiology equipment in particular) in OCB projects continued to increase, leading to a greater need for technical support.
- 65-70% of equipment breakdowns combined with its impact on programme activities show that biomedical equipment is not often well-understood by the end-users. Training and support, in particular medical people, remain of high importance.
- Training of national staff to better oversee the management and maintenance of biomedical equipment is very important in order to avoid that devices are out of service for unacceptable periods of time as regional support is poor and sending equipment for repair to Brussels is not a viable option due to long delays.

EMERGENCY UNIT

- In 2015, the E-Unit intervened in 14 countries directly, and supported nine interventions (in eight countries) managed by cells.
- The major interventions were the continued assistance to internally displaced persons (IDP), refugees, the wounded, and general population in Syria (including operations outside the country in Lebanon and Turkey), the assistance to IDPs in Nepal after the earthquake, the "Search and Rescue - SAR" operation for asylum seekers in the Mediterranean and the continuation of the Ebola outbreak activities in Liberia and Guinea.
- Following the earthquake in Nepal, the MSF-OCB emergency activities included providing primary health consultations and mental health (MH) activities through mobile clinics (MCs), food and non-food items (NFI) distributions, supporting hospitals in Kathmandu with medical materials, and some WASH activities in the IDP camps in the city.
- In Ukraine, the three project activities (Lugansk, Donetsk and Artemovsk) provided support to health facilities and social institutions. These included medical and MH consultation and training; and donations of medical and hygiene kits. Additionally, in Donetsk and Dnepropetrovsk, TB services were provided in prisons.
- In Madagascar, in response to the flooding following the cyclone, the MSF emergency response included a malaria intervention through MCs and nutrition intervention (Ambulatory and Inpatient Therapeutic Feeding centres and "Surveillance Caravanes" project).
- The SAR operation- Burbon Argos "Search and Rescue" in the Mediterranean included 59 interventions, with 52 direct rescues. A total of 12,390 people were assisted, of whom 5% were minors (below 17 years of age). Among

the adults 20% were women and 160 were pregnant.

- There were more than 800 departures to the field under E-Unit interventions, split mostly between the different direct interventions.

EPIDEMIOLOGY/EPICENTRE

- The support provided by Epicentre epidemiologists to MSF-OCB field interventions was mostly driven by the Ebola Virus Disease (EVD) epidemic in West Africa.
- Additionally, Epicentre conducted a vaccine coverage survey in Bangassou (CAR), and developed an intersectional database to centralize the data related to the immunization activities. In DRC, Katanga Province, data collection and surveillance systems were set up to investigate a large measles outbreak. A rapid measles vaccination coverage surveys was also conducted.
- Clinical and operational research was conducted on EVD, vaccine preventable diseases, diarrheal diseases, mental health, surgery, diagnostics, antibiotic resistance, nutrition, HIV/AIDS, HCV, tuberculosis, malaria, and neglected diseases.
- An important achievement was the launch of the VSV-EBOV vaccine trial. This challenging project will remain an excellent example of efficient collaboration between Epicentre and MSF-OCB teams, both at the headquarters and field levels.

EVALUATION UNIT

- The Stockholm Evaluation Unit (SEU) worked on eight evaluations for OCB, one for OCA and one inter-sectional.
- The main activity was the Ebola review process, which consisted of nine reports and a summary report. The Ebola review process absorbed most of the unit's capacity and required the temporary increase of support staff.
- The new evaluation website (www.evaluation.msf.org) was launched just ahead of the 2015 MSF International Assembly. It allows centralised evaluations in MSF and offers a public evaluation portal.
- The thematic evaluation of trauma centres allowed the comparison of services in two of OCB's hospitals and therefore, helped to identify broader issues.

HEALTH INFORMATICS

- The Epicentre outpatient department/inpatient department/ gynaecology/ obstetrics data collection tool and MINOS (Medical Information Network for Operational support) were the two main routine (aggregated) data collection tools being used in OCB projects.

- The Epicentre data collection tool was used in 6 missions where OCB was working and MINOS was being used in 14 missions by the end of 2015.
- To answer the need for more detailed reporting of MSF activities, which cannot be met effectively using aggregated data, a collection of dedicated databases (HIV/TB, mental health, surgery, emergency obstetrics, neonatology, sexual violence, etc.) have been constructed and adapted for customization and/or integration with other activities (e.g. integrated mental health/sexual violence/victims of torture and an integrated hospital database).

HEALTH PROMOTION AND SOCIO-ANTHROPOLOGY

- Health Promotion (HP) activities were still partly dedicated to the Ebola outbreak in West Africa. The referent was still actively involved in conferences and workshops on lessons learned.
- HP activities were conducted in 38 projects across 22 missions, not including vertical HIV/TB projects (9 emergency interventions and 29 regular projects)
- The increased attention to anthropology after the Ebola outbreak led to the organisation of the first OCB workshop on anthropology
- Time has been dedicated to exchange of experiences on good practices, both among MSF sections and between MSF and other actors and organisations. It is the first step towards developing HP evidence based approaches.

HIV/TUBERCULOSIS

- The results of the START trial finally showed conclusively that all people with HIV should be initiated on treatment regardless of CD4. This means that roughly twice as many people need ART compared to current guidelines.
- Due to global strategic changes, pushing HIV away from exceptionalism and stagnation of funds programme scale-up, particularly in middle income countries, under threat to be blocked. Access to HIV/TB care remains inadequate in low coverage settings, in particular in (post)-conflict settings.
- MSF-OCB's focus lies on integrating such activities within our range of intervention in emergency and unstable countries, while in more stable environments mentorship is the core activity for contexts where Ministries of Health (MoH) are able to ensure basic care, the 'light approach'. Furthermore challenges of HIV prevention and treatment in key (drug users, sex workers, and men who have sex with men, and other vulnerable populations, are addressed.
- MSF- OCB supported HIV care and treatment in 18 projects across 10 countries, of which 14 vertical and 4 integrated into other programme

activities. TB activities were run in 16 vertical TB/DRTB and HIV/TB projects.

- Innovative outreach HIV testing has been supported and led to 97,815 HIV tests being performed
- A total of 5267 TB patients were detected and started on treatment in 26 OCB projects. 452 were DRTB cases. The ongoing scale up of GeneXpert and the introduction of the new lab test TB LAM were responsible for the improvement for early TB detection
- A total of 29,888 adults and children were initiated on ART of which 1868 (8%) were children.
- Among adults on ART, retention in care ranged from 69% to 86% (target threshold: 90%) and among children it was 69%- 92%. Although retention in care for children seems slightly better, their viral load levels are significantly worse than those of adults.
- In the eight projects reporting on TB treatment outcomes, overall treatment success of the 1219 drug sensitive TB patients was 77%.
- Treatment success rate for MDR-TB cohorts in Khayelitsha (high HIV coinfection rate) and Mumbai were 41% and 60%, respectively. Treatment success rate of Ukraine (Donetsk and Dnepro) was 22%; high rates of patients refused to continue treatment.
- Important achievements have been reached in terms of early detection of TB and Rifampicine resistance, as well as in terms of introduction of new drugs for Drug resistant TB patients with limited therapeutic options.

INFECTION PREVENTION AND CONTROL

- Infection prevention and control (IPC) is a major challenge in all hospitals. The basis of IPC lies in the application of standard precautions
- All hospitals should have an Infection Control Officer and functional infection control committee. A survey in 2015 showed that 10 out of the 18 MSF hospitals had an Infection Control Officer, while 11 had a functional infection control committee.
- An intersectional guidance document for IPC in health facilities in Ebola epidemic areas was developed, which will be applied in the primary health care structures.
- In collaboration with WASH, the IPC team received more requests to assess the construction or rehabilitation plans of several facilities (e.g. CAR, Lebanon, Guinea, India and South Sudan)
- A new protocol on wound care was developed and approved by a panel of national and international wound care experts.

INTENSIVE CARE

- There were a total of 901 admissions in the two ICUs of the two trauma centres (Tabarre, Haiti and Kunduz, Afghanistan). Despite the abrupt ending of Kunduz in October 2015, this showed an increase of 17%
- Mortality dropped from 20% in 2014 to 14% in Kunduz and 13% in Tabarre
- Invasive mechanical ventilation is currently the most challenging activity in this field, due to the high demand for monitoring of patients under-

going this treatment, as well as the required high skills of the staff

LABORATORY

- Laboratory activities were supported in 32 projects in 18 countries
- Ebola diagnosis by GeneXpert-EBOLA (+/- 1200 samples), malaria by RDT and biochemistry by I-STAT were performed in a by MSF designed container lab and accelerated considerably the management of patients.
- Specimen transport and result delivery remain major challenges and innovative ways, including use of mobile technology, are required to accelerate result delivery.
- Point-of-care (POC) testing remains a promising option for some contexts including low prevalence, conflict and remote settings. Many sites already have GeneXpert for TB and the polyvalent nature of this near POC is under investigation.

MALARIA

- A total of 548,889 rapid diagnostic tests (RDTs) were performed with 271,019 (49%) tests being positive. The highest proportions were observed in DRC (73%) and South Sudan (72%). Both countries remained to be confronted with malaria emergencies in 2015
- Central African Republic (CAR), South Sudan, DRC and Niger were the four missions treating 90% of all confirmed cases. Severe malaria cases comprised 4.3% (> 14,000 cases).
- The Cambodia mission keeps focusing on the elimination of artemisinin resistance/tolerance. This involves active case finding and cascade screening, using polymerase chain reaction (PCR).
- The pan pLDH Rapid Diagnostic Test (RDT) became available in 2015, and is prequalified by WHO. This avoids over diagnosis of malaria.
- Although vector control through the distribution of LLINs is an essential and effective component of any malaria programme, this is not always implemented correctly in our existing projects.

MENTAL HEALTH

- Mental health (MH) activities were provided in 49 projects. While emergency MH interventions went down more mid/long-term projects increased.
- Operational focus was on mental health among refugees/migrants in Europe and Middle East. Mental health/psychosocial activities were set-up in transiting countries (7 locations in Serbia and Greek islands). In Sicily in particular for survivors of critical incidents (e.g. shipwrecks).
- The Indonesia project (Rohinga migrants from Myanmar) and Bili, DRC (refugees from CAR) focused more on longer term displaced migrants
- Migrants, being victims of torture, are under rehabilitation care in Roma, Egypt and Athens.
- Specific targeted beneficiaries: i) survivors from Ebola who present with sequelae. ii) Specialized medico-psycho-social care for survivors of SGBV, iii) Provision of psychiatric care in or-

der to develop the capacity of diagnostic/management and provision of psychotropic medication.

- The crisis of migrants represented a great challenge. To adapt our interventions with migrants according to their situation in the midst of their journey has been a key point.

NUTRITION

- 2015 was a "regular year" for MSF-OCB. There were no "major" emergencies though three situations could still be labelled 'nutritional emergencies' in Madagascar and DRC (Bolomba, Nord Ubangui). In the regular projects, the major event was the start of the handover of our project in Niger in April.
- The total number of admissions in therapeutic feeding programmes continued to decrease due to reduction in Niger activities but the number of nutritional structures and supported countries increased.
- There were 18,688 cases with Severe Acute Malnutrition (SAM) (including 5,882 complicated cases requiring admission to Inpatient Therapeutic Feeding Centre (ITFC) through twelve nutrition projects in nine countries. This represents a decrease of 25% compared to 2014.
- The experience of Bolomba in DRC showed that simplified and short term nutritional interventions were feasible and effective even in logistically challenging contexts.
- We are losing our internal human resources capacity to perform nutritional surveys and nutritional/ food security evaluations

OPERATIONAL RESEARCH AND DOCUMENTATION

- There was good integration of Operational Research (OR) into various programmatic areas including the 2014/15 Ebola outbreak, migrant health, sexual violence and torture.
- The introduction of a Mobile Qualitative Researcher within the OR team improved the understanding of complex field contexts.
- The improved support for medical data collection and analysis created useful synergies with OR.
- OR appeared in the international MSF activity report, marking a milestone in the recognition of this science within MSF. An article entitled "A decade of operational research in MSF: luxury or necessity?" highlighted the evolution of OR in MSF over the last decade.
- The OCB-related publication outputs reached 131 peer-reviewed journal articles. Over 80% of all OCB publications were open access.
- SORT IT was developed by MSF and The Union in 2009 and has been scaled up to 82 countries in collaboration with WHO and partners.
- Since 2010, the MSF Field Research website (www.fieldresearch.msf.org) has had 807,209 downloads around the world.

PAEDIATRIC CARE

- 509,079 (24%) of all outpatient consultations and 29,522 (33%) of all hospital admissions in OCB were for children under five.
- Leading causes of morbidity for paediatric outpatients remained respiratory tract infections

(35%), malaria (27%) and non-bloody diarrhoea (14%) and for paediatric inpatients those were severe malaria (44%), lower respiratory tract infections (24%) and non-bloody diarrhoea (9%).

- Paediatric inpatient mortality was mainly caused by severe malaria (33%), lower respiratory tract infections (10%), sepsis (8%) and severe acute malnutrition (2%).
- 6558 neonatal exits were recorded (60% more than in 2014) of which 781 (12%) neonatal deaths mainly due to low birth-weight/prematurity (47%) and perinatal asphyxia (30%).
- The highest impact on mortality is achievable for neonates with a birth weight above 1500 grams within the means and the level of technology being offered in the OCB structures.
- Follow-up of specific high risk neonates after hospital discharge may be recommended and considered based on feasibility.

PHARMACY

- The continuing emergencies in Syria and Ukraine and increased MSF activity in countries with constraints for importing drugs and material - such as in Egypt, South Africa, Kenya, Ukraine, Pakistan, India, Lebanon and Syria (via Turkey) continued to represent significant challenges to the medical supply chain.
- Local pharmaceutical market evaluations were conducted in 14 countries: seven manufacturers and 106 wholesalers were approved, however four manufacturer and 37 wholesalers were not.
- Through field visits, the reinforcement of MSF Quality Assurance Scheme for countries bound to local purchase (26 out of 33 missions) continued.
- Total expenditure for medical procurement was 35M€ with an additional 0.7 M€ for therapeutic food. This was 6.4M€ more than last year. Five out of 33 missions account for nearly three-quarter of this total expenditure: Ukraine, Lebanon (for Syria), DRC, CAR and Guinea.

SEXUAL AND REPRODUCTIVE HEALTH

- The projects which conduct deliveries decreased to 19 but its total deliveries increased with 15%. This is due to the big maternity projects: Khost and Kabul in Afghanistan, Timergara, Pakistan and Castor, CAR which contributed the most with a four-fold increase. Eleven projects which offered emergency obstetric care showed an increase of 14% provided Caesarean sections.
- Antenatal visits were over 150,000 of which 50% were first ANC visits. Projects providing postnatal care consultations decreased with 24%, its total consultations (24,000) however decreased less with 8%. Family planning uptake was 46,000 a decrease of 22% possibly to change of reporting.
- The number of termination of pregnancy services was provided to twice as much women compared to last year but 74% of those were only in two projects. Most projects provided these services only once or even less per month.
- Activities related to cervical cancer care has been expanded from Kibera, Kenya (11.6%

positive out of 1409 being screened) to Gutu, Zimbabwe (13% positive out of more than 800 screened women). Gutu adopted a screen and treat in one visit approach in four out of 30 clinics.

- Care for survivors of sexual violence was offered in 19 projects: 3,015 cases were seen.

SURGICAL ACTIVITIES

- Surgery in OCB focused on providing 1) essential, life-saving surgery, with low-tech requirements; 2) high-standard orthopaedic care in selected projects; and 3) specialised surgical care to women with obstetric fistula in various locations.
- By the end of 2015, there were 12 projects offering surgical care: over the course of the year, three projects conducting surgical care were opened or newly started (Burundi, DRC), and three were closed: two were handed over to local authorities (Burundi, South Sudan) and one project stopped its activities after being bombed by the US air force (Afghanistan).
- Support also included emergency interventions following natural disasters (e.g. Nepal earthquake) and provision of care to victims of violence (e.g. Burundi turmoil).
- 13,570 new surgical cases were seen, this increase in primary interventions on new cases is the highest since 2010. 25,178 surgical procedures were performed.
- An excellent quality indicator of anesthesia provision (83%) has been achieved in 2015.
- The sudden stop of activities of Kunduz Trauma Centre (Afghanistan) cancelled some ambitions to invest in surgical care, operational research and the development of new techniques.
- The handover of the Gitega obstetric fistula project in Burundi left OCB with a gap of projects performing such specialized surgeries.

VACCINATION

- The year 2015 saw major increase in activity in the fields of routine vaccination and preventive mass vaccination campaigns in OCB projects.
- More than half of the medical OCB projects reported vaccination activities in 2015. A total of 1,170,508 doses of vaccine were administered with the concurrence of MSF in 29 projects. This showed an 11% increase compared to 2014. Almost 46% of the doses were given in routine vaccination activities, one third (30%) in reactive mass vaccination campaigns and one fifth (22%) in preventive mass vaccination campaigns.
- Three quarters of the doses (453,852) were given in OPD and ANC, while one fifth of the routine doses were given through the IPD and Gynaecology/Obstetric wards (84,464). There is still an outstanding lack of integration of routine vaccination in HIV projects.
- The massive increase in preventive mass vaccination activities - five times increase compared to 2014 - reveals a positive change of MSF attitude towards primary prevention, especially where the EPI has shown clear limitations.
- New Missed Opportunity Vaccination (MOV) evaluations were conducted in Afghanistan,

Pakistan and Mauritania, allowing the projects to monitor the activities and respond to gaps in routine vaccination.

WATER, HYGIENE AND SANITATION

- Significant effort was spent to recalibrate the Water, Hygiene and Sanitation (WASH) operational support from the overwhelming Ebola outbreak to the regular missions support.
- The "Where is Everyone" review of the humanitarian aid system response in displacement of populations had initiated a reinvestment in salvaging WASH activities in the MSF movement.
- Majority of OCB projects included a WASH component to minimise hospital-acquired infections and optimise infection control. A systematic scanning of WASH needs was performed for all OCB projects.
- WASH needs in the large OCB emergency interventions were mainly addressed by specialised staff with technical support from headquarters.
- In 2015, about 63 WASH experts supported projects in 19 countries (Malawi, Guinea, Mozambique, Tunisia, Nepal, South Sudan, Tanzania, Afghanistan, Greece, CAR, DRC, Belgium, Serbia, Niger, Zimbabwe, Burundi, Madagascar, Mauritania and Haiti).
- MSF should go beyond the technical "water only" approach and include waste, excreta disposal and vector control as part of its holistic public health approach.

BIOMEDICAL EQUIPMENT

1. OVERVIEW

In the past year, OCB continued to increase its complex and fully equipped reference hospitals. Consequently the need for specialized technical support kept growing which remains a challenge. The support team has grown by splitting the medical and technical/tactical responsibilities into two full-time positions. Both will work with a mobile implementation officer (MIO) to facilitate the missions in adapting to the growth in both numbers and complexity of their equipment. Only one person was recruited in 2015. New trainings or training modules for national and expatriate staff were introduced and existing ones revised. A big step forward was taken in the standardization of equipments throughout the different missions, and even within the different operational centres.

2. PROGRAMME ACTIVITIES

2.1. TECHNICAL SUPPORT

A mission must have the following minimum requirements to be able to independently manage its biomedical equipments:

- All equipment users must be familiar with how to operate the equipment and the daily maintenance needs
- One or more technicians must be trained and be made responsible for the monitoring of the equipment
- Maintenance must be planned for and carried out as recommended
- How to conduct maintenance workshops must be planned for and undertaken.
- All maintenance activities must be recorded
- Stocks of spare parts must be maintained by ensuring punctual inventories and follow-up on orders

Priority is still given to those missions with large hospital projects having complex biomedical equipment. It is clear that although most missions have the minimum requirements in place (e.g. Democratic Republic of Congo (DRC), Haiti, Afghanistan, Pakistan, South Sudan, India, Sierra Leone), follow-up is lacking and the responsibilities between both the medical and logistical staff in the field are still not clear. The management of the equipment also become very time consuming in larger structures, necessitating the introduction of a guideline on the lifecycle management of equipment.

In 2015, additional protocols, including user maintenance (medical), preventive maintenance and troubleshooting guides (logistical), were introduced for the most common equipments being used through biomed trainings and field visits.

2.2. FIELD VISITS

A number of field visits were undertaken in 2015. The referent visited the mission in DRC, while the MIO provided technical support to the following health structures:

- The health structures of Guidam Roundji in Niger
- The health structures of Bangassou and Bangui in CAR
- The health structures of Martissant and Tabarre in Haiti.

The national referent from DRC was also detached for a visit to the mission in Mauritania.

3. INTERSECTIONAL COLLABORATIONS

The biomedical contact group has developed greater visibility and voice in MSF through biannual meetings, sharing of information, an intersectional division of tasks, ensuring presence in other medical working groups, and combining project visits with other units or sections. The biannual meetings include the diagnostic imaging working group in order to improve the use and maintenance of radiology equipment.

4. TRAINING AND HUMAN RESOURCES

Informal training in the field – tailored to the contextual needs of the field - comprised a big part of the biomedical training agenda. Formal trainings included:

- Two five-day biomedical training courses that are now set up in collaboration with all sections. This are held at the EBC training centre in Brussels. There were 15 participants in the French training and 12 participants in the English one. Priority was given to national staff, but expatriates involved in hospital logistics or were preparing for a referent position were accepted as well.
- The biomedical equipment module was included in the Preparation for Departure (PPD) course.
- A biomedical equipment module was also included in the Hospital Management Team Training (HMTT) and the Basic Logistics Course (BLoC).

During the last working group meeting it was decided that there was need for an intersectional radiology engineer whose recruitment will be in 2016.

LESSONS LEARNED IN 2015

In the past year, a retrospective analysis of equipment breakdowns combined with the impact they have on programme activities clearly showed that biomedical equipment are often introduced without proper understanding by the end-users. For example 65-70% of the equipment out-of-service could be traced back to user-related issues. As a result, revision of responsibilities and more support for the medical staff was introduced.

The technical support continues to include more equipment in the MSF protocols. The downside is that our technicians are beginning to be overwhelmed by the amount of equipment. Local maintenance of laboratory and radiology equipment remains a critical issue. Most technicians lack the knowledge to maintain these while regional support from the manufacturers remains poor. Airlifting technicians can only partially mitigate the problem, and often these devices remain out of service for unacceptable duration of time.

The challenges of long delays encountered when equipment is sent to Brussels for repair still needs to be resolved in collaboration with MSF Supply. More autonomy will be given to the field regarding arrangements with local representatives of manufacturers in handling maintenance and/or calibration after expiry of the equipment's warranty period.

PROSPECTS FOR 2016

The new set-up for medical equipment support will have to settle in and all actors will need to match up to their respective responsibilities.

Hopefully an intersectional radiology engineer will join the team to directly support and train the projects with imaging equipment.

From a medical perspective more emphasis is needed on quality control (QC) for diagnostic and monitoring equipment. Together with the respective medical referents (e.g. laboratory, surgery, infection control, anaesthesia and sexual & reproductive health) support will be given to the end-users to ensure that the necessary QC is implemented.

In 2016, a series of documents will be released including:

- A review of the reference tool to aid making inventories, planning of maintenance activities and ordering of necessary spare parts. (Note: An update with the latest supply codes is provided annually).
- Biomedical Policy and Guideline for OCB
- An additional set of user and maintenance protocols for standard MSF medical equipment.

Also, in collaboration with the medical training team, a module focused on the lifecycle management of medical equipment is being developed for the new First Line Medical Training (FLMT).

EMERGENCY UNIT

1. OVERVIEW

The emergency unit (E-Unit) oversees the direct management of emergency projects, and supports emergency interventions managed by the operational cells through provision of experienced human resources and/or technical support. In 2015, the E-Unit intervened in 14 countries directly, and supported nine interventions (in eight countries) managed by cells.

The major interventions in 2015 were the continued assistance to internally displaced persons (IDP), refugees, the wounded, and general population in Syria (including operations outside the country in Lebanon and Turkey), the assistance to IDPs in Nepal after the earthquake, the “Search and Rescue - SAR” operation for asylum seekers in the Mediterranean and the continuation of the Ebola outbreak activities in Liberia and Guinea. Some of these are discussed below in detail.

2. PROGRAMME ACTIVITIES

2.1. SUMMARY OF EMERGENCY ACTIVITIES IN 2015

Over the course of 2015, 23 interventions (direct and support) were performed by the E-Unit (table 1). These included management of disease outbreaks, nutrition, care for IDPs due to conflicts and natural disasters, care for refugees, and care for war-wounded.

2.2. SOME OF THE EMERGENCY RESPONSE ACTIVITIES IN 2015

2.2.1. Nepal: emergency intervention after earthquake

On 25th April 2015, a high magnitude (7.8Mw) earthquake struck Nepal. This was followed by another aftershock of 7.3Mw on the 12th of May. Over 2.8 million people needed humanitarian assistance of which 864,000 lost their homes, over 95,000 were displaced, 100,000 were injured and 8,673 died. An estimated 1.4 million people were in need of food assistance due to the high impact of the earthquake on their agriculture-based livelihood.

The first MSF team was deployed hours after the earthquake from India and more staff followed in the next days. By April 29, MSF medical teams had managed to reach people in isolated villages, by air (helicopters) or road. Four Operational Centres (OCA, OCB, OCP and OCBA) were on the ground. The MSF-OCB emergency activities were carried out in Gorkha, Dhading and Dolakha districts. These included providing primary health con-

Table 1: Emergency activities managed by the E-Unit (direct and support), 2015

Managed by the E-Unit	Reason for intervention	Comments
Lebanon	Connected to Syria conflict: refugees	Ongoing since 2011
Syria/Turkey	Conflict, support project, general population needs	Ongoing since 2012
Guinea	Ebola outbreak	From mid-March 2014 to end of December 2015
Liberia	Ebola outbreak	From April 2014 to April 2015
Ukraine	Civil conflict	From October 2014; handed over in January 2016
Madagascar	Malaria	June & July 2015
Madagascar	Nutrition	Ongoing since end of April 2015
Tanzania	Cholera in refugee camp	From May to July 2015
Libya	Civil conflict	Ongoing since April 2015
Nepal	Natural disaster (earthquake)	From April to December 2015
Mediterranean	SAR - Asylum seekers	From May to December 2015
Tunisia	Asylum seekers	Ongoing since May 2015
Belgium	Asylum seekers	From August to October 2015
Greece	SAR - Asylum seekers	Since November 2015; handed over in Jan 2016
Support to cell and/or other sections		
DRC (Kindu)	Cholera	HR – technical support (to Cell 1)
Malawi	Cholera	HR – technical support (to Cell 5)
Malawi	Natural disaster (floods)	HR – technical support (to Cell 5)
Mozambique	Cholera	Support on evaluation – tech support (to Cell 5)
Greece (Lesvos)	Asylum seekers	HR – organisation support (to Cell 2)
Niger	Meningitis	HR – technical support (to Cell 3)
DRC (Kasai)	Measles	HR (to Cell 1)
Burundi	Civil war	HR – technical support – EPREP (to Cell 3)
Pakistan	Natural disaster (earthquake)	Technical support (to Cell 4)

DRC: Democratic Republic of Congo; HR: human resources; EPREP: emergency preparedness plan

sultations through mobile clinics (MCs), food and non-food items (NFI) distributions, supporting hospitals in Kathmandu with medical

materials and some WASH activities in the IDP camps in the city. Additionally, mental health (MH) activities were performed in af-

affected villages. Minor surgical activities were only provided in the first week after the earthquake in a fixed clinic in a camp in Jharland village, Dhading District.

Total relief during the emergency phase included:

- 4084 households in two district; Dolakha and Dhading with NFI's and food (rice).
- 730 primary health care consultations via MCs.
- 971 psychosocial support interventions.

In the post-emergency phases, two interventions were implemented:

- Support to the Charikot hospital in Dolakha District - the epicentre of the second earthquake - in collaboration with the Ministry of Health (MoH). The medical activities started on the 19th of July 2015 and included surgery, ER, IPD for surgical and non-surgical patients. A total of 744 and 322 patients were treated in ER and IPD, respectively; and 89 surgical interventions were carried out. All activities had been handed over to a public-private partnership by the end of the year.
- In Sangha, MSF worked in the Spinal Injury Rehabilitation Center (SIRC) - a 50-bed facility providing extra capacity to the general rehabilitation for post-operative follow up of trauma patients through physiotherapy, dressings, medical follow-up and MH support. MSF also supported the construction of a 50-bed new ward attached to the existing facility for general rehabilitation. In total, 41 patients underwent rehabilitation in the MSF facility before it was handed over to SIRC by the end of the year.

2.2.2. Ukraine: civil war emergency intervention

The MSF response started in November 2013, following the Median demonstration, by supporting the makeshift clinics around Maidan square and later with MH support. In 2014, in DPR (Donetsk Republic) and Donetsk oblast, MSF supported several health structures with first aid and/or war-wounded kits, training on mass casualty and MH activities. By the end of 2014, MCs were provided on both sides of the frontline. During the winter of 2014 and 2015, MSF distributed NFI (e.g. kits of blankets, hygiene kits, baby kits) to IDPs and social institutions (e.g. houses for elderly people, orphanages, psychiatric institutes). In January 2015, MSF started activities in LNR (Lugansk Republic), support-

ing hospitals, social institutions and IDPs; and providing MCs. Between January and March 2015, due to the heavy fighting along all front-line, MSF increased MCs in DPR/LPR areas (Non-Government Controlled Areas - NGCA) and increased support for IDPs in the Northern project in Governmental Controlled Areas (GCA). In order to be able to continue the assistance to XDR-TB patients in GCA, the MSF project for XDR-TB in Donetsk prison was split and part of the intervention started in Dnepropetrovsk.

In summer 2015, the health systems in both NGCA and GCA became more organised. However, MSF continued MC activities, ad hoc donations to health facilities and MH care for victims of conflict. Specific needs for medical items (such as insulin and haemodialysis consumables) in the two NGCA were also supported. Several trainings were organised for MH professionals. MSF operated in the two NGCA areas up to October 2015, when the access was blocked by the local committees. The intervention continued in the Northern project (Artemovsk district) till the end of 2015, providing MC, MH, donations as well as the XDR-TB project in Dnepropetrovsk. The emergency intervention was revised and handed over to Cell 4 in January 2016.

Routine activities of the projects in Ukraine:

Project activities started in Lugansk in January 2015 (and ended in July 2015 after the local committee declined further authorization), in Donetsk in July 2014 (and ended in October 2015) and by end of 2014 in Artemovsk. Additionally, the TB prison project in Dnepropetrovsk opened in March 2015 to give access to care for patients with pre-XDR-TB and XDR-TB.

Support to health facilities and social institutions for the half-year to June 2015 in Lugansk, Donetsk and Artemovsk projects are presented in figure 1. Number of supported health structures increased gradually.

Donations of various types of kits and hygiene materials in the three projects are in figure 2 (a, b), while the trends in medical consultations in the OPD by either MSF doctors or the MoH pool are in figure 3.

In Lugansk, a total of 1,597 new patients received 2,584 individual MH consultations. There were 532 group sessions which involved 5,750 participants. Sixteen training sessions on MH for capacity building were conducted for 343 participants.

Figure 1: Support to health facilities and social institutions in three Ukraine projects (Lugansk, Donetsk and Artemovsk) by MSF-OCB, 2015

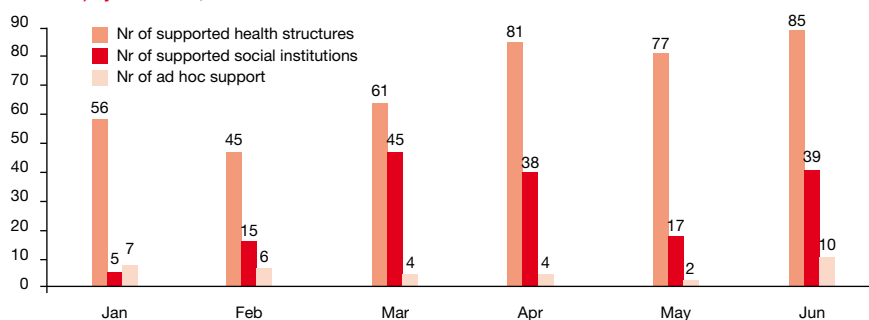
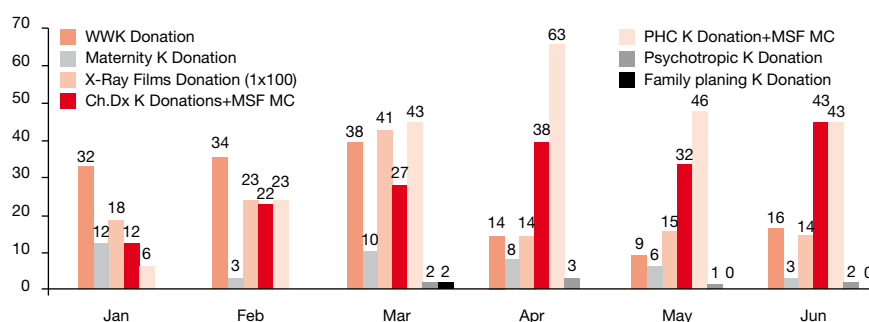


Figure 2a: Donations of various types of medical kits to three Ukraine projects (Lugansk, Donetsk and Artemovsk) by MSF-OCB, 2015



K: Kit; WWK: War-wounded kit; Ch.Dx: Chronic diseases; MC: Mobile clinic; PHC: Primary health centre

Figure 2b: Donations of various types of hygiene materials to three Ukraine projects (Lugansk, Donetsk and Artemovsk) by MSF-OCB, 2015

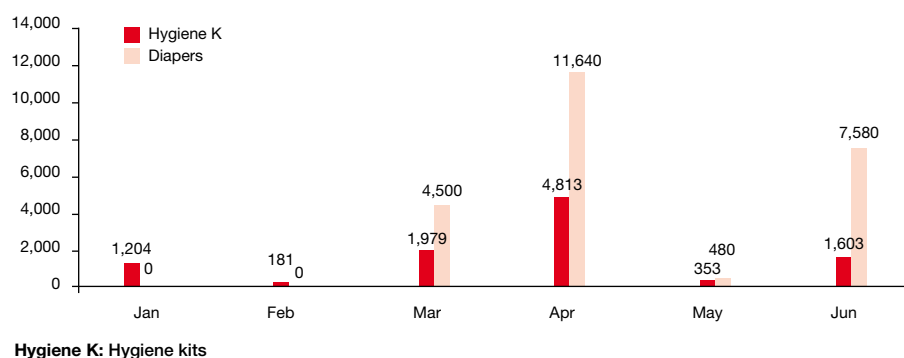
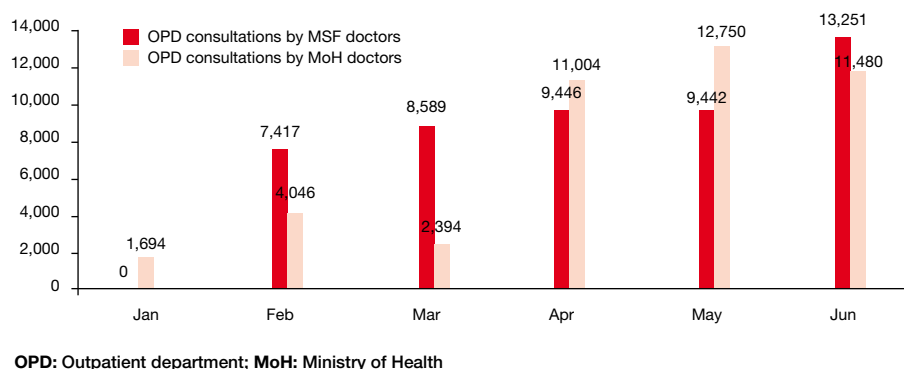


Figure 3: Medical consultations in the OPDs of three Ukraine projects (Lugansk, Donetsk and Artemovsk) supported by MSF-OCB, 2015



In Donetsk, 1,036 new patients received 1,592 individual MH consultations. There were 331 group sessions which involved 3,808 participants and fifteen capacity building trainings were conducted for 144 participants. In collaboration with Handicap International, physical rehabilitation was provided between August and September 2015. A total of 92 patients were assessed, and 120 physiotherapy sessions were provided. The majority (72%) of the beneficiaries had disabilities caused by natural causes (congenital diseases, older age) rather than accidents or arms-related injuries. The TB project in the prison was closed in October 2015.

In Artemovsk, a total of 15,501 medical consultations were provided between February and December 2015 through MCs. As of June 2015, 749 (8%) of consultations were children aged <5 years and 196 home visits had been made. MSF provided first aid points in Zaichevo and Mayorsk checkpoints, the latter considered as an active military zone. The services included first aid consultations and ambulance services for severe cases. There were a total of 7,118 consultations and 40 calls for the ambulance. The main morbidities were hypertension crisis, cardiovascular diseases, dehydration and heat strokes. As regards MH activities, a total

2,345 new patients received 3,339 individual consultations. There were 682 group sessions which involved 5,713 participants. Fifty capacity building trainings were conducted for 720 participants.

In Dnepropetrovsk, six capacity building trainings on MH were conducted for 112 staff in hospitals and psychiatric clinics. Its TB project in the prison (opened in March 2015) had admitted 50 pre-XDR-TB and XDR-TB patients.

2.2.3. Madagascar: malaria and nutritional emergency interventions

In January 2015, tropical cyclone Chedza hit Madagascar leading to flooding across the country, with the capital city of Antananarivo among the areas that were worst affected. Due to floods and the risk of mudslides, thousands of people were forced to leave their homes to move to safer areas, creating ad hoc settlements with poor shelter and hygiene conditions. The access to health care and clean water sources was also presumed to be limited. The island has several areas where malaria is endemic and possibilities of epidemics in the cyclone-affected areas. Elevation of malnutrition levels in the southern part of the island was expected due to incon-

sistent rains, limiting the possibility of an adequate harvest during the post rainy season. The Southern part of Madagascar has poor health services and there are serious issues with access to health care due to geographical reasons. Two areas of intervention were encountered:

a) Malaria intervention:

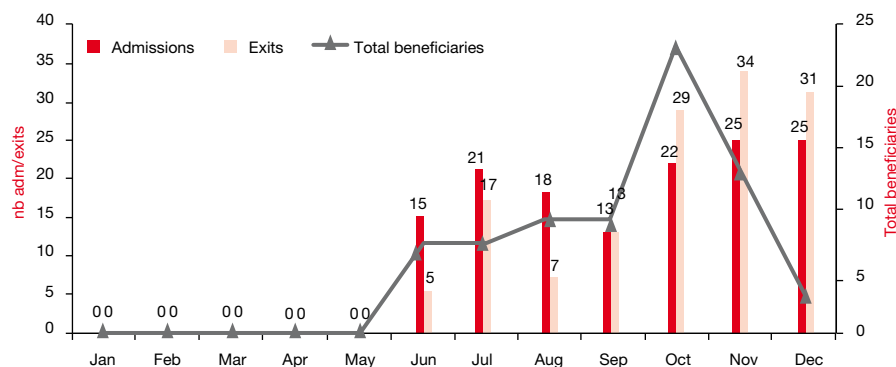
In May 2015, an exploratory mission showed an increase in the incidence of malaria in certain parts of the Southern region. The malaria intervention activities started in week 23 and ended in week 29, covering four districts and 13 communities by the MCs. A total of 4,190 patients were tested, of whom 59% were found positive and treated with ACT. Beside, donations for malaria case management were provided to two hospitals, 16 clinics and 18 primary health centres.

b) Nutrition intervention:

The assessment by MSF showed that the situation was serious (level 3 of nutritional crisis) and considering the lack of precipitation to aid the crops, the situation was estimated to deteriorate. The MSF intervention was launched in May and admission of malnourished children started in June in Ambovombe District, South of Madagascar. The numbers of admissions were not as expected due to the unexpected arrival of the rain and the food security gradually improved by September. The team remained on ground to be able to follow and monitor the situation in this large rural area with scattered population. The "Surveillance Caravanes" project was launched to continue with nutritional surveillance in several parts of the Southern area. The intervention activities were as follows:

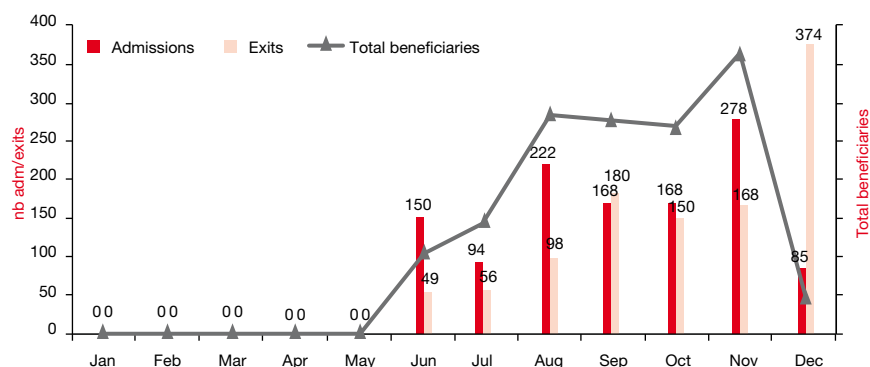
1. Inpatient Therapeutic Feeding Centre (ITFC): There was a total of 139 admissions, of which 90% were children <5 years old (Figure 4). Of 139 admissions, 52 (37%) were cured while the rest were as follows: transferred to ATFC (61), lost to follow-up (6), non-respondent (1), referred (12) and died (7).
2. Ambulatory Therapeutic Feeding Centre (ATFC): There were a total of 1,486 admissions, of which 75% were children <5 years old (Figure 5). Of 576 children <5 years admitted, 438 (76%) were cured and the rest were as follows: lost to follow-up (55), non-respondent (78), referred (4) and death (1).

Figure 4: Total number of beneficiaries, admissions and exits in the ITFC of Abovombe, Androy region, Madagascar, 2015



ITFC: Inpatient Therapeutic Feeding Centre

Figure 5: Total number of beneficiaries, admission and exits in the ATFC of Abovombe, Androy region, Madagascar, 2015



ATFC: Ambulatory Therapeutic Feeding Centre

2.2.4. Mediterranean SAR operation (Burbon Argos "Search and Rescue")

The number of migrants trying to reach Europe by boat has significantly increased in the past two years. In 2013, 48% of all irregular migrants and 63% of all those arriving by sea to the EU, came from Syria, Eritrea, Afghanistan and Somalia - countries torn by conflict.¹ In the first eight months of 2014, about 40% of those irregularly reaching Europe through the central Mediterranean route were Eritreans (23%) and Syrians (17%) - these were the top two nationalities.² With the Syrian conflict still raging, and violence spreading in the Middle East and Sub-Saharan Africa and the sealing of the land borders into "Fortress Europe", especially via Turkey, Greece and Bulgaria, many refugees and migrants considered that the only open route was crossing a perilous sea towards Italy or Malta. In 2014, there was a total of 218,000 seaborne refugees and migrants irregularly

crossing Europe's Southern border. Of these, UNHCR estimated over 170,000 arrived in Italy. The vast majority of migrants departed from Libya - at least 77,000 out of 88,000 who had arrived as of August 2014.

The increasing numbers of refugees and migrants attempting the crossing is putting the SAR operation in the central Mediterranean under pressure and exposing its systemic weaknesses. When rescue operations are hindered, this potentially leads to loss of life. For example, in 2014, there was a total of 3,500 deaths, of these, 2,200 occurred between the beginning of June and the 15th of September³.

The main identified gaps were; foremost is the lack of lifesaving activities in terms of SAR operations. With a wide area to cover there were only few actors and with limited capacity. Secondly, the limited medical services on board for stabilizing patients before reaching a safe haven.

The general objective of MSF intervention was to reduce mortality of the migrants at sea in central Mediterranean with a specific objective being to provide migrants at sea with a large scale safety and rescue operation (including medical care and provision of rescue material).

The intervention focused on three different areas:

1. Migrants have access to life saving services (life vests, seaworthy vessel).
2. Refugees have access to emergency medical care: this included setting-up medical screening and triage at embarkation, distribution of water, food and blankets, treatment of severe cases (mainly hypothermia, and other emergency medical cases), first aid treatment of minor and medium medical cases and finally providing shelter on board until disembarkation.
3. EU member states and the general public are made aware of the situation (as enhanced by medical data collection), and act upon it. Additionally, visual and oral testimonies on stories of the people were provided to the Advocacy Unit and the Communication Department through analysis of the data and testimonies.

During the summer of 2014, two other MSF boats (from OCB and from OCA) joined the intervention.

In total there were 59 MSF-OCB interventions, with 52 direct rescues (the others being transfer operations from or to another vessel after a rescue). The total people assisted were 12390, of whom 5% were minors (below 17 years of age). Among the adults 20% were women and 160 pregnant during the rescue intervention. In total, 6,100 medical consultations were done. Headache and other minor morbidities due to dehydration constituted 33% of total consultations, followed by scabies and other skin infections (32%), sea-sickness (17%) and 5% trauma (accidental, violence related and burns). Of the total rescued, 139 medical referrals were done for severe conditions, mainly pregnancy related or due to severe trauma.

¹ Frontex, Annual Risk Analysis 2014, 14 May 2014, http://frontex.europa.eu/assets/Publications/Risk_Analysis/Annual_Risk_Analysis_2014.pdf

² Frontex, Situation in the Mediterranean, Presentation of Gil Arias, Executive Director a.i. of Frontex to the Civil liberties, justice and home affairs (Libe) Committee, Brussels, 4 September 2014.

³ UNHCR, "Three boat tragedies in five days on the Mediterranean", Briefing Notes, 26 August 2014, <http://www.unhcr.org/53fc5e491c3.html>

3. EMERGENCY PREPAREDNESS

In 2015 there was the support to EPREP in Burundi for cholera and war-wounded.

4. HUMAN RESOURCES AND TRAINING

In 2015, the E-Unit increased, from three to four permanent emergency coordinators and continued to have three permanent support staff (HR, Logistic/Supply and Finance). Additionally, the Syria task force continued to be embedded in the E-Unit since 2012 (four full time positions). The Ebola task force was handed back to the E-Unit in July 2015 and finally dismantled in November 2015. At HQ level, three persons provided “ad hoc” support for part of the year.

The number of field emergency coordinators (medical and non-medical) remained at

approximately 10 to 13 throughout the year. Up to December 2015, there were more than 800 departures to the field under E-Unit interventions, split mostly between the different direct interventions.

The coordinators from the E-Unit continued to be part of trainings as facilitators and/or trainers throughout the year, in particular during the Head of Mission and/or Medical Coordinator trainings and PSP training.

5. COMMUNICATION AND E-UNIT

The E-Unit contributed to specific communication initiatives to increase visibility and leverage. The major communication initiative was done for the Ebola intervention all throughout the year, followed by intensive communication on the Nepal intervention and SAR operation in the Mediterranean.

6. NEW DEVELOPMENTS AND INNOVATIONS

- In 2015, there were still several new developments and innovation done in response to the needs of the Ebola intervention. The full list will be part of the updated Ebola guideline which will be developed in 2016.
- During the intervention in Madagascar, a different way for nutritional surveillance was put in place “the Caravans” which allows for monitoring of nutritional trends in a scatter-rural setting. Vaccination with PCV10 was also initiated.
- The Risk Surgical Kit was used and tested in Nepal. It will be updated based on the lessons learned during this intervention.
- Other innovations on the logistic IT side included: the Emergency IT kit, portable VSAT kit, specific laptop for boat context, VHF with extended range antenna and external ISAT-phone pro-antenna.

7. LOOKING BACK AND AHEAD

LESSONS LEARNED IN 2015

During 2015, there were several themes identified as problematic or that needed to be developed. A number of specific lessons were drawn from field interventions:

- WASH: How to be more efficient on testing new WASH items (especially for vector control) and how to set-up a simplified water supply system during an emergency which can be easily handed-over to other organisations or to the population.
- Secondary health care preparation: difficulties in setting-up faster and good quality case management in pediatric and internal medicine sections.
- HIV/TB & NCD in emergencies: difficulties in organizing appropriate medical care and follow-up of patients during emergencies.
- Nutrition in borderline food crisis set-up and/or in scattered populations: this remains a concern for intervention strategy based on lessons learnt in the last intervention in Madagascar.

DOSSIERS FOR 2016

Following three years of the E-Unit being fully busy with operations, the long-term dossiers were mostly in a stand-by phase. At the end of 2015, meetings and discussions in the E-Unit enabled the prioritization of issues that will need to be addressed from 2016. These are as follows:

- Med-Ops perspective: revision of scenarios and emergency stock; pediatric toolbox for primary and secondary health care in emergency; HIV/TB & NCD care in emergency; aerial disease pandemic preparedness; finalization of exploratory guidelines. Other dossiers that will need further attention include: SRH toolbox revision, flood manual revision, reporting forms in emergency, data collection in -emergency, malaria and vaccination in emergencies.
- The Ebola intervention is still ongoing and several evaluations, lessons learned and/or critical reviews are yet to be finalized. It will be necessary in 2016 to prepare for an intersectional specialist meeting that will allow finalizing the discussions on lessons learned and listing of further prospects for Ebola intervention.
- Med-WASH perspectives: a toolbox for WASH in emergency, tool for quick assessment, research on equipment with easier hand-over of water supply system, and research on WASH intervention for scattered populations. Several other technical dossiers to be explored for emergency interventions and connected to the LuxOR unit include: environmental infectivity studies for Ebola, cholera and Hepatitis C Virus; possible interventions and new items for mosquito controls; personal protection and environmental control of some specific diseases (TB, SARS).

- HR dossier: first priority is the revision of the toolbox HR for emergency. Other discussions on several HR issues in emergencies include how to deal with salary or level changes during an emergency and how to deal with specific needs during emergencies (death allowance, per-diem changes). Additionally, analysis of the FM departure in emergencies and Omer for emergency.
- Supply perspective: there is a need to prepare a tool kit for the supply team for each phase of emergency (phases 1 and 2 emergency and post-emergency set up). A toolbox on exit strategy needs to be finalized by involving all departments.
- Logistic side: several innovation dossiers are ongoing especially on IT development. Others include different discussions on shelter availability for medical structures (MFH 2nd version, Risk 3rd version, other possibilities for shelters) and discussions and meetings with the log scenarists for other dossiers.
- Finance perspective: toolbox for HQ level (i.e. simplified table for day-to-day expenditure); toolbox for project level (i.e. budget file for emergencies by phases); toolbox for the field (like the HR tool which can support finance in an emergency intervention during different phases) and tool for field visit (check-list and reporting). Discussions to be done with the Finance Department on policy paper for finance in emergency when intervening in a country with MSF presence (how to raise funds in a new mission, safety for E-Unit cash availability and other dossiers).

PROSPECTS FOR 2016

- The training and support for EPREP will be continued, in particular, in contexts where emergency scenarios are anticipated.
- The collaboration with external specialists (Orthopaedist International Association, Renal Disaster Relief Task Force, Handicap International, and Disaster Epidemiology Centre) will be continued and strengthened.
- The collaboration with the Pool d'Urgence Congo (PUC) will be continued. Discussions are ongoing for a mini-PSP in Kinshasa.
- The training of the staff confronted with emergency on a regular basis - discussions for a mini-PSP in CAR.
- Further close interactions with the Brazil Office are anticipated in terms of HR (two positions for emergency coordinator in Rio) and support to the general overview of emergency assessment.
- The level of 10-15 mobile team members will be maintained throughout 2016.
- The preparation of the E-coordinators on security and risk analysis management will be continued.
- Follow-up of the impact of El Nino.
- The dossiers will be started and finalized in 2016 based on availability of time and capacity of the E-Unit members.

EPIDEMIOLOGY

EPICENTRE

1. OVERVIEW

Epicentre's field epidemiology studies support MSF with evidence to improve their interventions and medical care. Field epidemiology includes three main areas of work; emergencies, support to MSF Programme monitoring activities, and research designed to change preventive, curative and diagnostic protocols and tools. Results may be used to support advocacy in the scientific community or with local, national and international authorities. The Epicentre scientific team is composed of epidemiologists, statisticians and laboratory specialists. In 2015, one epidemiologist was integrated into the MSF-OCB Medical Department (Operational Research) in order to enhance communication and facilitate the implementation of new research projects.

2. ACTIVITIES

2.1. RESEARCH IN EMERGENCY SETTINGS

In 2015, the support provided by Epicentre epidemiologists to MSF-OCB field interventions was mostly driven by the Ebola Virus Disease (EVD) epidemic in West Africa (Table 1).

As in 2014, Epicentre was involved in various activities to support the Ebola epidemic. Epicentre epidemiologists joined the pool of field epidemiologists in Guinea to ensure timely data management, analysis and interpretation of MSF-OCB activities in the Ebola treatment centres (ETC), and to ensure close collaboration and communication with epidemiologists of all partners of the Ebola response. In addition, during the first half of 2015, an Epicentre epidemiologist continued to provide support to the Ebola task force, harmonizing and centralizing the data originating from all MSF Ebola project sites and providing close support to the other field epidemiologists. Use of these data aimed to both guide the MSF interventions and to improve knowledge of the EVD. The results of the data analyses were shared with a wider

audience through the Epicentre and MSF scientific days. Epicentre epidemiologists also supported several publications as part of the Ebola data analysis platform. Finally, through intersectional collaboration, Epicentre continued to record the progress made towards Ebola preparedness in countries surrounding the core of the epidemic (Mali, Guinea Bissau and Ivory Coast) though, unfortunately, real-time mapping could not be implemented. Short internal reports were circulated and a report on the lessons learnt is being finalized.

In addition to the EVD related activities, Epicentre conducted a vaccine coverage survey in Bangassou, South-East of the Central African Republic (CAR), immediately after the measles vaccination campaign conducted by MSF-OCB and the Ministry of Health. In addition, and in the same country, Epicentre also initiated the development of an intersectional database to centralize the data related to the immunization activities for all MSF operational centres.

In the Democratic Republic of Congo (DRC), Epicentre supported the investigation of a large measles outbreak in the Katanga Prov-

ince by reinforcing the data collection and surveillance systems. Epicentre also organized rapid measles vaccination coverage surveys and produced weekly intersectional reports on the outbreak evolution and the operational response by MSF and other partners.

2.2. SUMMARY OF OTHER RESEARCH CONDUCTED IN 2015

The key research areas in Epicentre include EBV, vaccine preventable diseases, diarrhoeal diseases, mental health, surgery, diagnostics, antibiotic resistance, nutrition, HIV/AIDS, HCV, tuberculosis, malaria, and neglected diseases. During 2015, MSF-OCB collaborated in a number of these research activities.

2.2.1. Ebola viral disease

In 2015, in collaboration with the World Health Organization, the Ministry of Health in Guinea and other partners including Epicentre and MSF-OCB successfully launched the Phase III trial to assess the safety, efficacy and effectiveness of the VSV-EBOV vaccine in Guinea. Epicentre and MSF-OCB concentrated their efforts on the implementation of the trial component focusing on the vaccination of frontline health workers. The recruitment of 1200 frontline workers in Conakry was completed in 2015. Thereafter, the inclusions were extended to offer vaccination and monitor the vaccine safety among up to 2000 more frontline workers. Final results on the immunogenicity and safety of the vaccine will be released in 2016.

The implementation of the trial component of vaccinating contacts of EVD patients using a

Table1: Epicentre/MSF-OCB field interventions in 2015

Country/project	Intervention	Topic
Guinea, Sierra Leone, Liberia	Epidemiological data compilation and analysis for the Ebola task force	Ebola
Guinea	Outbreak investigation	Ebola
Mali, Ivory Coast, Guinea Bissau	Surveillance in non-affected countries surrounding the core of the epidemic	Ebola
CAR, Bangassou	Vaccine coverage survey	Measles
CAR	Development of an intersectional database	Immunization
DRC, Katanga	Outbreak investigation and vaccine coverage	Measles

ring vaccination was to be spearheaded by the WHO. As part of the vaccine consortium steering committee, MSF-OCB and Epicentre provided technical support to the study and the publication of its preliminary results in the *Lancet*¹. Additional documentation work supporting MSF-OCB interventions is also ongoing.

2.2.2. Vaccine preventable diseases

Epicentre and MSF-OCB, supported by the MSF Innovation Fund, implemented a measles vaccine stability study in DRC. The aim of this study was to examine the heat stability of measles vaccine in real field conditions and evaluate the potential use of this vaccine in controlled temperature chain (i.e. at ambient temperatures, rather than the normal cold chain temperature). The results showed that the vaccine is quite stable in the lyophilized form, but quickly loses its potency once reconstituted and kept at elevated temperatures. Discussions have started with the manufacturer to consider the implications of these results and possibilities of using measles vaccine outside the cold chain.

2.2.3. HIV and Hepatitis C virus

At the 2015 Conference on Retroviruses and Opportunistic Infections (CROI), Epicentre presented the results of the HIV population survey conducted in KwaZulu-Natal, South Africa, separately (Huerga et al)² and as part of the multi-centric analysis of the three population surveys conducted in Kenya, Malawi and South Africa (Huerga et al; Maman et al)³. The communication and publication of these results will continue in 2016. In the meantime, the study recommendations are being introduced in the field projects of MSF-OCB.

In 2015, the final multi-centric analyses on pre-ART care among adults treated in MSF HIV Programmes were presented in the 8th IAS Conference on HIV Pathogenesis, Treatment and Prevention. The manuscript and analysis of cohorts of adolescent patients

before and after starting ART treatment were put on standby while awaiting ethical clearance to use the databases gathered from various MSF African and Asian HIV/AIDS projects, including those from MSF-OCB.

As part of the CIPHER⁴ Paediatric HIV cohort collaboration, an initiative devoted to accelerating research in paediatric HIV, Epicentre contributed to the project in 2015 by providing data from the MSF paediatric HIV cohorts (including data from MSF-OCB) and reviewing protocols and publications. The priority research questions focused on global epidemiology of adolescents with perinatal HIV infection and on the duration of effective first-line antiretroviral therapy in children.

In 2015, ethical clearance was granted for the intersectional UNITAID project that will oversee the introduction of a new Hepatitis C virus (HCV) treatment for HIV patients in six different countries. The MSF-OCB field projects that are involved are located in Kenya (Kibera) and India (Mumbai). Epicentre started managing the multi-centric cohort database and organized a training for the projects' staff in Paris. Beside the UNITAID project, Epicentre is also supporting an MSF-OCB HCV project in Pakistan which includes deployment of cohort database, data management together with the MSF-OCB LuxOR unit, training of staff and ethical submission requirements.

Also in 2015, a secondary analysis of the data arising out of CARINEMO⁵ study was initiated to assess the association between NNRTI⁶ exposure, viral load suppression and the emergence of resistance in HIV-infected patients receiving rifampicin⁷. Final results are expected in 2016.

Supported by Epicentre since 2011, the MSF study that aimed at evaluating the performance of new and currently used rapid diagnostic tests for HIV in five African countries was completed in all study sites, including the MSF-OCB site (Conakry, Guinea). Final report and results will be issued in early 2016.

2.2.4. Malaria

In the area of malaria, 2015 was dedicated to the communication (oral communication and manuscript preparation) of the results from the following studies: (i) evaluation of the time taken for three malaria rapid diagnostic tests to become negative after successful treatment in children under five years in Uganda; (ii) evaluation of the efficacy of three artemisinin-based combinations⁸ for the treatment of uncomplicated malaria in children under five years of age in Maradi (Niger). However, only preliminary results were presented due to issues of quality of PCR analysis carried out in Niamey. Repeated PCR analysis will be conducted in Bamako and final study results are expected in early 2016; and (iii) the evaluation of the efficacy and bioavailability of Artemether-Lumefantrine in severely malnourished children compared to those non-severely malnourished⁹. For this study, further pharmacokinetic modelling will be conducted in 2016 in collaboration with the WWARN¹⁰.

2.2.5. Tuberculosis

In the absence of randomized controlled trials (RCTs) to assess new treatments for (multi/poly) drug-resistant (DR) tuberculosis (TB), retrospective cohort analyses could provide important information on how to improve the management of these patients. In 2015, Epicentre continued the multi-centric analysis on cohorts of MSF patients with (multi/poly) drug-resistant tuberculosis. A publication was issued on the revised definitions of multidrug-resistant tuberculosis treatment outcomes (Bastard et al, *Am J Respir Crit Care Med*, 2015). Further analyses are planned for 2016.

2.2.6. Niger Research Centre

In 2015, MSF-OCB continued to support the Epicentre Research Centre based in Niger. During the year, the results from several studies were published or accepted for publication including: (i) two studies on the

¹ Henao-Restrepo et al, *Lancet* 2015.

² The titles of the presentations: Who is at risk of being untested and unaware of HIV-positive status in KwaZulu-Natal?; Self-reported versus blood-tested ART intake to estimate ART coverage in South Africa.

³ The titles of the presentations: Starting ART at 500 CD4 in Southern Africa: what is the impact on ART eligibility?; Most breastfeeding women with high viral load are undiagnosed in sub-Saharan Africa; Population viral load in three high HIV prevalence settings in sub-Saharan Africa.

⁴ Collaborative Initiative for Paediatric HIV Education and Research.

⁵ Comparison of Nevirapine and Efavirenz for the Treatment of HIV-TB Co-infected Patients

⁶ Non-Nucleoside Reverse Transcriptase Inhibitors.

⁷ UNITAID project.

⁸ Artesunate-amodiaquine, dihydroartemisinin-piperaquine and artemether-lumefantrine combination therapies.

⁹ In collaboration with the Malaria Research and Training Centre in Bamako, Mali, and the Epicentre Research centre in Maradi, Niger.

¹⁰ WorldWide Antimalarial Resistance Network.

preventive effects of long-term supplementation with various food supplements in young children (Sayyad-Neerkorn et al, *Journal of Nutrition*, 2015; Prudhon et al, *Matern Child Nut* 2015); and (ii) a double-blind RCT on the systematic use of amoxicillin in children with uncomplicated severe acute malnutrition (Isanaka et al, *NEJM*). In addition, the phase III RCT on the use of a new heat-stable rotavirus vaccine (ROSE study) is progressing well and the primary outcome has been achieved. Submission for licensure and WHO prequalification is expected in early 2016. Finally, in 2015, Epicentre supported MSF and the MoH of Niger to describe the epidemic of more than 5000 cases of meningitis caused by meningococcus bacteria from the serogroup C in Niamey.

2.3. TRAINING

During the year 2015, Epicentre ran two PSP (Populations in Precarious Situations) courses and two REPEPI (Responding to epidemics) courses. These were attended by staff from all MSF sections including MSF-OCB. In Addition, Epicentre supported MSF-OCB in running a “Responding to emergencies” course for the regional staff of the MSF-OCB Congo Emergency Pool (PUC) in Kinshasa, DRC.

2.4. MISCELLANEOUS

Members of Epicentre were involved in presenting and participating at internal (including working groups) and international meetings on the different themes discussed in section 2.2 and 2.1.

The FUCHIA helpdesk continued to provide regular technical support to all projects where a FUCHIA monitoring system was implemented.

In 2015, two FUCHIA training sessions (in April and July) were conducted for the medical staff of two Centres de référence - CDR” on the management of HIV/AIDS projects supported by MSF-OCB in Annaba and Tamanrasset, Algeria. A total of 11 persons, mostly medical doctors in infectious diseases, were trained. Both CDRs now have a database customized for their location and are able to enter follow-up data of their cohorts of HIV patients.

3. LOOKING BACK AND AHEAD

LESSONS LEARNED IN 2015

Similar to 2014, 2015 was still dominated by the West African Ebola epidemic. An important Epicentre-MSF-OCB joint achievement was the launch of the VSV-EBOV vaccine trial. This challenging project will remain an excellent example of efficient collaboration between Epicentre and MSF-OCB teams, both at the headquarters and field levels. It illustrated the strength of both teams in conducting high quality clinical research in the difficult context of a complex humanitarian crisis.

Also in 2015, Epicentre strengthened its links with the Southern African Medical Unit (SAMU) attached to MSF-OCB by decentralizing an epidemiologist to Cape Town in order to jointly develop new research agenda.

PROSPECTS FOR 2016

In 2016, Epicentre will continue to support recovery from the aftermath of the Ebola epidemic. Epicentre will ensure the completion the VSV-EBOV vaccine trial among the frontline health workers. Besides analysis and communication of results, this will also include advocacy support to ensure vaccine availability at an affordable price. Epicentre will also support the harmonization of data collection in MSF-OCB projects providing care to Ebola survivors.

As every year, Epicentre will continue to ensure the dissemination of recent study results to the MSF-OCB Medical and Operations Departments, and to discuss new research ideas with MSF-OCB. Finally, Epicentre will continue to work on improving its interaction, communication and collaboration with MSF-OCB partners both in the field and at headquarters. In particular, the second position for an Epicentre epidemiologist located in MSF-OCB will be re-opened with a specific focus on epidemiological activities of the emergency pool. Additionally, a second Epicentre epidemiologist will be hosted by the SAMU to conduct further HIV population surveys in the region.

EVALUATION UNIT

1. OVERVIEW

The Stockholm Evaluation Unit (SEU) has continued to conduct utilisation focused evaluations, following its objective to contribute to institutional learning and accountability. In 2015, more than fifteen dossiers were followed and ten reports were completed, mainly requested by OCB operations.

2. PROGRAMME ACTIVITIES

In 2015, the SEU completed a total of eight evaluations for OCB, one for OCA and one inter-sectional.

The main activity was the Ebola review process, which in itself consisted of nine specific reports and a summary report. All were presented to MSF in December, and will be publicly released in 2016. The Ebola review process absorbed most of the unit's capacity and required the temporary increase of support staff.

Five donors requested evaluations of HIV Programmes (DGD). Three of these were completed in 2015 while the remaining two will be finalised in 2016.

3. INNOVATIONS AND COLLABORATIONS

The new evaluation website, www.evaluation.msf.org, was launched just ahead of the 2015 MSF International Assembly. It allows centralised evaluations in MSF and offers a public evaluation portal. The ambition is to allow more public sharing of evaluation reports with external stakeholders. The SEU takes the lead in managing this evaluation website for the International Evaluation Group (IEG).

The "Knowliah" project was set up during the Ebola review in order to manage and capture document and knowledge created during the Ebola outbreak. It was an interesting pilot with a set up and software to manage large

amounts of documents and e-mails generated during the outbreak response.

4. HUMAN RESOURCES AND TRAINING

- The annual MSF evaluation course, which is jointly organised by the two evaluation units, took place in Vienna.
- In the spirit of a better exchange between the MSF evaluation units, the head of the Vienna Unit replaced the manager of the Stockholm Unit during his paternity leave.
- The team of the unit was temporarily increased with a 50% support position. A permanent position is planned for 2016.

5. LOOKING BACK AND AHEAD

LESSONS LEARNED IN 2015

- The thematic evaluation of trauma centres allowed the comparison of services in two of OCB's hospitals and therefore, helped to identify broader issues. One of them was on the limitation of MSF's usual one-year plans, where multi-year strategic planning and investment is required. The other relates to the need for more hospital management capacity and a rational electronic health information system.
- The Ebola review, the biggest ever conducted, was an enormous challenge for all commissioners, review team and the evaluation unit. It offers a number of lessons:
 - Terms of reference (ToR) process should have resulted in a better-defined and more manageable scope.
 - Overall review set up was huge, resulting in loss of efficiency, and reduced feasibility to guide and support all evaluators accordingly.
 - Administrative management to support such review needs to be set up from the start.
 - The "Knowliah" project was a useful pilot set up for managing documents.
 - Due to a strong commitment from OCB, stakeholders stayed engaged during the difficult process. The internal discussions of the first findings offered valuable exchange sessions.
- The request to review what is perceived as an increased "bureaucratisation" in OCB field missions posed a challenge in terms of defining the core problem that is linked to many factors in the organisation (e.g. growing demand on reporting to different departments in the headquarters). This was tackled with a field visit to Egypt that served a double objective; to a) frame problems of the mission and break them down into questions that can be addressed and b) collect data from the mission and start answering those questions. The next phase of the review will include two more field visits in 2016.

- One of the HIV evaluations requested by the institutional donor was looking at the hand-over process of the OCB project in Kenya. The evaluators were chosen from the country, which facilitated a good buy-in from local counterparts and facilitated the immediate use of recommendations in communication with national stakeholders.

PROSPECTS FOR 2016

- Increase the capacity of the evaluation unit with a Medical Evaluation Referent in order to respond to the increasing demand for evaluation support and to improve further the quality of evaluations.
- Test the real-time evaluation approach with Meningitis outbreak in Niger.
- Ensure good communication and utilisation of the Ebola review findings.
- Streamline the follow up on recommendations to the operations as part of the monitoring meetings (twice/year) and continue the annual reporting to the MSF board.
- Strengthen further the consistency of evaluation practice and mutual learning around the MSF movement. Therefore, we will invest in the collaboration with the Vienna Evaluation Unit and the practitioners' network through the intersection evaluation working group.

HEALTH INFORMATICS

1. OVERVIEW

The medical department supports three main data collection tools for standardised monitoring and reporting of medical programme data: a) the Epicentre tools for outpatient and inpatient departments and gynaecology/obstetrics services (OPD/IPD/Gyn-Obs tools), b) the Medical Information Network for Operational Support (MINOS)¹, and c) a collection of Excel- and Epidata-based tools for collecting patient level, “line-list”, data in which pertinent details for a given case are summarized in a single or multiple spreadsheet rows.

In 2015 Epicentre tools were used in six missions where OCB was working while MINOS was also used in six missions (with the Democratic Republic of Congo (DRC) using both tools). In Central African Republic (CAR), MINOS was deployed (transitioning from emergency mode) at the end of 2015 in preparation for its use the whole of 2016.

2. PROGRAMME ACTIVITIES

The distribution of data tools in use throughout the year is provided in Figure 1. Among the 1,815,626 general OPD consultations conducted by MSF-OCB (disregarding ante- and postnatal care (ANC/PNC) and family planning consultations), 231,407 (13%) were reported through the Epicentre tools and 955,978 (53%) through MINOS (Figure 2); among the 71,849 general IPD admissions, disregarding admissions to inpatient therapeutic feeding centres (ITFC) and maternity admissions, 34,873 (49%) were reported through the Epicentre tools and 25,185 (35%) through MINOS (Figure 3). These figures reflect the use of Epicentre tools and MINOS in high volume, longer-term projects; but less so in other contexts.

2.1. EPICENTRE DATA TOOLS

In 2015, the Epicentre tools for data involving outpatient and inpatient departments and gynaecology/obstetrics services (OPD/IPD/GynObs tools) were used in 6 OCB missions. In fact Epicentre tools were used in a number of additional emergency contexts without direct support or coordination with the medical department. At the time of writing, the figures on OCBs use of Epicentre tools in emergencies were not available to the authors.

A global summary of all 2015 outpatient, inpatient and GynObs data from programmes using these tools is provided in the table in annex. A total of 231,407 outpatient consultations (compared with 254,338 in 2014) were conducted while there were 34,873 inpatient admissions in 2015 (compared with 25,936 in 2014). The variability in these IPD

figures arises mainly from increases in the IPD admissions reported by the projects in CAR.

2.1.1. OPD consultations

The 2015 distribution of OPD consultations by country and as a proportion of the total OPD consultations is indicated in figure 4. The highest proportion of OPD consultations were in the Democratic Republic of Congo (DRC: 29%), followed by Haïti (27%) and by CAR (22%) and Kenya (15%).

2.1.2. IPD admissions

The 2015 distribution of IPD admissions as a proportion of the total IPD admissions is indicated by country in Figure 5. The highest proportion of IPD admissions was observed in CAR (64%), followed by Niger (22%) and by DRC (10%).

Figure 1: Main data tools per OCB project, 2015 (n=89)

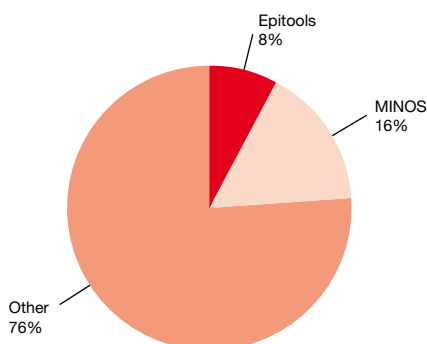


Figure 2: OCB data reporting tool for OPD consultations, 2015 (n=1,815,626)

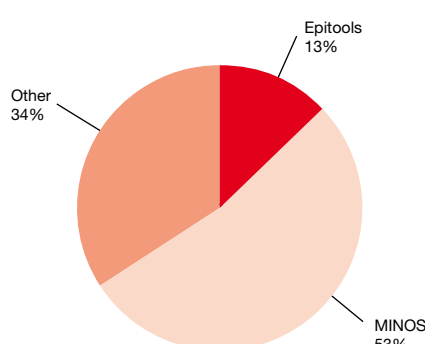
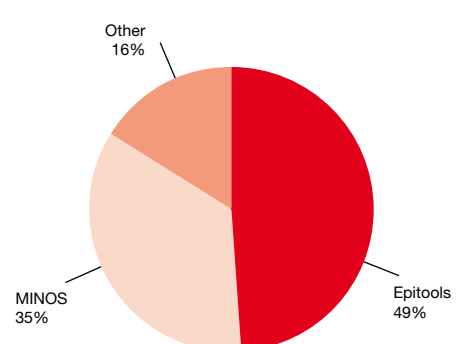
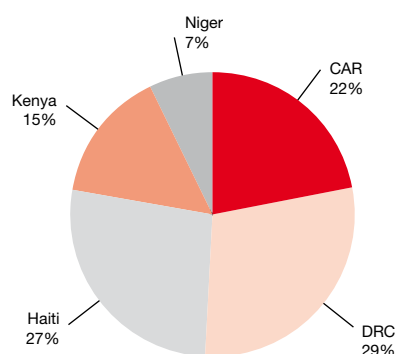


Figure 3: OCB data reporting tool for IPD admissions, 2015 (n=71,849)



¹ MINOS is an information system, designed and developed in-house, for the collection, storage, transmission, analysis, and reporting of medical service data.

Figure 4: Distribution of OCB OPD consultations by country in 2015



DRC: Democratic Republic of Congo, **CAR:** Central African Republic

For all the countries, the proportion of discharges with medical agreement was higher than 90%; the hospital mortality was under the acceptable threshold of $\leq 5\%$ in all the countries except in DRC where it was 7.4%

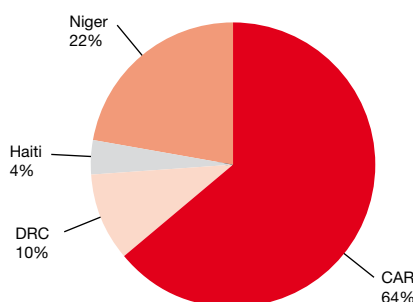
2.2. MINOS

At the end of 2015, fourteen OCB projects had used MINOS as one of their primary data collection and reporting tools during the year: three projects in Afghanistan, two in DRC, one in India, three in Pakistan, four in South Sudan, and one in Mauritania.

2.2.1. Implementation

One mission (CAR) and three additional projects (two in CAR and one in DRC) completed setup processes to initiate MINOS use in 2016. Over the course of the second half of 2015 to the first half of 2016, all projects using MINOS either received or will receive visits from the Health Information Systems Mobile Implementation Officer. These visits will centre on (re)training, the introduction of new standardized summary reports of medical indicators, and fine-tuning of the tools to better meet project and coordination needs. So far these advancements were well received by MINOS users.

Figure 5: Distribution of OCB IPD admissions reported in Epicentre tools by country in 2015



DRC: Democratic Republic of Congo; **CAR:** Central African Republic

2.2.2. New developments

During 2015, MINOS continued to mature as did the headquarters capacity to support the tool in the field. Improvements to the reporting functionality in MINOS make it easier than ever before for the tool to provide nicely formatted tables and charts of multiple indicators at any desired level of organizational granularity (service level, project level, mission level or OC level statistics). Likewise, this level of granularity can vary within a single report.

Two HQ positions with responsibility for remote and field based support/ deployment of MINOS were filled in 2015, the eHealth Applications Administrator and the Health Information Systems Mobile Implementation Officer. Both of these new positions, among other roles and responsibilities, are part of the Monitoring and Surveillance Tools (MAST) programme formalized in 2015. MAST is a cross-departmental team led by the medical department and tasked with improving the tools OCB uses to access high-quality, managerial information concerning our operational medical activities.

2.3. OTHER DATA TOOLS

Support within the medical department continued for service-specific individual-level da-

tabases: the existing databases for emergency department, operating theater, intensive care unit, obstetrics, neonatal care, sexual violence, and mental health were maintained and updated where necessary. In addition to facilitating routine monitoring and evaluation activities, the widespread implementation of these standardised data tools has paved the way for a number of multi-centric analyses of different services, including neonatal care and sexual violence care, which will be completed over the course of 2016.

Two new standardised data tools were implemented during 2015. In order to streamline the collection and routine analysis of hospital-level data, an integrated hospital data system was put in place in the trauma centres of Tabarre and Kunduz, and was expanded to the trauma project of Arche (Burundi) at the end of 2015. This system serves to cross-link the service-level databases (emergency room, operating department, intensive care, IPD, OPD, and physiotherapy), and thus allows analysis of patient information across services, as well as automated data quality checks. The goal of this system was to address the need for facility-level (rather than service-level) data monitoring for the trauma centres, filling the gap until a formal hospital-level Electronic Medical Record system can be put in place.

A second innovation was an EpiData-based data platform for the Victims of Torture projects in Cairo, Athens, and Rome. These projects consist of multiple services (including psychological, medical, and physiotherapy care, as well as social work), with patients often being referred and counter-referred between these services. In order to better monitor the programme performance, relational data systems were put in place in these projects, also allowing analysis of patient information across services. Visits to each project were conducted to implement the data systems, and a formal training on their use was conducted in Athens in December 2015.

3. LOOKING BACK AND AHEAD

LESSONS LEARNED IN 2015

- A barrier to broader use of MINOS in the field is that it has not been deployed in emergency contexts or at the outset of new projects by choice. The team has found that replacing Epicentre tools or other ad hoc tools deployed in these early project stages creates challenges to MINOS implementation later, general delays in data availability for those with monitoring/reporting responsibilities, and confusion about where data is stored. In 2016 we should develop a capacity and stakeholder support for deploying MINOS from the point medical activities begin in all projects (emergency or stable) to improve the quality and continuity of OCBs data collection and analytics.

- Calls for more decentralized electronic collection of disaggregated data (electronic patient files rather than paper-based files) at or near point of care and broad organizational access to high quality analytics continues to grow. Some examples of contexts driving these requests include ongoing treatment of patients with non-communicable diseases or integrated community case management programmes.
- The formalization of a Monitoring and Surveillance Tools (MAST) programme in the medical department as well as the new and renewed positions (mentioned in section 2.2.2) to provide ongoing support for MINOS and other eHealth applications are improving our responsiveness to data management requests from the field and HQ.
- Until MINOS use is well established in emergencies we should not forget that the data collected in Epicentre tools (or other tools) need to be available for analysis and reporting purposes in a timely manner and we should make use of available tools for aggregating data from many OPD/IPD/GynObs tools. Delays in sharing data within OCB continue and the fragmented way we manage our data must finally be addressed.
- The in-house capacity proved to be sufficient to design and implement two databases managing cross-service data through a relational system: one for the management of the trauma centres and one for the management of Victims of Torture data. For the trauma centres, this setup is intended as a stopgap measure until a generalizable and scalable solution for hospital data management is implemented, while for the Victims of Torture projects, the systems may represent a more sustained tool.
- As always, collaboration between all the stakeholders is key and we cannot stress the point enough that the quality of data depends on the good links between the medical department, the cell and the field. When everybody in the network understands the importance of good data for the monitoring of projects, the data collection will become easier and the quality of the collected data is likely to improve. Improving the quality of the data in the field will persist as a main challenge of the medical department.

PROSPECTS FOR 2016

- A major gap in MINOS' capabilities has been the lack of integrated collection and analysis of patient-level data. A project to pilot the integration in MINOS of a free, robust, and widely used piece of software, DHIS2, for the collection, transmission, and analysis of anonymous patient level data is planned for 2016. Assuming a successful pilot, a full deployment to replace standard Excel-based line lists will be planned for 2017.
- Steps will be taken to implement MINOS at the start of projects rather than playing catch-up several months into projects. This requires ongoing monitoring of field project initiation activities by the MAST team.
- A more comprehensive set of self-learning tools and training on MINOS will be developed in 2016 to improve use of the tool throughout OCB.
- Additional pilot projects will be launched in OCB, when possible in collaboration with other OCs, to improve health informatics tools for clinical support such as electronic medical records in large hospital projects. These projects are mainly run out of the operations department and Information and Communication Technologies teams, but the medical department will coordinate with these projects closely to ensure any systems deployed are well integrated with OCB's monitoring and surveillance tools, and gradually replace the extant stopgap tools in place.
- In 2016, we will continue to support the missions which are not able to use MINOS, for instance during emergency interventions when we don't have time to train people on MINOS. We will still insist on briefings of the medical coordinators and the epidemiologists who are either going for the first time to the field or are being recruited for the first time in this position to be aware on how to use these tools ensuring good quality of data; we again recommend this habit which has been abandoned lately. This is a possible reason why some databases are never sent to Brussels.

HEALTH PROMOTION AND SOCIO-ANTHROPOLOGY

1. OVERVIEW

In 2015, Health Promotion (HP) activities were still partly dedicated to the Ebola outbreak in West Africa. Particularly, the intervention in Guinea was still quite intense, with the referent still actively involved in conferences and workshops on lessons learned.

2015 also saw stronger collaboration between the different MSF sections on HP, anthropology and community engagement, resulting in the development of an intersectional concept paper on HP. The HP referent for OCA started in November, the 3rd section with a full time position dedicated to HP support.

The increased attention to anthropology after the Ebola outbreak led to the organisation of the first OCB workshop on anthropology for sections' HP referents, key people in the medical department and operations and field anthropologists from different sections.

2. PROGRAMME ACTIVITIES

2.1. HEALTH PROMOTION GENERAL OVERVIEW

In 2015, HP activities were conducted in 38 projects across 22 missions (not including vertical HIV/TB projects, which are reported elsewhere – (cf. HIV/TB section). These projects included emergency interventions (9 projects; Table 1, annex) and regular projects (29 projects; Table 2, annex).

2.2. HEALTH PROMOTION ACTIVITIES AT A PROJECT LEVEL - EXAMPLE

We present one example of HP activities in the Karachi project in Pakistan. HP activities

are one of the key components, both in the health structure and the community.

Example: HP activities in Karachi, Pakistan in 2015

- Throughout all HP activities, a total of 175,787 people were reached, of whom 70,229 (40%) were male and 105,558 (60%) were female.
- A total of 13,989 HP sessions were conducted in the MSF clinic (OPD, Delivery Unit and ANC) and the community surrounding the community (Machar Colony)
- The topics discussed included seasonal diseases, hygiene, mother and child health, vaccination, Hepatitis C virus and

- Health promotion training in Kabul: five days regional training, open to all sections.
- Two days Ebola training in Brussels: module on HP & Ebola.
- NOHA and UCL fall school in International Humanitarian Action: two hours module on anthropology in humanitarian response.

Furthermore, the HP & Anthropology Referent, Medical Anthropologist from the Vienna Evaluation Unit and the OCB MIO of Qualitative Research organised a two-day workshop in Brussels on anthropology within MSF. This involved field anthropologists of OCB and other MSF sections, HP referents (OCBA, BRAMU, and Vienna Evaluation Unit) and key people from operations and medical department. The objective was to exchange ideas on the ways forward for anthropology within MSF and building capacity of field anthropologists. Approximately, 40 people attended the workshop over the two days.

4. OPERATIONAL RESEARCH / SOCIO-CULTURAL ASSESSMENTS

To generate a better understanding of the socio-cultural issues in the contexts in which OCB works, and to better support OCB medical activities, a number of qualitative socio-anthropological surveys were conducted either as part of HP activities or for operational research purposes. These included the following:

- Cambodia – Preah Vihear: qualitative research on “Population's perception of the Total Malaria Elimination project”

	MSF clinic	Community ^a (Machar Colony)
Total HP sessions	11,220	2,769
Total community meetings	-	52

^a Meetings were organized for women, men, community leaders, teachers and parents

MSF services. The key issues in these sessions were the interaction with the audience and the dynamic discussion and dialogue.

3. TRAINING AND HUMAN RESOURCES

The following trainings included a HP or socio-anthropology component:

- Water, Hygiene and Sanitation (WASH) in emergencies: module “Health promotion in WASH and Emergency”.

- Sexual and Reproductive Health training: module “Health promotion and Reproductive health”.
- Management of Health Services (MHS): module on “Health Promotion and Anthropology in OCB” & case study integrated with malaria and health structure models components.
- Health Promotion level I training in Brussels: ten days training, open to all sections (the training curriculum for this course was revised to include additional HP modules).

- Sierra Leone – Kenema: qualitative research on “Health seeking behaviour and perception of public health facilities in Kenema District”.
- Sierra Leone – Kenema: quantitative research on “Children’s caregivers’ knowledge of three main killer diseases and health seeking behaviour”.
- South Africa – Rustenburg: community assessment report on “Perceptions on community issues and sexual violence”.
- DRC – Bikenge: anthropological study of health seeking behaviour and local practices before opening of the project.
- Attendance on invitation of a workshop in Malaysia of the Asia Europe Foundation (ASEF), on risk communication for public health emergencies.
- Presentation during the annual meeting of the American Society of Tropical Medicine and Hygiene in Philadelphia, on key lessons learned on HP and community engagement.
- Participation in a two-day inter-agency workshop organized by Oxfam in Oxford, on lessons learned on community engagement.

5. SEMINARS AND CONFERENCES

6. LOOKING BACK AND AHEAD

LESSONS LEARNED IN 2015

- The position of Mobile Implementation Officer (MIO) for qualitative research allowed coaching of one field anthropologist, and increased the attention and scope of qualitative research, which is needed in HP and anthropology pool.
- More time has been dedicated to networking and exchange of experiences on good practices, both among MSF sections and between MSF and other actors and organisations. It is the first step towards further collaboration and sharing work experiences and lessons learned in HP; in order to develop evidence based approaches.
- Attention was paid to common fields of work between HP and WASH, which resulted in new ideas of research and project activities.

PROSPECTS FOR 2016

- Revision of MSF-OCB’s Health Promotion Policy. At the intersectional level, this was an unachieved objective of 2015, now rescheduled for 2016.
- The increased collaboration with other MSF sections on HP should result in the development of a second HP yearly training and several guidelines and templates for the field projects.
- In 2015, ideas for collaboration with other agencies and academic institutions have been launched, particularly in WASH emergency setting. In 2016, we will try to strengthen this collaboration in order to document evidences on what works and what does not work in such setting for HP and community engagement.

HIV/AIDS AND TUBERCULOSIS

1. OVERVIEW

In 2015 the results of the START trial finally showed conclusively that all people with HIV should be initiated on treatment regardless of CD4 counts. Implementation of this would mean roughly twice as many people needing ART compared to current guidelines. Following latest WHO recommendations, some countries and MSF programmes have been preparing to move towards universal treatment. However, since most are still initiating at CD4 counts below 350 and some 500 cells/ μ l, and with the exception of PMTCT B+ and those co-infected with TB and Hepatitis B, most patients are still offered treatment only once CD4 drop below these levels.

The move from the Millennium Development Goals (MDGs) towards the Sustainable Development Goals (SDGs) and away from HIV exceptionalism, together with stagnation in HIV/TB funding in recent years and combined with the risk of reduction in donor funding to a large number of African countries reaching so-called middle income status, has threatened to block programme scale-up in many countries. Ongoing neglect in low coverage settings, particularly conflict and post-conflict settings, means that access to HIV/TB care in these countries remain shockingly inadequate.

OCB HIV/TB Operational strategies in 2015 have increased focus on integrating such activities within our range of intervention in emergency and unstable countries, while redirecting MSF focus towards 'niche' activities and mentorship in more stable environments where the Ministry of Health (MoH) is able to ensure basic care. The 'light approach' in some sites, with MSF pulling mostly out of routine activities such as facility based HIV testing or first-line TB or HIV treatment, means that most projects only report on activities that were led and implemented directly by MSF¹.

OCB has continued to invest heavily in HIV/TB programming, both vertical and integrated. New areas of programming reflect ambitions to increase integration and access to care in conflict and low prevalence settings and address the challenges of HIV prevention and treatment in key populations (drug users, sex workers (SW), and men who have sex with men (MSM)), and other vulnerable populations.

2. PROGRAMME ACTIVITIES

2.1. INTRODUCTION

2.1.1. HIV

During 2015 MSF-OCB continued to disengage from large vertical projects, keeping a specific role in some while investing in more integrated, emergency, and unstable contexts.

At the end of 2015, OCB was supporting HIV care and treatment in 18 projects across 10 countries, coming from an average of 10 HIV/TB projects in 2011-2013. Of these, 14 were vertical HIV/TB projects in the following nine countries: India (Mumbai), Guinea (Co-

nakry), Democratic Republic of Congo (DRC) (Kinshasa), Mozambique (Changara, Beira), Zimbabwe (Gutu, Chikomba, Nyanga), Malawi (Nsanje and prison project), South Africa (Khayelitsha, KwaZulu-Natal), Algeria, and Ukraine (Dnipropetrovsk) while MSF decided in 2015 to actively disengage from Buhera, Mavalane and Thyolo. In four remaining projects, HIV/TB activities were integrated with other medical activities such as primary care, chronic disease management and sexual and reproductive health (SRH) in Kenya (Kibera), DRC (Masisi) and Central African Republic (CAR) (Bangui and Bangassou). Five vertical projects in India, Kinshasa DRC, Kenya, Guinea and Ukraine (Dnipropetrovsk since MSF expulsion from Donetsk) remain

primarily MSF supported in terms of human resources and/or drug supply whilst the remaining projects aim to work in collaboration with ministry of health staff to strengthen and increase the quality of HIV services.

2.1.2. TB

In 2015 TB activities were run in 16 vertical TB/DRTB and HIV/TB projects in India, Guinea, Ukraine, South Africa, Malawi, Zimbabwe, Mozambique, Lesotho and CAR and in 10 transversal projects. The project in Lesotho closed during the year, thus handing over TB activities to the MoH. Among projects with a relevant DRTB component, the project of Donetsk, in Ukraine, closed but activities continued in the project of Dne-

¹ Data on numbers related to MSF activities varies according to somewhat subjective decisions regarding the level of MSF responsibility for that output. Generally HIV testing is only reported where fully MSF led while outcomes of firstline treatment may be reported even where MSF has no engagement other than counselling support and mentorship. This principle means care should be taken in interpreting year on year differences and absolute numbers of people affected by our programmes. In particular it is important to note that since operational strategies often involve training and mentorship rather than direct delivery, this approach to data may lead to underestimation of the impact of MSF activities.

propetrovsk. Important achievements have been reached in terms of early detection of TB and Rifampicin resistance, as well as in terms of introduction of new drugs for Drug-resistant TB patients with limited therapeutic options.

2.2. TESTING FOR HIV AND TB

2.2.1 HIV Testing: exploring ways to reach the first '90'

In 2015, an increasing number of projects developed initiatives to support HIV outreach testing, targeting specific groups, compared to a previous focus of facility-based testing, now mostly implemented by MoH staff. Across these projects 97,815 HIV tests were performed. Innovative testing strategies at community and facility level have continued including piloting of oral tests in KwaZulu Natal (KZN), night testing strategies for men in Zimbabwe and peer-led testing and re-testing among SW and truck drivers in Mozam-

bique. Not included here is data from a number of projects where MSF is only providing training and mentorship though the impact of those projects has also seen increased HIV testing provided by MoH.

2.2.2 TB case finding

For 2015, TB case-finding data were reported from 26 OCB projects. A total of 5,267 TB patients were detected and started on treatment during the year and, out of these, 452 were DRTB cases. The overall TB case detection is consistent with data from the previous years, although the number of projects reporting TB data increased: this can be explained by the fact that some vertical projects closed and handed over TB activities to the MoH or to other MSF sections during the year but more transversal projects reported case detection data, although numbers were very small.

Improvements in early TB detection, allowing for rapid initiation of TB treatment, has been

possible through the ongoing scale up of GeneXpert, as well as through the introduction of the new lab test TB LAM, for severely sick HIV positive patients admitted to MSF Kabinda hospital in Kinshasa.

Among new drug sensitive TB (DSTB) cases, in projects which reported the standard indicators for TB, the average proportion of confirmed pulmonary TB – by smear microscopy and/or by Xpert MTB/RIF – was 59%, considerably increased compared to 2014, when confirmed cases represented only 26% of the newly registered. The roll out of GeneXpert has contributed to this increase by bacteriologically confirming TB in patients who were previously categorised as smear negative. The proportion of extra-pulmonary TB (EPTB) cases continue to be lower than expected in most HIV projects, with an average of 10%.

2.3. PATIENT ENROLMENT (SECOND '90')

2.3.1. Pre-ART enrolments

In 2015, a total of 29,888 people were newly registered for HIV care and treatment in OCB-supported facilities (Figure 2). With increasing eligibility thresholds for ART initiation and rapid initiation of ART at enrolment fewer patients are entering pre-ART cohorts. Since the START results, the pre-ART cohorts are slowly disappearing, with moves towards all patients now being offered ART.

2.3.2. ART enrolments

A total of 24,664 adults and children were initiated on ART in 2015 (Figure 3). Of these, 3074 (12%) ART initiations were made in the MSF fully supported sites. Paradoxically, increased testing did not translate into increased initiation. The fall compared to 2014 reflects handover of several major projects (Buhera, Mavalane, Lesotho) and lack of the 4th quarter data for Thyolo and Nsanje. There were 1868 paediatrics initiated on ART (Figure 4) representing 8% of all initiations, with similar reasons explaining the fall in numbers. In accord with the WHO guidelines, all countries adopted option B or B+ (lifelong ART for all pregnant women regardless of CD4 count), but remained slow in implementing ART initiation at CD4 <500 cells/μl, and initiating ART in all children less than five years (under 10 in Kenya). No countries have yet moved to a universal test and treat policy as of end-2015.

Figure 1: HIV testing supported by MSF in OCB projects, 2007-2015

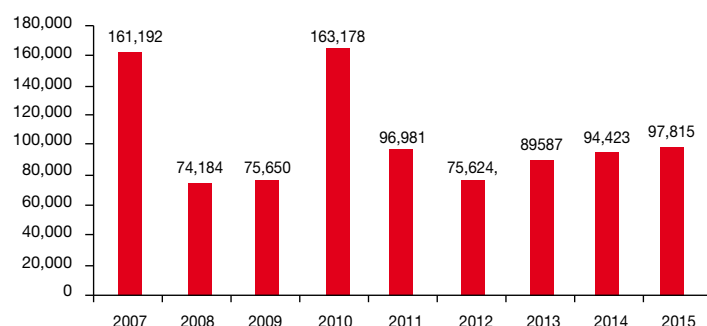


Table 1: Tuberculosis case detection in OCB projects, 2011-2015

	2011	2012	2013	2014	2015
Number of projects reporting data	22	17	21	12	26
Total number of DSTB registered	8,255	5,960	6,086	4,324	5,267
New cases of DSTB	6,869	5,423	5,729	4,005	2,749 *
% Confirmed pulmonary positive	34	41	40	26	59
% Smear-negative pulmonary	45	35	46	65	31
% Extra-pulmonary	22	24	13	9	10
Retreatment cases (% of total)	884 (11)	560 (9)	357 (6)	319 (7)	194 *

* Less than 50% of the projects reported the complete standard indicators; others only total number of patients

Figure 2: Number of newly registered HIV patients in OCB programmes by year of entry, 2005-2015

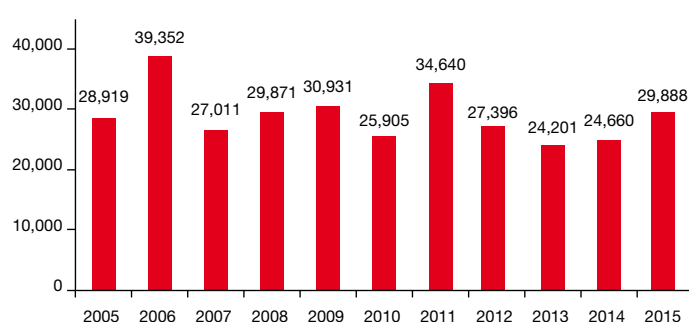


Figure 3: ART initiations (adults and children) in OCB projects, 2005-2015

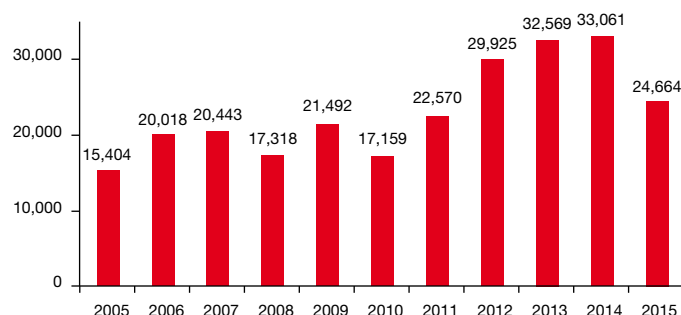
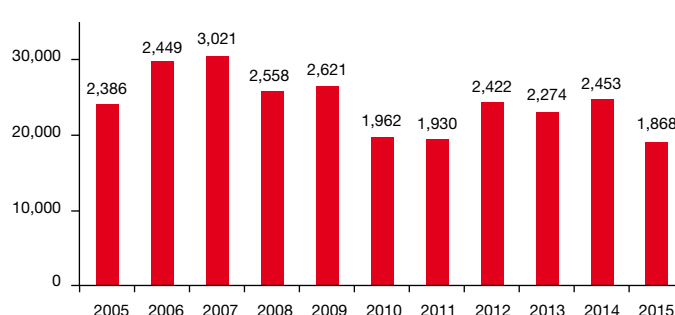


Figure 4: Paediatric ART initiations in OCB projects, 2005-2015



Only DRC continued to initiate adults with zidovudine (AZT) based first line treatment, while all other countries have moved to tenofovir (TDF), lamivudine (3TC) and efavirenz (EFV). Only Kenya and South Africa are providing the protease inhibitor lopinavir/ritonavir as the standard first-line regimen for children below three years, though it is increasingly included in country guidelines. Delays in development have meant that the thermostable paediatric formulation remains unavailable in our projects though MSF remains closely engaged with DNDi in moving the situation forward. Figure 5 shows the proportion of the cohorts on first, second and third line regimens. The proportion of the overall cohort on 2nd line regimens increased from 2% and 1% in 2014 in Chikomba and Nsanje to 5% and 6% in 2015, respectively, while in Changara 42 patients switched compared to none (0) in the previous year; these increases can largely be attributed to increased viral load monitoring and gradual increase in 2nd-line decentralisation. Nonetheless 2nd line coverage remains low though the Mumbai project in India is a special case due to its major focus on treatment failure. Only five projects reported having patients on third line treatment, specifically India (36), KZN (3) and Murambinda (1) and Nsanje (1). Khayelitsha, through its paediatric treatment failure clinic

was supporting over 100 children on 2nd line and four on 3rd line regimens.

2.4. HIV AND TB OUTCOMES

2.4.1. ART outcomes

2.4.1.1. Adult ART outcomes

The current target for “remaining in care” (RIC) in ART programmes is for at least 90% (based on 90-90-90 goals, though previous target was 85%) of the cohort to be retained in care on ART at 12 months. For the 11 projects reporting cohort outcomes for patients initiated on ART during 2015, retention in care at 12 months ranged from 69% in Nsanje to 86% in KZN and India (Figure 6).

Differentiated care strategies - reducing the burden for stable patients and allowing greater focus on those in need - have increasingly become the norm in MSF projects and some national programmes with alternative refill strategies (using community ART groups and adherence clubs) and clinic-based ‘fast track’ systems. Routine viral load testing/monitoring has enabled a move towards a once a year clinical visit by identifying adherent patients and allowing clinicians to dedicate more time for patients with significant medical or adherence problems. MSF continued playing a major role in the

development of national strategies for viral load (VL) and counselling scale-up and implementation.

2.4.1.2. Paediatric ART outcomes

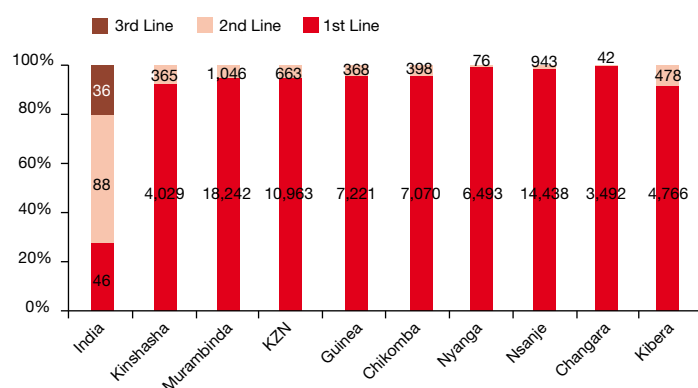
Retention in care rates for paediatrics remains higher than adults ranging from 69-92% (Figure 7). However, cross-sectional virological data for those remaining in care shows significantly poorer outcomes in children than for adults (see VL section) and medical and patient support teams continue to focus on this critical problem.

2.4.1.3. Viral Load (VL) and the VL Cascade

The multi-country UNITAID HIV monitoring project has helped VL scale up in a number of countries, with significant improvements in patient care as a result. However, more work is still needed to ensure the full cascade is completed.

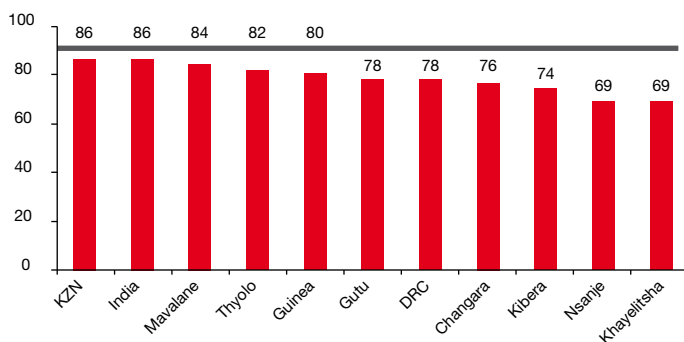
Viral load outcomes were generally worse in children than adults and varied widely between projects (Figure 8). Proportion of high VL (>1000 copies/ml) ranged from 9% in Malawi to 40% in Mozambique though results need to be interpreted with caution as lower coverage in some sites can bias the results. Improved support to adherence and switch to second-line for those in need nonetheless remains a priority.

Figure 5: Percentage of cohort on first, second and third line regimens

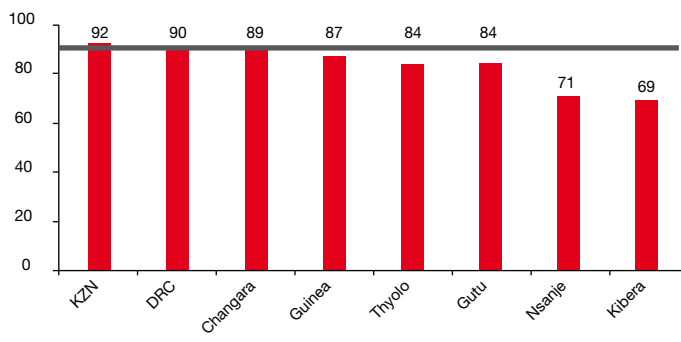


2.4.2. TB outcomes

TB treatment outcomes for patients with DSTB were reported from only 8 projects, for 1219 patients registered during 2014. Average success rate was 77%. Some projects reported lower than expected treatment success rate, for example, Gutu in Zimbabwe (46%) where a high proportion of patients (40%) were declared “not evaluated for outcome”. This means that no outcome can be assigned as patients have been transferred to other treatment centres and we do not know what happened to them. Several pro-

Figure 6: Adult Retention In Care at 12 months, for patients initiated on ART in 2014

* Target for retention in care at 12 months is 90%

Figure 7: Paediatric Retention In Care at 12 months for patients initiated on ART in 2014

* Target for retention in care at 12 months is 90%

jects that referred to the respective National TB Programmes (NTP) for management without any further MSF support or involvement did not report outcomes.

2.5. DRUG-RESISTANT TB

In 2015, 452 patients with multidrug-resistant tuberculosis (MDR-TB), were enrolled on MDTB treatment in 6 OCB projects, which is consistent with the enrolments of the previous year.

The biggest cohorts are still represented by Khayelitsha, Ukraine, and Mumbai, with 217, 178, and 40 DR TB treatment initiations in 2015, respectively, with outcomes as shown in Figure 9. Treatment success rate for the cohorts of Khayelitsha (with high HIV coinfection rate) and Mumbai were 41% and 60%, respectively. Treatment success rate for the overall 2013 cohorts of Ukraine (Donetsk and Dnepro) was 22% likely related to the complex prison context with high rates of patients refusing to continue treatment, thus declared Lost to Follow-up (52%) and high prevalence of pre-XDR and XDR TB.

Introduction of new DRTB drugs and related advocacy activities have continued throughout the year. Both Delamanid and Bedaquiline have been introduced for selected patients in the project of Mumbai, under a compassionate use (CU) mechanism. In

Khayelitsha, use of Bedaquiline under routine conditions (strengthened protocol) continued, while Delamanid became accessible at the end of 2015 under CU. In Ukraine, where needs of new drugs is extremely high, no patients could be started on new drugs and more advocacy is needed.

2.6. HIV/TB INTEGRATION

Integration of TB and HIV activities continued throughout the year. Among TB patients registered in 2014 in projects collecting HIV/TB integrated indicators, almost 85% knew their HIV status - still lower than the goal of 100%. Among patients with a known HIV status, 60% were HIV positive and 82% were receiving ART. Further efforts are needed to ensure that all TB patients are counselled and tested for HIV, and that all HIV/TB co-infected patients are timely started on ART. Among the achievements, the project of Gutu in Zimbabwe, has been scaling up Isoniazid Preventive Therapy (IPT) among PLHIV, providing IPT to 569 adult HIV positive patients.

2.7. PMTCT

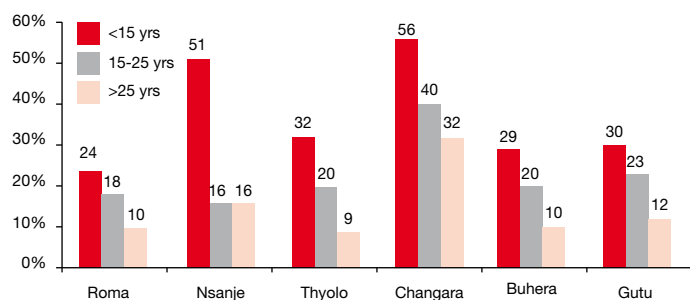
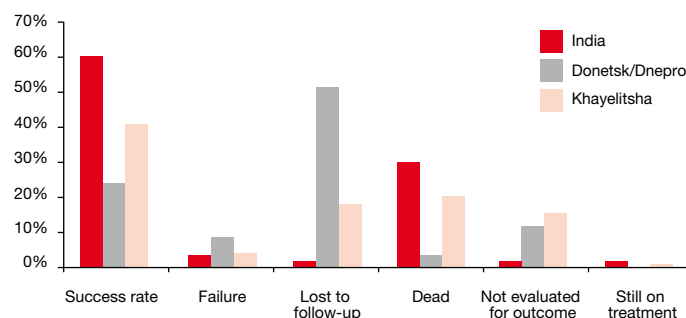
Activities aimed at preventing mother-to-child transmission (PMTCT) of HIV are fully described in the Sexual and Reproductive Health section of this report.

2.8. INTEGRATION OF HIV, TB AND DR-TB ACTIVITIES INTO NON-VERTICAL HIV PROGRAMMES

In 2015, two countries with non-HIV focussed projects reported having integrated TB/HIV activities; Mauritania (TB) and CAR (TB/HIV and PMTCT). Improvement needs to be done to integrate TB/HIV activities in countries in sub-Saharan Africa such as South Sudan, Burundi or Sierra Leone as well as TB in Western Asia such as Pakistan, Afghanistan and Lebanon.

2.9. PATIENT AND COMMUNITY SUPPORT

Patient and community support activities have continued to focus on supporting patients with high VL and in the development of community led models of differentiated ART delivery. New areas of focus in 2015 have been packages of care for key populations, whereby the development of peer-led approaches for SWs and MSM have been crucial to reach out to these groups. Through a collaboration with the advocacy unit, 2015 also saw the organisation of a workshop for national stakeholders and the launch of the report "HIV/TB counseling: who is doing the job", a multi-site analysis of the situation of lay cadres performing patient support services. Ongo-

Figure 8: Percentage of Adults and Children with Viral Load >1000 copies/ml at 12 months on ART**Figure 9: DRTB Outcomes for the 2013 cohort from India, Ukraine and South Africa**

ing challenges remain the lack of recognition and dedicated funding of this cadre. To increase competences of the patient and community support teams in the field and promote peer-to-peer exchange, a three-day workshop – the first of its kind – was organised for PCS activity managers and supervisors in Cape Town. Preparations started in 2015 to support adherence to new interventions for 2016 including pre-exposure prophylaxis (PEP) and universal ART through awareness-raising and 'same day' ART initiation counselling.

2.10. LABORATORY SUPPORT IN HIV/TB

Viral load testing increased in many laboratories supported by MSF with the roll out of national plans in countries such as Zimbabwe, Malawi, Mozambique, and DRC.

Specimen transport and result delivery remain major challenges facing the laboratory network. Median intra-laboratory turnaround time is at 20 days and innovative ways, including use of mobile technology, are required to accelerate result delivery. Laboratory Information Systems have improved efficiencies in work flow and provide M&E data that helps identify gaps and bottlenecks in scaling up testing.

Point-of-care (POC) testing (GeneXpert HIV-1 Qual, SAMBA II, and Alere Q EID) remains a promising option for some contexts including low prevalence, conflict and remote settings. Many sites already have GeneXpert for TB and the polyvalent nature of this near POC is under investigation (testing for MTB/Rif, HIV Viral load, Early Infant Diagnosis, HCV, HPV).

Uptake of CrAg lateral flow rapid test for the diagnosis of cryptococcosis together with Determine TB lateral flow rapid test within the late presenters/defaulters programme (for the diagnosis of TB in patients with CD4<100cells/uL or HIV clinical stage III/IV) remain low in many projects but is increasing and being promoted strongly.

2.11. PHARMACY SUPPORT IN HIV/TB

Uninterrupted availability of medicines and laboratory commodities remain a problem across countries.

Civil society initiatives monitoring stock outs electronically are being supported by MSF in South Africa and Mozambique (Tete & Maputo) and other actors started similar initiatives in Malawi & DRC.

In South Africa, a civil society consortium to monitor stock outs continued its national surveys with MSF support. In Kinshasa, a survey revealed major ART and test kits stock out problems.

A variety of innovative approaches to both monitoring problems and improving supply, while simplifying access for patients, have been implemented across MSF projects, including support for longer drug refills, pharmacy dispensing software and mobile apps, a private sector support for 'last-mile' delivery of ART and vaccines in rural areas.

3. MONITORING AND EVALUATION AND OPERATIONAL RESEARCH

In 2015, there was a continued M&E and OR focus on implementation of HIV VL monitoring and the VL cascade, and on community models of care. Partnership with the University of Cape Town for supporting the M&E of patients on treatment for HIV and TB, specifically the open-access TIER.Net software continued.

A large number of other OR activities continued across all projects, details of which are

available elsewhere. Findings were published and presented at a variety of international conferences and other fora.

Qualitative operational research received a boost with the creation of a new Qualitative OR Mobile Implementing Officer (MIO) position shared between SAMU and LuxOR. SAMU and LuxOR are in ongoing discussion regarding strengthening of epidemiology, OR and M&E capacity on HIV/TB and other areas within OCB.

4. HIV/TB TRAININGS

In 2015, a diverse range of learning opportunities were provided for projects in many different contexts, with the support of the SAMU HIV/TB-focussed learning and development unit.

A particular focus was made on provision of on-site field training and mentorship adapted to the needs of the specific staff and project supported.

Three main domains of expertise were developed further: HIV/TB programmatic and clinical, Pedagogical, and a particular focus on Clinical mentorship strategies that are increasingly required in 'light' MSF projects. Mentoring demands programmatic and technical frameworks that are not only time-consuming but can be resource-intensive, and require a specific skill set.

A summary of the 14 trainings to 242 participants is given in table 2.

Trainings were open to all MSF projects and while most participants were OCB, 30% were from other OCs and 65 trainees were MoH counterparts.

Table 2: HIV/TB trainings by SAMU in 2015

	Off-site HIV/TB Trainings Cape Town	On-site HIV/TB trainings Field	On-site Pedagogic/mentoring Field
SAMU HIV/TB TRAININGS IN 2015	<ul style="list-style-type: none"> - 1 Programmatic - 3 Clinical - 1 DRTB - 1 Patient & community support 	<ul style="list-style-type: none"> - 5 clinical: <ul style="list-style-type: none"> - Guinea - Mozambique - Central Africa Rep. - Dem. Rep. Congo - Myanmar 	<ul style="list-style-type: none"> - 2 ToT mentors - Lesotho - Dem. rep. Congo - 1 ToT - Central Africa Rep.
MSF staff (177)	80	56	41
MoH staff (65)	7	58	-
TOTAL STAFF (242)	87	114	41

ToT: Training of Trainers

CHALLENGES FOR 2016

MSF faces critical challenges in balancing HIV/TB priorities in the coming years - between ensuring improved access to quality care for sick patients in low coverage settings and populations while aiming for universal coverage and incidence reduction.

This balance is sought in an international context of reducing financial commitments and a reversal of HIV exceptionalism.

New international targets articulated around “90-90-90”, force MSF to position itself clearly and define its specific contribution.

Additional areas of focus in 2016 include:

- Emergency contexts as well as non-vertical HIV/TB projects
- Pre-exposure prophylaxis (PREP) in specific groups with extremely high HIV incidence
- Co-infection with TB including DRTB with simplified DRTB regimen with access to new drugs
- Identification of paediatric HIV infection and management of virological failure in children and adolescents
- Hepatitis B and C treatment with new regimens where appropriate

More than ever MSFs role will be as an innovator: in diagnostic strategies, around Early Infant Diagnosis (EID) and VL (including POC), in initiating and maintaining life-long quality treatment and support for those in care while trying to reach under-served groups through differentiated models of care and increased community engagement.

INFECTION PREVENTION & CONTROL AND NURSING CARE

A. INFECTION PREVENTION AND CONTROL

1. OVERVIEW

Health care-associated infections (HAI) are an important public health problem because they occur frequently, cause morbidity and mortality and represent a significant burden on patients, health-care workers and health system. The most common types of HAI are infections of surgical wounds, blood stream, urinary tract and lower respiratory tract.

Infection prevention and control (IPC) is a major challenge in all hospitals. The basis of IPC lies in the application of standard precautions. These include hand hygiene, use of personal protective equipment, prevention of needle and sharp injuries, environmental cleaning, and appropriate handling of soiled and reusable material.

2. PROGRAMME ACTIVITIES AND LESSON LEARNED

To implement IPC activities in hospitals, we need to address the core components as described by the World Health Organization (WHO) in 2008:

2.1. ORGANIZATION OF IPC PROGRAMMES

An IPC team in the facility is responsible for organizing, implementing and monitoring practices throughout the facility for the prevention and control of endemic and epidemic HAI.

All hospitals in MSF-OCB should have an Infection Control Officer and functional infection control committee. We performed a survey in June 2015 in 18 hospitals run by MSF-OCB – 10 out of the 18 hospitals had an Infection Control Officer, while 11 had a functional infection control committee.

2.2. TECHNICAL GUIDELINES

The teams in the facilities need technical guidelines using the best evidence available for IPC. The field of IPC has accumulated considerable knowledge on the effectiveness of preventive interventions, many of which are simple and cost effective. Unfortunately, this evidence is still significantly lacking in low resource settings and major adaptations need to be done. Despite the gaps in knowledge, we can state that if only we would put into practice what we know, we could prevent a lot of harm.

With the five MSF sections, we have written a guidance document for IPC in health facilities in Ebola epidemic areas. This guidance paper is meant to be applied in MSF projects in the primary health care structures such as health centres (potentially with limited IPD capacities), health posts and outpatient departments (OPD) (excluding maternity structures). We will write another guidance paper to guide the staff in maternities, operating theatres (OT) and inpatient departments (IPD).

We have made an addendum to the guideline on IPC from MSF-FR. The goal is to establish an international guideline in the coming year.

2.3. HUMAN RESOURCES

A crucial factor to establishing behaviour change regarding IPC is providing training to all healthcare workers.

We provided several trainings in 2015, these included: IPC in health structures (non-treatment centres) in an Ebola epidemic area - 21 sessions in one-day trainings; SRH course - one session of two hours; Biomed courses - two courses across the year, with one session of two hours each; MHS - two courses across the year, with one session of eight hours each; GAS week in Hong Kong - one session of eight hours.

We also provided on-the-job trainings during our field visits in DRC (20 weeks), Afghanistan (10 weeks), Mauritania (1 week), Haiti (4 weeks), Egypt (1 week), South Sudan (2 weeks), and CAR (6 weeks).

The team of IPC recruited a second Mobile Implementation Officer to be able to increase the field support.

2.4. SURVEILLANCE AND ASSESSMENT OF COMPLIANCE WITH IPC PRACTICES

Surveillance systems for HAI and assessment of compliance with IPC practices should be in place. Surveillance remains an important challenge for MSF, mainly due to the lack of microbiology capacity in the laboratories in our working settings.

The only standardized case definition that can be used for clinical surveillance of HAIs is the one for Surgical Site Infections (SSI). Even though this surveillance might be feasible to implement, there is need for commitment, as only half of the facilities performing surgery reported on SSI.

Hospital managers need information for action to prevent HAIs, particularly in settings where there are no available resources to implement surveillance on HAIs. There is need to emphasize on the monitoring of IPC activities to prevent HAIs. These were emphasized in the 2015 audits of hand hygiene compliance in our facilities, where 7 out of the 18 hospitals performed measurements of hand hygiene compliance.

We also introduced new tools for the monitoring of IPC activities, such as the template for monthly monitoring and the control set for visual inspection by means of UV light after completion of cleaning and disinfection of surfaces.

2.5. MICROBIOLOGY LABORATORY

There is still a limited laboratory capacity in MSF facilities - only two out of 18 hospitals had available microbiology laboratory.

2.6. ENVIRONMENT

Thanks to the good WASH work in MSF, the essential requirements for health structures were always fulfilled in our facilities. The IPC team received more requests to assess the

construction or rehabilitation plans of several facilities, for example, in CAR, Lebanon, Guinea, India and South Sudan. We assessed the following issues: access to hand-hygiene in facilities (e.g. availability of running water and soap in areas designated for patient care or where other health-care procedures are performed); clean and hygienic conditions in the facility; well-ventilated areas; well-illuminated areas where health care procedures are performed; in building in progress and renova-

tion work in health-care facilities - proper containment of dust and particles, especially if in OT and Intensive Care Units (ICU); the availability of single patient rooms with private sanitation for isolation capacity.

The bed occupancy rate remains a major challenge, exceeding 100% in some facilities. Though often it is still one patient per bed, the bed spacing becomes too narrow to guarantee a safe environment.

PROSPECTS FOR 2016

- Guidelines: we need to work on a guideline for management of antimicrobial resistant infections in our hospitals.
- Human resources: we need to work on specific recruitment for IPC nurses and establish their pool. We also need to empower the IPC nurses in our hospitals and prepare specific IPC workshops.
- Surveillance and monitoring: hand hygiene compliance monitoring should be done in all health facilities. Each should have minimal indication on the implementation of IPC activities. SSI Surveillance also needs to be strengthened.

B. NURSING CARE

Following the trends of operations, i.e. rapid increase of hospitals, increased complexity of care and higher technical level in trauma centres, more support of nursing care has become increasingly important. Additionally, with scope of the three Medical Department priorities for 2016 (quality of care, antimicrobial resistance and data management), improvement of nursing care is crucial.

For 2015 wound care and intensive care were identified as main topics. In order to improve the quality of wound care, a new protocol was developed and approved by a panel of national and international wound care experts. This protocol together with the new dressing materials will be tested in Haiti (Tabarre and Martissant) in the spring of 2016. Based on the results of the testing, the protocol, guidelines and tools will be adapted and prepared for implementation in all MSF missions where wound care is performed.

As the level of care became more "intensive" in certain projects, the writing of Standard Operational Procedures (SOPs) and bundles of care on technical nursing care procedures in ICU started in December 2015. The focus will first be on Peripherally Inserted Central Catheter (PICC) lines followed by other technical nursing care procedures carried out in ICU (e.g. mechanical ventilation, chest tube, central lines).

INTENSIVE CARE

1. OVERVIEW

During the present year intensive care activities continued to evolve in our two trauma centres of Haiti (Tabarre) and Afghanistan (Kunduz).

Both intensive care units (ICU) operated as level 2+ services (within MSF level 0 is the most basic and level 3 is the most complex); this is so far the highest level of care achieved in the global MSF movement. Invasive mechanical ventilation is currently the most challenging activity in this field, due to the high demand for monitoring of patients undergoing this treatment, as well as the required high skills of the staff.

Taking into account our limitations of care provided, national teams were eventually able to work independently. After a mean of three years of MSF's intervention, it has been possible to reach acceptable international results.

2. PROGRAMME ACTIVITIES

2.1. ACTIVITIES AT PROJECT AND MISSION LEVEL

During 2015, intensive care was provided in two OCB missions: Afghanistan and Haiti. The standardized ICU database was used in both settings, allowing a more in depth understanding of the activities and outcomes of these services (Table 1 and Table 2 in annex).

The main highlight during the year was the increased number of activities, obliging us to increase the number of beds in both units. A total of 901 ICU admissions were reported, compared to 765 in the previous year, representing a 17% increase despite the abrupt ending of the Kunduz ICU activities in the last trimester (cf. section 2.2.1).

2.2. COUNTRY SPECIFIC ACTIVITIES

2.2.1. Afghanistan

OCB continued to provide intensive care in Kunduz trauma centre (KTC) in northern Afghanistan. A total of 369 patients were hospitalized in the ICU during 2015, with a mean length of stay of 4 days. Main causes of trauma were: road traffic accidents (39%), gun related injuries (25%) and bomb related injuries (18%).

Care of patients with head trauma constituted 54% of all cases and continued to represent the highest workload of the unit due to the lack of qualified referral centres for these patients.

Table 1: OCB ICU activities in 2015

ICU 2015	Kunduz	Tabarre
Admissions		
< 5 years	37	28
≥ 5 years	332	504
Total	369	532
Deaths		
<5 years	4	2
>5 years	48	74
Total	52	76

ICU: intensive care unit

During the previous year, the ICU in Kunduz trauma centre structure had proven to be too small for its needs; for this reason it was moved to a new bigger structure with a bed capacity of eight and an isolation area. Despite the increase in bed capacity, it was not possible to fully utilize it, due to insufficient number of human resources and skills to provide the desired quality of care. Therefore, the number of allowed admissions only increased from four to six in the beginning of the year. It was not feasible to attain 2015's main objective of recruitment and (re)training of staff due to the high turnover of national staff in the year, including our most trained and experienced doctors; this compounded difficulties to an already challenging setting.

At the end of September, Taliban militants seized the city of Kunduz. The Afghan army, backed by U.S. airstrikes, began an offensive operation to regain control of the city. On the 3rd of October, a US-led airstrike badly struck the KTC, damaging the structure and

killing doctors, other staff members and patients. The hospital was left unusable.

2.2.2. Haiti

OCB continues to provide intensive care in Tabarre project, a container-based hospital in Port-au-Prince, the capital city of Haiti. Tabarre is not only a trauma centre, but also takes care of patients with acute surgical conditions. During 2015, a total of 532 patients were hospitalized in the ICU, 83% of these cases being trauma related. The mean length of stay in the unit was 5 days. The main causes of admission were: gunshot related injuries (40%); road traffic accidents (29%) and acute surgical, non-trauma related conditions (17%) – mainly cases of peritonitis. The high level of violence in this urban setting is well reflected in these figures.

The ICU had a capacity of seven beds till the last two months of the year, when the unit capacity was increased to nine beds in re-

sponse to the increasing demands following the closure of the surgical activities of Drouillard project run by MSF-OCP. Due to this unexpected increase, the ICU has now reached its maximum capacity, in terms of both space and human resources.

3. HUMAN RESOURCES AND TRAINING

In both countries, intensive care is not part of the national medical curricula. International specialists' support is still needed in

both units. As within MSF there are so far no guidelines on this subject, constant training, including both scheduled training sessions and bedside training, remain the main tool for improving the required skills of the staff. This proved to be a major need in Kunduz as explained above due to the high turnover of staff.

Continuous training of nursing care is also essential, as this might be the most important activity to ensure quality of care. Basic nursing care protocols have been imple-

mented in both units as a first step towards the standardization of care in MSF ICUs. During the year, the "Basic Assessment and Support of Seriously Ill Patients in Developing Healthcare Systems (BASIC DHS)" training that aims to tackle the problem of non-specialized personnel being in charge of critically ill patients, was also developed for nurses. This training is already in place for medical doctors, thus helping improve care of the most severe cases.

4. LOOKING BACK AND AHEAD

LESSONS LEARNED IN 2015

- The medical staff of both ICUs had different levels of training. While Kunduz had general practitioners, Tabarre had anaesthetists. As such the intensive care training had to be adapted to the background training of each group.
- It was not feasible to provide certain types of care (e.g. parenteral nutrition, neurosurgery, and haemodialysis), because of the limits of care delivery set by MSF.
- Continuity of care: there were gaps in international specialists, as well as security-related hibernation of expatriate teams, which prevented on-site continuous support.
- A standard training programme for national staff should be planned and organized before the start of projects including ICU services.

PROSPECTS FOR 2016

- More emphasis needs to be put on the follow up and standardization of low-level care ICUs within our section.
- Ongoing efforts to develop and standardize guidelines for intensive care in our settings. The BASIC DHS course for doctors and nurses will be reinforced during the year and several trainings provided in different countries.
- The use of Peripherally Inserted Central Catheters (PICCs) will be introduced in a trial basis in the ICU of Tabarre, as it requires definite standards of nursing care (which have still not been achieved in other settings). Bedside training with strong component on infection control, and refresher courses will be organized.
- Expatriate staff working in activities related to intensive care will continue to be followed up by the Intensive Care Referent.

LABORATORY

1. OVERVIEW

Laboratory activities were well balanced in 2015, with some closing while others opening up. An example of the latter was the installation of a more automated HIV viral load equipment by ABBOTT in DRC (through UNITAID funds). Ongoing were the roll-out of Dried Blood Spot (DBS) viral load testing in Malawi, Mozambique and Zimbabwe and a UNITAID study of the evaluation of the GeneXpert HIV-1 Quantitative cartridge in Zimbabwe. Additionally, important laboratory work was done in Ebola context.

2. PROGRAMME ACTIVITIES

2.1. LABORATORY ACTIVITIES AT A COUNTRY AND PROJECT LEVEL

In 2015, laboratory activities were supported in 32 projects across 18 countries (Table in annex). New activities were implemented in DRC. Two projects (in Ukraine and Lesotho) were also closed in 2015, due to political reasons, with immediate halt of all activities.

2.2 USE OF A REFERENCE LABORATORY

OCB continued to work with the Institute of Tropical Medicine in Antwerp, Belgium, which served as an HIV reference laboratory. Additionally, collaborations continued with the National Institute of Communicable Diseases/National Health Institute (NICD/NHLS) and Global Laboratories in South Africa.

2.3 EMERGENCY-EBOLA

In the Guinean Ebola Treatment Center (Donka and Nongo) an MSF designed Laboratory (container structure) was located between High Risk Zone and Low Risk Zone in order to reduce time to sample reception and processing. Ebola diagnosis by GeneXpert-EBOLA (+/-1200 samples), malaria by RDT and biochemistry by I-STAT were performed.

3. QUALITY CONTROL

OCB laboratories continued to be enrolled in the Proficiency Testing Programme of the

NICD/NHLS in order to ensure high quality and staff motivation, as well as CDC EQAS programmes in certain regions - Nsanje, Malawi and Kinshasa, DRC.

4. OPERATIONAL RESEARCH AND DEVELOPMENTS

These included:

- Harare, Zimbabwe: Xpert HIV-1 Quantitative study: A laboratory validation.
- Harare, Zimbabwe: Pooling for HIV VL testing using the bone marrow (BM).
- Thyolo, Malawi: Evaluating DBS for HIV VL testing using the Abbott m2000 system.
- Feasibility of Xpert Ebola Assay in Médecins Sans Frontières Ebola Programme, Guinea.

5. TRAINING

During 2015, only two national staff attended a laboratory training organised by MSF Austria.

6. LOOKING BACK AND AHEAD

LESSONS LEARNED IN 2015

- The ongoing introduction of Xpert MTB/RIF and recently HIV Viral Load has led to an increase in demand for biomedical engineering support from Brussels as these machines often break down.
- The availability of Ebola diagnosis through a piloted Xpert Platform and biochemistry at the MSF ETC accelerated considerably the management of patients.
- Despite the fact that more laboratory posts should have been opened and laboratory skills provided or strengthened through interactive courses, these did not happen since operations did not open lab positions neither were budgets set aside for the training of the existing lab personnel.

PROSPECTS FOR 2016

- Plans are underway to set up a microbiology unit in order to be able to perform blood cultures in the Gondama Referral Centre in Sierra Leone and the Paediatric Hospital in Martissant, Haiti.

This will allow us to better identify and assess sepsis and such related conditions in children seen in our paediatric hospital.

- The lessons learned from the Ebola "Laboratory Container" will be used to design a lighter VHF Laboratory set-up which can be easily deployed in remote settings.
- The use of GeneXpert in HIV and TB programmes will continue to expand.
- Opening of field laboratory positions and possibilities for lab training will be promoted under operations.

MALARIA

1. OVERVIEW

Malaria continued to be a leading cause of morbidity and mortality in OCB projects. Countries such as South Sudan, the Democratic Republic of Congo (DRC) and the Central African Republic (CAR) were particularly affected.

The West African countries affected by the Ebola outbreak also have a heavy malaria burden that needed specific attention because of similar symptomatology.

The implementation of preventive tools such as Long Lasting Insecticide Treated Nets (LLIN) needs to be further reinforced. As innovative vector control tools such as a new generation LLIN and insecticide treated durable wall lining become available, their places in the projects have to be defined.

The pan pLDH Rapid Diagnostic Test (RDT) became available in 2015, and is prequalified by WHO. This test turns negative two to three days after the elimination of the parasites while it takes weeks with the currently used HRP2 test; as such over diagnosis of malaria can be avoided. The further roll-out of this type of test is foreseen in 2016.

In terms of case management, the focus of OCB remains on ensuring adherence to treatment and pharmacovigilance during the implementation of the new artemisinin-based combination therapy (ACT), Dihydroartemisinin-Piperaquine. The implementation of injectable artesunate has been very successful, and the roll-out has been completed.

A specific project in Cambodia addresses the emerging threat of artemisinin resistance.

The implementation of the policy on malaria in pregnancy needs to be strengthened.

Scaling-up of existing activities or implementation of additional innovative preventive activities such as Intermittent Preventive Treatment for children (IPTc) is needed.

2. PROGRAMME ACTIVITIES

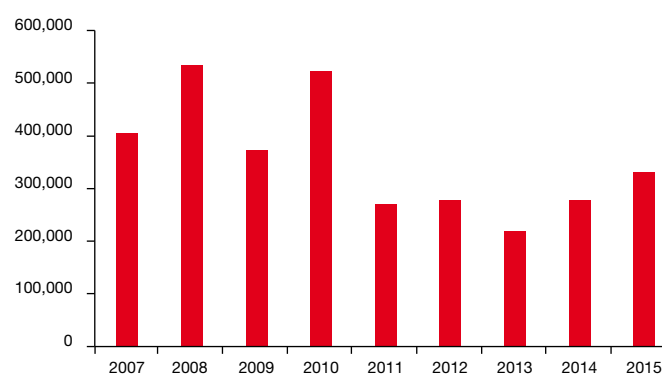
2.1. MALARIA CASES

In 2015, the total number of confirmed malaria cases treated in OCB projects was 332,390, an increase of 20% compared to 2014 (Figure 1).

About 90% of all malaria cases were treated in four missions: DRC, South Sudan, CAR and Niger (bearing in mind that Niger stopped supporting the health centres in March 2015, though did maintain the “Ap-pui Palu” activities throughout the year) (Figure 2). Of the total malaria cases, more than 14,000 (4.3%) were cases of severe malaria, representing a 2.1% reduction compared to 2014. This might be explained by the closure of the severe malaria project in Burundi.

The countries South Sudan and DRC were confronted with malaria emergencies, resulting in peaks in number of treated cases (Figure 3). Mauritania also showed an increase in number of treated cases.

Figure 1: Confirmed malaria cases in OCB projects, 2007-2015



2.2. DIAGNOSTICS

During the course of 2015, a total of 548,889 rapid diagnostic tests (RDTs) were performed in OCB projects. Out of those 271,019 (49%) were positive. The proportion of positive RDTs was highest in projects such as Bili (73%) and Bikenge (72%), DRC, Gogrial, South Sudan (72%), Bangassou, CAR (67%), Tulear Palu, Madagascar (59%), and refu-

gees; Mauritania (52%). This indicates high malaria endemicity in these settings.

2.3. CASE MANAGEMENT – ARTEMISININ-BASED COMBINATION THERAPY

A pilot project focusing on the elimination of artemisinin resistance in Preah Vihear province, Cambodia was launched in 2015. Ini-

Figure 2: Numbers of confirmed malaria cases treated in OCB missions, 2015

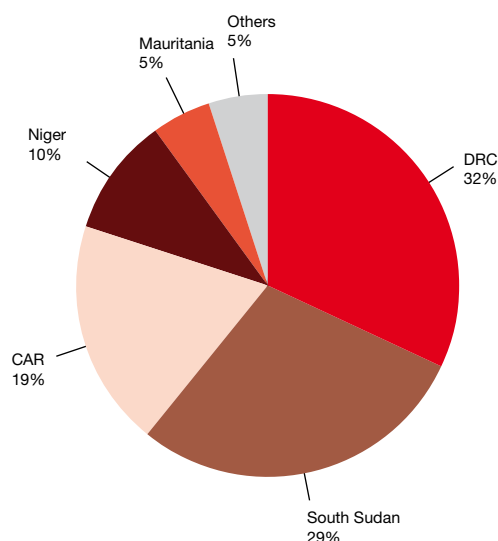
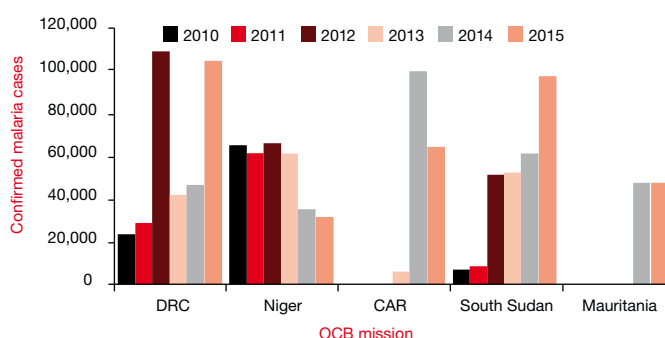


Figure 3: Malaria trends in OCB missions, 2010-2015



tially it involved a Targeted Mass Treatment component. However, as this could not be continued, the focus shifted towards active case finding and cascade screening around positive patients. Advanced diagnostic techniques are used to identify low parasitaemic patients, using polymerase chain reaction (PCR).

2.4. CASE MANAGEMENT – SEVERE MALARIA

Injectable artesunate is used as first-line treatment for severe malaria in MSF projects. A qualitative survey evaluating the perception and practices of injectable artesunate among medical staff in Burundi showed excellent results: the drug is considered to be highly effective and easy to use. This study will be used to further support the roll-out of injectable artesunate in Burundi in 2016.

While rectal artesunate remains one of the most effective and safe pre-referral treatments for severe malaria at the peripheral healthcare level, the drug is still under-used in quite a few of our projects. This needs to be addressed, and is expected to be boosted in case a WHO-prequalified product becomes available in 2016.

2.5. COMMUNITY MANAGEMENT OF MALARIA

Community activities are also being launched in the Bangassou project in CAR, Bikenke in DRC and Pibor in South Sudan.

2.6. OUTBREAKS

Malaria emergencies continued in 2015 in South Sudan and DRC. In DRC malaria cases more than doubled from 46,921 in 2014 to 105,409 cases in 2015 and in South Sudan malaria cases increased by 30% compared to 2014 (61,592 in 2014 to 97,955 in 2015).

2.7. PREVENTION

Vector control through the distribution of LLINs is an essential and effective component of any malaria control programme. However, this activity is not always implemented correctly in our existing projects or during emergencies.

2.8. MALARIA IN PREGNANCY

Surveys were conducted in different MSF projects to evaluate the implementation of the MSF policy on malaria in pregnancy. The management of uncomplicated malaria and

the Intermittent Screening and Treatment strategy seemed well implemented, but the management of severe malaria and provision of LLINs were correctly implemented in only half of our projects.

3. OPERATIONAL RESEARCH

- A study evaluating the prevalence of congenital malaria and the validity of RDTs for diagnosis of congenital malaria was carried out in Kirundo, Burundi. The PCR prevalence was found to be extremely low (0-1.3%). Due to this, the sensitivity of the RDT could not be evaluated; the specificities of the SD Bioline HRP2, the Carestart pan-pLDH and microscopy were 99.3% (95% CI 97.6-99.8), 100% (95%CI 98.2-100) and 100% (95%CI 98.7-100) respectively. This study is ready for publication.
- Results of the first baseline survey in Preah Vihear, Cambodia were published in the Malaria Journal. Results of the second survey are under review for publication.

4. LOOKING BACK AND AHEAD

LESSONS LEARNT IN 2015

- There is a need for better diagnostic tools, such as the pLDH-RDT.
- Malaria transmission in contexts such as South Sudan and DRC is still poorly understood and this has implications in terms of identifying an appropriate strategy for malaria control.

- Having an effective pharmacovigilance system during interventions such as SMC (Niger), mass drug administration (Cambodia) or IPTc (South Sudan, CAR) is essential. However the feasibility of implementing such a system is a real challenge.
- Resistance has been confirmed and a containment project launched in Cambodia, but there is need to monitor the efficacy of artemisinin outside of the Mekong region, such as India.

PROSPECTS FOR 2016

- A pan pLDH RDT (which has a better specificity compared to the RDT - HRP2 RDT - currently used in OCB projects) will be implemented.
- Additional preventive pharmaceutical malaria interventions are planned: a pilot project of Intermittent Preventive Treatment for children is to be considered during emergencies or in contexts with high seasonality such as CAR, DRC and South Sudan, ideally using dihydroartemisinin-piperaquine or other alternative ACTs.
- Intermittent Preventive Treatment post discharge (IPTpd) is being considered.
- There will be a continued focus on the issue of adherence to ACT.
- The use of rectal artesunate as pre-referral treatment should be reinforced.
- Research is planned in Doro, South Sudan, in order to better understand malaria transmission, entomology, and the efficacy of insecticides.
- In collaboration with the pharmacists, we will try to develop/improve pharmacovigilance during IPTc, focusing on severe adverse effects.

MENTAL HEALTH

1. OVERVIEW

In 2015, the portfolio of Mental Health (MH) activities remained as high as in 2014. Emergency interventions were, however, much lower than last year due to the closure of several Ebola projects following the containment of the outbreak (15 in 2014 to 9 in 2015; Table 1, annex). Some emergency settings became longer-term interventions, like in Ukraine where the situation was less tense and volatile and therefore MH interventions focussed more on mid/long term effects of the conflict.

On the contrary, more mid/long-term projects with MH component opened this year (15 in 2015 compared to 3 in 2014, Table 2, annex), as a result of the increased demand and awareness of the need for MH activities.

First of all, operational focus on migration increased following the continuous flow of refugees/migrants in Europe and Middle East. The past history of violence in their country of origin, the difficult and dangerous journey while fleeing, and the harsh conditions in the transiting/host countries often provoke psychological suffering and distress that can lead to mental disorders. The WHO reports that the prevalence for common mental disorders in a situation of crisis increases from 10 to 20%, and the severe ones increase from 2-3 to 3-4%.

Mental health/psychosocial activities were setup in transiting countries (in 7 locations in Serbia and Greek islands, through Psychological First Aid interventions¹, in groups or individually). In Sicily, a similar type of intervention has been developed for the survivors of critical incidents such as shipwrecks in the main landing ports of Sicily, Calabria, Puglia and Lampedusa Island.

A couple of new projects focused more on the migrants displaced on a longer term, such as: Rohingya migrants from Myanmar in 2 camps in Indonesia, or refugees from CAR who arrived in Bili, remote Equateur province in DRC. Lastly, a new centre of rehabilitation opened in Roma for migrants who have been victims of torture, after Egypt and Athens had developed similar projects. Holistic care offered included different components: medical, psychological and psychiatric care, social support and physiotherapy, and medico legal aspects.

And lastly, some projects have been developed for specific targeted beneficiaries: i) the opening of a new clinic for survivors of Ebola in Sierra Leone who present with sequelae and are offered medical and psychological care and referral for specialized care. A similar clinic in Monrovia was handed over to MSF-OCP in the second trimester; ii) specialized medico-psycho-social care for survivors of SGBV in Rustenburg, North West province of South Africa in the mining settlements – a sensitive area with many informal settlements, 50% of population being migrants, and high unemployment and poverty rates; iii) provision of psychiatric care in an existing HIV project in Maula prison in Malawi in order to develop the capacity for diagnostic/management and provision of psychotropic medication for the inmates presenting with severe mental disorders.

2. PROGRAMME ACTIVITIES

Excluding HIV/TB programmes (“HIV-TB Community and Patient support” component include concurrent educational, social and psychological aspects of care), MSF-OCB provided in 2015 MH activities in 49

projects across 22 countries, compared to 44 projects in 2014. The decrease of emergency interventions has been compensated by the important increase of opening mid/long term projects where MH activities have been implemented. Four projects closed this year compared to 8 in 2014. These closures

took place in Ukraine, and were mainly due to the fact that MSF had been expelled from the rebel-controlled areas.

In terms of the volume of activities, we noted a general increase with 11 projects, which provided more than 2,000 individual psycho-

¹ According to Sphere (2011), IASC (2007) and WHO (2011), psychological first aid (PFA) describes a humane, supportive and practical help to fellow human being in severe distress after being recently exposed to a traumatic event. It covers both social and psychological support and can be provided by non-specialized people trained.

logical consultations during the year. Some other projects focused on group interventions, for strategic reasons guided by context, like on the Greek Islands where 22,647 transiting migrants benefited from psychological first aid or group counselling in 2,080 group sessions.

Two examples of integration of MH activities into OCB contexts are presented below.

2.1 INTERVENTION FOR TRANSIT MIGRANTS IN GREECE

Following the increasing influx of people arriving in Greece and crossing the Balkans to reach Northern Europe, MSF-OCB opened several migration related operations. Activities were launched in 2015 in the Dodekanese islands, Lesbos and the North of Greece to respond to the urgent needs of the migration flow. Unlike other migration projects, the population in this case was in transit only, which is something quite new and challenging to MSF. The most common nationalities seen were Syrians followed by Afghans. However in Eidomeni, the most common nationality were Moroccans (men who usually ended up being stranded in the area).

The onward advancement of migrants in their journey to a given destination was dependent on: access from one country to another, obstacles, difficult experiences, economic capabilities, services of smugglers, travelling with family, etc. Sometimes they remained in a place for only a few hours, at best for a few days. Mental health interventions have thus been adjusted to this specific population and context while focusing on vulnerable groups and identified needs.

In such transit contexts, there are some ethical considerations with regard to MH interventions to be respected. It would not be ethical to provide a multi-session therapeutic strategy which could open psychological wounds that would be difficult to be closed in very limited time, hence interventions have been essentially focused on first aid and stabilization of the patients. The main objective for the MH component has been to alleviate the suffering by providing information on how to reduce stress and boost their coping mechanisms.

In each project, a team of psychologists and cultural mediators provided support to the patients during their length of stay in the country. Most of the time, supportive group sessions were provided. However, individual

sessions were proposed for the most vulnerable cases focusing on improving their direct future (decreasing their acute stress condition or referring them for further care).

The prevalence of acute anxiety, post-traumatic stress and depression amongst migrants is very high. Special attention was given to the identified vulnerable groups: unaccompanied children, pregnant woman, elderly people, people who lost all their family or have been victims of violence. Recovering dignity, relieving feelings of sadness, anxiety and facing stressful situations could be the essential focus of the intervention proposed in Greece. Though, a second step intervention - a longer-term MH intervention - could be proposed in the destination countries. Assessments in different countries in Europe are currently taking place to evaluate the need/relevance of future operations.

2.2 INTERVENTION IN UKRAINE (CONFLICT)

The project moved from Svetagorsk to Artemovsk from November 2014. Artemovsk (approximate population, 70,000) is quite close to the conflict zone, and is considered to be the last Ukrainian hub before approaching the frontline in the area of North Donetsk Oblast. It hosts several military garrisons inside and outside the town and many IDPs had fled into this province.

Mental health care in Ukraine was mainly focused on specialized care, taking place in and around psychiatric clinics and institutions. People are not used to psychologists and there is a lot of stigmatization around mental health services.

The intervention focused, for a significant period of time, on direct patient counselling. This is still one of the important pillars of the ongoing MH activities. In the last 3 months of 2015, there were over a 1,546 consultations conducted: i.e. an average of 515 consultations per month with 89% (1,373) being first time consultations and 11% (173) follow-up consultations. In addition, there were 214 group sessions and 18 training sessions for over 2,161 beneficiaries. 64% (136) of these group sessions were psycho-education sessions, 8% (18) therapeutic group sessions and 28% (60) focus group discussions. Primary mental health morbidities diagnosed were anxiety disorders, depression disorders and PTSD.

In parallel, activities focusing on schools close to the front line were developed. During

2015, 24 schools each received a 3-month intervention focusing on training/group support for relevant professionals (teachers, social workers, pedagogues and psychologists) and parents on how to deal with psychological consequences of conflict within children, as well as direct support to children when needed.

Capacity building is another important activity in the current context of post-conflict as there is a gap between needs and available mental health-psychosocial activities and services. Staff and volunteers of local NGOs, hospitals, schools and agencies have been trying to fill this gap and support the affected population. Some individuals, groups or families present with moderate or severe depression, PTSD or anxiety disorder or pre-existing mental health conditions aggravated by the war directly or indirectly. Hence building the capacity of volunteers and staff through the provision of training and follow-up in order to develop and strengthen their skills was found to be quite relevant.

In August, a specific 2-days training was provided six times for groups of MH professionals (112 participants) in order to provide technical support on the management of people who have experienced traumatic situations, especially the demobilized soldiers.

3. TECHNICAL GUIDANCE

Over the course of 2015, a number of activities were undertaken to develop or revise MH tools and guidelines, including:

- Editing and distribution of the guideline on MH & psychosocial care for children (inter-sectional)
- Preparation of an initial draft of content for an international Mental Health and psychosocial guideline
- Participation in the drafting of an ethical code for MH professionals in MSF (inter-sectional)
- Development of series of short guidance for the use of new models and approaches (EMDR, IPT)
- Reviewing and drafting of a new standardized MH database
- Development of a draft update of the guideline on SV-MH
- Review of the UNHCR guideline "Health information system"
- Review of the UNHCR/IOM/multi-agency guidance "Mental health and psychosocial

support for refugees, asylum seekers and migrants on the move in Europe”

- Review of the WHO guideline “Clinical care for survivors of Ebola Virus Disease”

4. TRAINING AND HUMAN RESOURCES

In 2015, the following MSF trainings included a MH component:

Mental Health Course:

- The Sexual and Reproductive Health (SRH) training course for nurses and midwives – a module on psychological support to survivors of sexual violence
- The Medical Health Services training (MHS) – MH policy and integration, and role of the medical staff (conducted twice in 2015)
- Health Promotion (HP) course – a module on introduction to MH in humanitarian contexts

- Ebola training for MSF expatriates and external actors – a module on psychosocial support within the Ebola outbreak (until end of February 2015)

- Public Health Course (University of St Louis, Missouri) – a module on Mental Health in humanitarian contexts (via skype)

- CERAH seminar on sexual violence in conflicts and emergencies (Geneva) – a module on psychological support for survivors of sexual violence and a module on Psychological First Aid

OCB, in collaboration with the 4 other Operational Centres (OCs), participated in the organization and facilitation of two-week MH training courses in Holland for field psychologists and supervisor counsellors (national and international staff). These were done twice in 2015, in regards to the general increase of MH activities within MSF. All OCs agreed to continue at this frequency.

As regards human resources (HR), the number of positions opened for MH expatriates remained quite stable (25 positions compared to 30 in 2014). With the stabilization of some missions where the MH activities were sufficiently structured, it has been possible to nationalize the position of activity manager/supervisor in some projects (e.g. Lebanon, Gueckedou, Bili). 54 psychologists/psychiatrists were deployed to the field in 2015 (versus 69 in 2014). This slight decrease corresponds to the fact that the mid/long-term projects require longer-term contracts. In addition, the MH professionals working in European contexts such as Italy or Greece are considered as national staff, thus not counted in field deployments even for managerial positions.

Among the expatriates, only 8 out of 54 (15%) were on their first missions, which is very low thus highlighting again the issue of the difficulties around renewing the pool of MH professionals.

5. LOOKING BACK AND AHEAD

LESSONS LEARNED IN 2015

The crisis of migrants represented a great challenge. Adapting our interventions on migrants according to their situation in the midst of their journey has been key. The different contexts (early intervention on arrival/landing, transiting places for a few hours/ days, or in third countries, and arrival in destination countries) require diversified strategies and different types of activities to fit the needs of migrants. Some aspects need to be improved, for example, screening of vulnerable cases, detection of sexual violence cases and related package of care, standardization of tools and data collection to allow transversal analysis.

In parallel, the huge increase of departures to the field of MH expatriates initiated in 2014 and maintained in 2015 would require that the current pool be enlarged and consolidated. The yearly MH training will from now on take place twice a year. Training in psychiatry for General Practitioners (GPs) and nurses initiated by MSF-OCA will be regularly conducted (with plans to conduct it in French in 2016). However, the limited number of positions opened for first mission staff remains an issue. An alternative solution such as coaching by experienced expatriates may be developed.

PROSPECTS FOR 2016

The finalization of the first international MH policy has been as a result of a constant collaboration between OCs in these last years and highlights the current efforts to harmonize approaches, which in the past were much more divergent. Today the different OCs have a similar package of mental health activities that can be implemented according to contexts. So for 2016, in order to continue this initial common work, the creation of an international Mental Health and Psychosocial guideline will be developed and finalized in the first half of 2016.

In addition, to maintain a vast panel of interventions for MH activities in projects on man-made and natural disasters, protracted crisis, integration into medical activities, etc., we also need to develop a more tailor-made approach for some vulnerable subgroups that may meet specific needs. For some, e.g. survivors of torture, specific activities/package of care have been developed in the field and need to be capitalized. Others need to be initiated, e.g. focus on Hepatitis C among intravenous drug users with regards to the probable prevalence in some contexts (e.g. urban slum) and the current developments within MSF.

NUTRITION

1. OVERVIEW

In the field of nutrition, 2015 was a “regular year” for MSF-OCB. There were no “major” emergencies though three situations could still be labelled ‘nutritional emergencies’. In Madagascar, following drought, MSF-OCB opened a nutritional project in the South (Androy and Anosy regions) in April. As a result of the worrying food security information concerning the harvest results in September, the project was prolonged until March 2016, with a set-up focused on surveillance.

In DRC, a high level of acute malnutrition was found by the PUC during a measles emergency in Bolomba, Equateur, in December 2014. The vaccination activities were combined with nutritional intervention with the mandate of the team being extended for a further two months to respond to the needs. This was a good opportunity to show that short term and effective nutritional interventions were feasible in DRC. In Nord Ubangui in Equateur, along the borders with CAR, an emergency project opened to take care of refugees from CAR. High level of malnutrition among refugees prompted the opening of nutritional activities which were also extended to host population.

In the regular projects, the major event was the start of the handover of our project in Niger in April. The Ambulatory Therapeutic Feeding Centres (ATFC) integrated in Health Centres (HCs) were handed over to Ministry of Health (MoH), except the one at Guidan Roudji. After training of the MoH staff, the full support to the hospital was progressively decreased to reach total independence by March 2016. In December, an intersection workshop was organised in Niamey to evaluate the 10 years of MSF presence in Niger and discuss the vision for the future. A report will be produced by Dakar Unit and hopefully, a second workshop with MoH and external actors will be organized in 2016.

The total number of admissions in Therapeutic Feeding Programmes (TFP) continued to decrease due to reduction in Niger activities but the number of nutritional structures and supported countries increased (nine versus eight in 2014). The number of beneficiaries of some nutritional support activities increased by 26.5% compared to 2014 – an absolute increase of 6,603 beneficiaries (table 2).

2. PROGRAMME ACTIVITIES

2.1. PROGRAMME ACTIVITIES AT PROJECT AND MISSION LEVEL

Overall in 2015, MSF-OCB treated 18,688 cases with Severe Acute Malnutrition (SAM) (including 5,882 complicated cases requiring admission to Inpatient Therapeutic Feeding Centre (ITFC) through twelve nutrition projects in nine countries. This represents a decrease of 25% compared to 2014, mainly due to the reduction of ATFC activities in Niger (the contribution of Niger to the volume of patients decreased from 72% in 2014 to 44% in 2015). DRC was the second as regards the number of treated children with SAM with 5,163 patients representing 28% of the total. However, the number of complicated cases treated increased by 8%. Most of the nutritional programmes were integrated in medical activities.

Table 1: OCB Nutritional Projects in 2015

Type of Programme	Countries and Projects
Vertical Programmes / Emergencies Nutrition main activity / Emergencies	DRC: Equateur (Bolomba, Nord Ubangui) Madagascar (Grand Sud)
Integrated Programmes Nutrition integrated into medical activities	Afghanistan (Kabul); CAR (Ouango, Bangassou); DRC (Nord Kivu, Maniema); Kenya (Nairobi); Mauritania (Hodh El Chargui); Niger (Guidan Roudji); Pakistan (Bajaur); South Sudan (Warrap, Jonglei, Upper-Nile)
Targeted Nutrition Programmes Nutrition integrated into HIV, fistulas programmes or for pregnant and lactating women (PLW)	DRC (Kinshasa), Kenya (Nairobi)

CAR: Central African Republic, DRC: Democratic Republic of Congo

Three new nutritional projects were opened in DRC (Equateur) and Madagascar. Handover process to the MoH of our major nutrition programmes in Niger started in March 2015. In Doro refugee camp (Maban, South-Sudan), the three health posts were progressively handed over between March and September 2015, reducing the programme

activity to one ATFC integrated in the HC and one ITFC integrated in the Inpatient Department (IPD).

2.2. NUTRITIONAL EMERGENCIES

In Bolomba, Equateur, DRC, the PUC implemented, for the first time, a simplified strategy for short-term nutritional intervention in a

particular population - a substantial part of the beneficiaries were pygmies. The success of this strategy was linked to the extensive screening implemented through the vaccination campaign and a catch-up door-to-door screening, allowing good coverage from the beginning of the intervention. After six weeks of intervention, the majority of cases were treated; the number of admissions decreased drastically; and at the time of project closure the children who were in care were discharged with two weeks food ration to complete their treatment. The outcomes were good as shown in table 3 in annex. An article on the lessons learned on this intervention is under preparation for publication.

In Nord Ubangui (Equateur), the emergency project to take care of CAR refugees opened in January then switched to a regular project in May, covering the two health zones of Bili and Bossobolo. Nutrition activities for refugees and host population were integrated in three OPD and three mobile clinics as well as the regional hospital of Bili. Simplified admission criteria (oedema and/or MUAC <120mm) were used.

In Madagascar, the Rapid Nutritional Evaluation (RNA) showed a Global Acute Malnutrition (GAM) of 14% and SAM of 3.3% in the context of an "Acute Food Crisis" with probable deterioration of situation. Due to low population density, difficult transportation and poor access to health care, it was decided to implement mobile clinics combining the treatment of SAM & Moderate Acute Malnutrition (MAM). This included paediatric consultations as well as support to the existing HCs and to two MoH ITFCs. Simplified admission criteria were also used. Unfortunately, the effectiveness of the intervention was jeopardized by different factors in the first 2-3 months, including: the blockage of Ready to Use Therapeutic Food (RUTF) at custom for a month, the field confusion about the admission criteria (restricted to MUAC <115mm) and problems with drug supply (OPD was not implemented). In September, the strategy was re-oriented towards surveillance with monthly RNA combined with mobile clinics in sentinel sites and integration of the previous mobile clinics in the MoH HCs. Even though Madagascar was the ideal setting to test the Community Management of Acute Malnutrition (CMAM) approach (and even suggested for a second phase), this was not implemented.

Table 2: Number of OCB nutritional programmes in 2015

Type of programme	No. of centres	No. of patients admitted
ITFC	11 in total 9 integrated in hospital	5,882
ATFC	48 in total 34 integrated in hospital/HC	12,806
SFC + Selective Feeding (PLW)	4	2,233
Specific targeted nutritional support	8	8,758
Family Food ration	1	1,376
Total		31,055

ITFC: intensive therapeutic feeding centre; **ATFC:** ambulatory therapeutic feeding centre; **HC:** health centre; **SFC:** supplementary feeding centre; **PLW:** pregnant and lactating women

2.3. NUTRITION PROGRAMMES

In 2015, the number of nutritional support activities increased except TFP. No Blanket Supplementary Feeding programmes (BSFP) were implemented. Despite the lower number of patients treated, the number of structures providing nutritional activities was higher than 2014 (11 ITFCs versus 10 and 48 ATFCs versus 27 in 2015 and 2014, respectively). This is due to the expansion of the integration policy to HCs and improvement in geographical access (e.g. via mobile teams). Systematic screening for acute malnutrition was generally implemented in OPD and Antenatal Care (ANC) programmes - a total of 230,325 and 70,178 MUAC were measured, respectively. An overview of all OCB nutrition activities is presented in table 2.

2.3.1. Therapeutic Feeding Programmes

The detailed programme data are presented in table 3 (Annex). There was a high proportion of children with SAM requiring hospitalisation in Afghanistan, CAR and South Sudan (Gogrial), which could be explained by the fact that activities were mainly provided in the hospital setting and the programmes were thus focused on inpatient care (only one ATFC attached to a hospital OPD existed in Kabul, no ATFC existed in Bangui and ACF was in charge of ATFC in Gogrial).

In the refugee camp of Doro (Maban, South Sudan), the response to treatment worsened due to food unavailability in the families and the deficient General Food Distribution (GFD). A family ration with BP5 was provided to all beneficiaries from August.

In DRC, The simplified strategy in Bolomba was successful with a cure rate of 81% and 9.8% being discharged with a two-weeks ration at programme closure. The median MUAC at discharge for children discharged but not cured was 120mm (IQR: 116 – 124).

The mean duration of treatment was only 23 days. This might be explained by: first, the low rate of complicated cases (5%) – of these 35 (75%) were severe malaria cases and the remaining 12 suffered from Kwashiorkor. Oedema represented 1.3% of total admissions, which is low compared to other regions of DRC; Second, 66% of admissions had a MUAC range between 115-120mm (MAM).

Mortality rates were generally low in 2015. The programmes with rates above 5% were ITFC-based. In Niger, the mortality increased from 2% to 6%. This may be explained by the lower proportion of ambulatory cases and the decrease in referral possibilities from ATFCs since the handover, resulting in late presentation of complicated cases. In Madagascar, the cure rate was underestimated, as it should have considered the 22% transfer rate and included transfers to other NGO's ATFC. This programme also had 10% non-response to treatment, most probably due to sharing of food ration. Two projects had a high defaulter rate: Bili (DRC) and Pibor (South Sudan) were affected by population movements (return of refugees or security incidents). In Bili, there might have also been a mis-understanding of the population as a good proportion of children (mainly malaria cases) defaulted after the first visits.

3. TRAINING

- The revision of the Nutrition E-learning to comply with the new international nutrition guidelines of 2014 was planned for 2015 but could not be done due to the lack of human resources. Meanwhile, a presentation of the main differences between old and new protocols was added as an introduction to the clinical module. Development of the offline version was postponed due to the delay in the revision.

- The process of revision of the Management of Health Services (MHS) training into the new transversal pedagogical concept of First Line medical training (FLMT) started.

4. OPERATIONAL RESEARCH AND DEVELOPMENTS

4.1. PUBLICATIONS

No studies were published in 2015.

4.2. ONGOING STUDIES

Collaboration with ITM, Antwerp and Ghent University started on a research project "Improving treatment of kwashiorkor through the elucidation of its aetiology: back to basics, forward with new technologies". This project was submitted and accepted by the MSF International Innovation Fund. The study is at protocol stage.

4.3. TOOLS AND GUIDELINES

- The revised "Nutrition Pocket Guide"; "OCB nutrition protocol"; and "OCB nutrition protocol for adolescents and adults" were released.
- The new protocol "Nutritional support & enteral feeding for adults in ICU or surgical ward" was presented at the coordination week and enteral feeding products and materials were identified.

5. LOOKING BACK AND AHEAD

LESSONS LEARNED IN 2015

- A summary of the lessons learned during our 10 years activities and the handover process in Niger was presented at the Niger workshop (report will be available in 2016).
- The experience of Bolomba in DRC showed that simplified and short term nutritional interventions are feasible and effective even in logistically challenging contexts.
- The strategy of "surveillance caravans" used in Madagascar combining RNA and mobile clinics is a good tool that could be useful in other contexts. The mobile clinic is a key for acceptance by the population for regular surveillance purposes, without setting-up nutrition activities. For more details, see the Madagascar intervention in E-Unit report.
- We are losing our internal human resources capacity to perform nutritional surveys and nutritional/ food security evaluations.

PROSPECTS FOR 2016

OPERATIONS

- With projections of El-Niño phenomenon in 2016, major droughts or floods and nutrition emergencies may affect some countries. Close surveillance will be needed in 2016.
- As hospital-based projects are growing, the focus will be put on improving hospital nutrition which will include two axes:
 - The field piloting (Haiti and Kinshasa HIV project) and dissemination of the new surgery and Intensive Care Unit (ICU) nutrition protocol.
 - Improving quality of integrated malnutrition detection and care in paediatric wards.

GUIDELINES AND TOOLS

- Revision of the E-learning tool to be in line with new international nutrition guidelines.
- Revision of the standard protocol for infants below six months of age.
- Evaluation of the dissemination and use of the PLW and ICU/ surgery nutrition protocols in the field.

TRAININGS

- Discussions on a policy for the maintenance and development of E-learning with the training unit.
- Development of the module 1 (formative supervision) of the FLMT and technical support to modules 3 and 5, where nutrition is included.
- Discussion with the diseases control unit about the implementation of Epi-info7, rapid nutritional evaluation and survey training (target group, organisation of sessions).
- Discuss with Ops, HR and OCG Nutrition Referent on possible collaboration with OCG who is organising food security and rapid nutritional assessment training.

OPERATIONAL RESEARCH

- Capitalisation and publication of use of MUAC based intervention on pigmy population in DRC.
- Kwashiorkor research project with ITM and Ghent University.

OPERATIONAL RESEARCH AND DOCUMENTATION

1. OVERVIEW

2015 saw achievements in a number of areas. There was good integration of Operational Research (OR) into various programmatic areas including the 2014/15 Ebola outbreak, migrant health, sexual violence and torture. The introduction of a Mobile Qualitative Researcher within the OR team improved the understanding of complex field contexts. Similarly, improved support for medical data collection and analysis created useful synergies with OR.

We maintained a high rate of publication outputs (an indicator of scientific output) with diversification in publication themes. They included Ebola, infectious diseases, medical equipment, Non-Communicable Diseases, rational drug use and research impact. This trend demonstrates the OR Unit's flexibility to adapt to operational dynamics. With a progressive increase in publication outputs, it is now vital to introduce the necessary metrics, resources and skills to measure and foster the impact of generated evidence on policy and practice change.

Dissemination of OR was achieved through the Brussels OR Day, and decentralized Days in India (for Asia) and Zimbabwe (for Africa). Other means of dissemination included LuxOR newsletters, summaries of recent publications, and ongoing updates on the MSF Field Research website (www.fieldresearch.msf.org).

Considerable success was achieved in OR capacity building through the global SORT IT partnership (SORT IT: Structured Operational Research and Training Initiative). SORT IT was developed by MSF and The TB Union in 2009 and has been scaled up to 82 countries with WHO support. The initiative has been adapted to include mixed methods research and distance learning modules. MSF has been a global catalyst and benefits from wider international networks, improved funding opportunities and accreditation by WHO and several European universities. SORT IT has also been a game-changer in crossing the English language barrier by publishing articles in Russian, Spanish and Portuguese languages.

The OR Fellowship Programme has been instrumental in expanding OR to virgin areas and improving the quality of medical data. Exploring ways to improve formal recognition and better appreciation of fellows will continue in 2016.

2. OR ACTIVITIES

There are two units responsible for OR in OCB: the South African Medical Unit (SAMU) which is primarily responsible for research related to HIV and tuberculosis (TB), and LuxOR for other operational areas and capacity building in OR. This section focuses on LuxOR.

2.1 INTEGRATION OF OPERATIONAL RESEARCH WITHIN ROUTINE OPERATIONS

Improved integration of OR into programming was achieved in various domains including the 2014/15 Ebola outbreak, migrant health, sexual violence and torture. The engagement of a Mobile Qualitative Researcher, supplementary epidemiologists and medical data personnel contributed to improving the quality and reporting of programme data. OR and medical data support visits were conducted

in the DRC, Egypt, Zimbabwe, Mauritania, Pakistan, Syria (supported from Lebanon and Turkey), Haiti and Lebanon. Anchorage of the OR team within OCB operations was largely fostered by the presence of the OR programme officer in Brussels.

2.2 PROMOTING THE UNDERSTANDING AND DISSEMINATION OF OPERATIONAL RESEARCH

For the first time, OR appeared in the international MSF activity report, marking a milestone in the recognition of this science within MSF. An article entitled "A decade of operational research in MSF: luxury or necessity?" highlighted the evolution of OR in MSF over the last decade.

(In French: <http://activityreport.msf.org/fr/recherche-operationnelle/>; In English: <http://activityreport.msf.org/operational-research/>)

Dissemination of OR was achieved through various OR Days conducted in Brussels, India (for Asia) and Zimbabwe (for Africa). Other means of dissemination included LuxOR newsletters, summaries of recent publications, and ongoing updates of the MSF Field Research website (www.fieldresearch.msf.org).

The OR Days continue to promote OR and enhance its credibility and perceived value within MSF. OR Day presentations are available online at <http://www.msf.lu/research/la-recherche-operationnelle-fr/evenements/operational-research-day-2015.html> and through the MSF Field Research website.

The MSF Field Research website (www.fieldresearch.msf.org) continued to archive MSF-authored publications from the entire MSF movement. Since 2010, there were a cumulative total of 807,209 downloads

around the world (Fig. 1). This is encouraging as it shows global interest in OR done by MSF and indicates that it addresses key knowledge gaps. Negotiations with numerous publication houses have ensured that all MSF's publications are available "open access" through the Field Research website.

2.3 PUBLISHING AND SUPPORTING OPEN ACCESS PUBLICATIONS

There were high rates of outputs of peer-reviewed scientific publications (a scientific output indicator) and continued diversification in publication themes. They included Ebola, infectious diseases, Non-Communicable Diseases, rational drug use, medical equipment and research impact.

There were a total of 131 OCB-supported OR studies in 2015 (Fig. 2) including "state of the art" articles, reviews, viewpoints, original research and case reports (cf. § list of publications). Viewpoint publications were aimed at challenging the status quo of medical practice by using publications for public debate and advocacy.

Over 80% of all OCB publications were open access. Open access ensures that knowledge is made freely accessible in order to facilitate wide dissemination. Anyone who has access to the internet can freely read, copy, print, download or link to those publications. Dedicated budgets were secured for open access charges (ranging from 400 to 4000 USD/article).

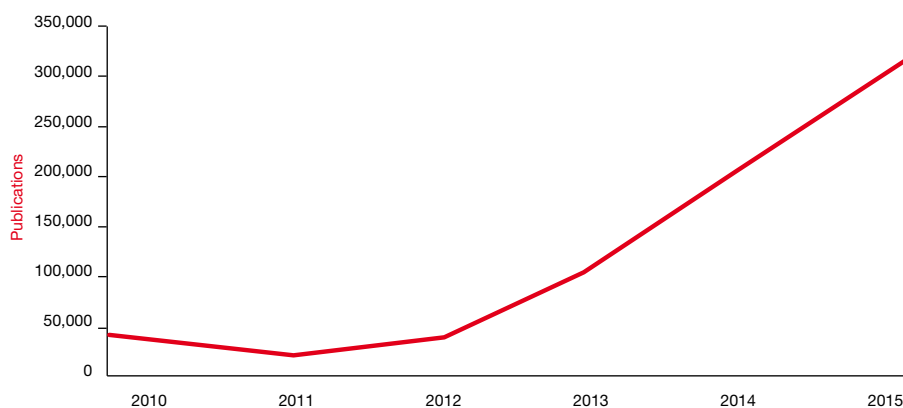
As in previous years, CDs of publications were distributed to missions, partners and donors, while hardcopy booklets were discontinued. As from 2015, publications became accessible on hand-held devices. A "MSF Kiosque Application" was developed to allow access using iPads, iPhones or Androids. This was made possible by our communications and marketing team. A full list of OCB publications for 2015 is provided in the Annex.

OCB publications covered 16 topics, representative of most MSF medical activities (Fig. 3). Areas remaining under-represented included health care in conflict settings, torture, migrant health, mental health, health promotion and infection control. A publication lag partly explains this gap.

2.4. ASSESSING THE INFLUENCE OF OR ON POLICY AND PRACTICE

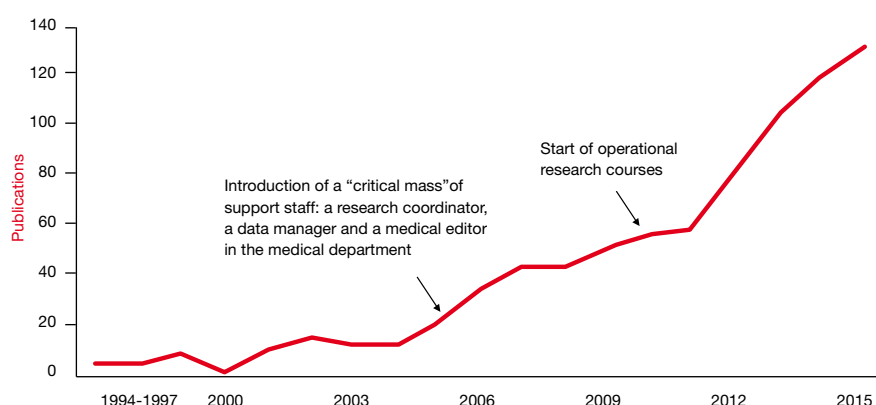
Although publications are vital for enhancing dissemination and supporting advocacy, the

Figure 1: Annual MSF Publication downloads from the MSF Field Research website, 2010-2015



Total publication downloads since 2010 = 807,209

Figure 2: Trend in OCB-related publications by year until 2015

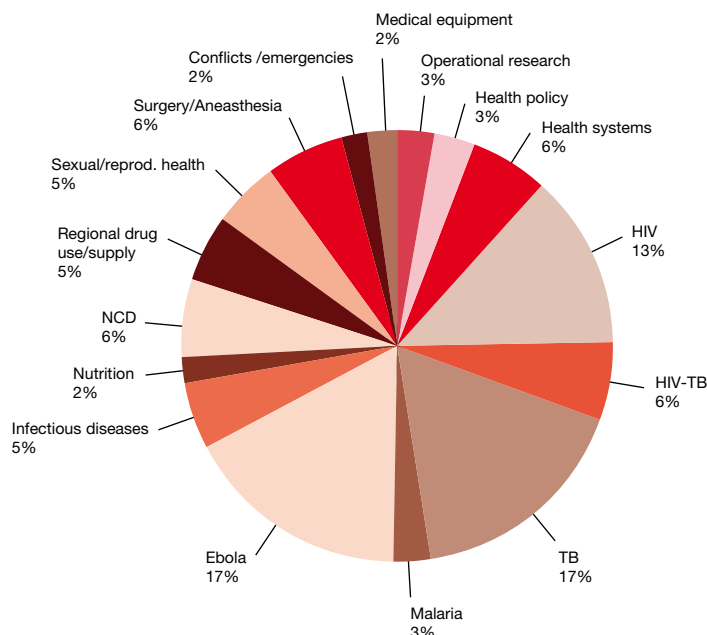


ultimate goal of OR is to influence policy and practice. An evaluation in 2014 of the policy and practice changes resulting from publications that appeared between 2009 and 2012 documented effects in 65 (74%) studies. They included changes to programme implementation (27), adaptation of monitoring tools

(24) and changes to existing guidelines (20). A more recent analysis was conducted in 2015 and has been submitted for publication.

Two assessments have explored what happened after individuals were trained through a SORT IT course. A 2014 assessment re-

Figure 3: Diversity of OCB-related publication themes in 2015 (n=131)



ported that over 60% continued with research activities after course completion, with strong institutional support. A 2015 evaluation (cf publication no 4) involving 63 SORT IT participants indicated that 51% had completed new research projects, 38% published papers, 44% had presented conference abstracts, and 24% had facilitated at further OR courses. These findings show that significant research outputs continue beyond the training and that individuals are able to apply the knowledge acquired. Such assessments need to be conducted more widely and in a more routine manner.

3. BUILDING SUSTAINABLE CAPACITY FOR OPERATIONAL RESEARCH (THE SORT-IT PROGRAMME)

Considerable success has been achieved in OR capacity building through the global SORT IT partnership (SORT-IT: the Structured Operational Research and Training Initiative). SORT IT was developed by MSF and The Union in 2009 and has been scaled up to 82 countries in collaboration with WHO and partners. Cumulatively, 305 participants have completed SORT IT courses with 315 papers submitted to peer-review journals. At the end of December 2015, 252 (80%) articles were in press or already published.

SORT IT is unique in that the research projects originate from the field, the course is output-oriented and it includes both MSF and non-MSF participants. Diversity of thinking is encouraged and the initiative is of added value for building partnerships, networking and advocacy. The standard model of quantitative methods is now being augmented to include mixed-methods research and distance learning modules. The teaching material has

also been made available in an open-access manner and online through YouTube (<https://www.youtube.com/channel/UC9ZRuVh-brxJm5xAjUHwo6Hw/featured/>)

SORT IT participants also benefit from the Tropical-Education Network for continuing education including obtaining a Masters in Public Health (MPH) and/or PhD from several European universities (e.g. University of Bergen, University of Nijmegen, University of Amsterdam). Finally, the SORT IT initiative has been a game-changer in breaking the English language barrier by publishing in Russian, Spanish and Portuguese languages.

4. OPERATIONAL RESEARCH FELLOWSHIPS

An OR fellowship programme was initiated by LuxOR in 2011; by the end of 2015 it included nine fellows. This Programme is a pioneering initiative within MSF for boosting on-the-job research skills, fostering institutional human resource retention, and enlarging leadership and career opportunities in MSF. A fellow's role is to strongly support development of "innovative approaches and ideas" within routine operations and support field implementation of OR.

Since 2011, the cumulative outputs of the nine fellows have included over 400 research projects demonstrating the added value of fellows in driving MSF research agenda. Fellows have also been instrumental in expanding OR into virgin areas and improving the quality and utilisation of medical data.

5. PROMOTING THE COLLECTION AND USE OF MEDICAL DATA

Several initiatives were started to improve routine programme data collection, analysis and reporting. These included the review and encoding of all Ebola data into a dedicated database by students; support to medical data systems for torture, sexual violence, mental health, migrants and hospital care; the running of a medical data workshop in Athens; and closer matching of the epidemiologist pool with field needs.

Additionally, a stratification of the epi-profiles has been discussed and is in the process of formalization. The different cadres include, a) Monitoring Officers - medical staff with training in data and involved in design, monitoring and reporting of relevant project indicators, b) Monitoring and Evaluation Activity Managers - persons trained in epidemiology and/or OR and involved in development of OR agendas, design of data collection systems and protocol writing, and c) Field Epidemiologists - epidemiologists involved in outbreak investigation and control. Improved support and utilisation of these three cadres should ensure that the diverse MSF OCB medical data needs are covered.

6. OTHER ACTIVITIES

Collaborative support was provided to other MSF sections (MSF Swiss, MSF Spain, the Brazilian Medical Unit - BRAMU) and fund raising activities undertaken involving various foundations. Efforts are also underway to activate the Luxembourg MSF Foundation. It could provide a complimentary environment to foster sustainable capacity building initiatives and humanitarian reflection based on OR evidence.

LESSONS LEARNED AND CHALLENGES IN 2015

- The presence of a Brussels-based Programme Officer enhanced anchorage within operations and provided a quick linkage for conducting OR in emergencies. Specific achievements were apparent in relation to Ebola, migrant health, torture, sexual violence, hospital care and medical data support. A challenge was finding the resources to cope with the unexpected and heavy workload. Short contracts were useful to bridge gaps and increase capacity on ad-hoc grounds.
- A rapid evolution has occurred in the number and diversity of scientific publications. This is a welcome development and reflects growing interest and capacity in new operational fields. However, this evidence should impact on policy and practice, something that will need focused attention and greater investment in 2016.
- Despite the achievements of SORT IT in terms of strengthening OR capacity generally, this has been associated with considerable workload and dedicated time linked with international travel, mentoring and peer review of scientific papers. There is now a need to rationalize and prioritize involvement in SORT IT.
- In terms of programme-related support, there is a need to think proactively on how to improve medical data collection and its utilization, particularly in emergencies.

- Finally, although epidemiologists and OR fellows have been critical in implementing relevant OR and improving “data for health”, they are not formally recognized by the MSF human resources department. For instance, epidemiologists are not considered as providing “specialised expertise” and thus not appropriately remunerated. This negatively affects recruitment. OR fellows have existed since 2011 but are still not formally included in the human resources salary grille. Other avenues to sustain commitment need to be sought.

PROSPECTS FOR 2016

These will be along the lines outlined in the LuxOR vision document (2016-2018). In summary:

- The gains made in several areas in 2015 including improved anchorage in operations and proactive involvement in emergencies, will be maintained.
- Enhancing the integration and cohesiveness of OR team members located in various parts of the world is important to optimize existing expertise.
- LuxOR will improve the focus on moving research into policy and practice. This will be done by introducing metrics, resources and skills needed to assess and foster translation of OR evidence into policy and practice. A dedicated profile will be introduced to integrate this aspect as a routine activity. Collaboration with others stake-holders (The TB Union, WHO, EvipNet) will be enhanced to maximize synergies.
- SORT IT will have a broader goal. This will be to a) conduct OR in accordance with institutional and country level priorities b) develop adequate and sustainable OR capacity at country level and c) create an organisational culture of policy and practice that is informed by OR and that leads to improved programme performance. To achieve this goal, SORT IT will be conducted in six phases: 1) research prioritization and planning for capacity-building, 2) practical OR training (protocol development to publication), 3) pro-active dissemination, 4) writing policy briefs and enhancing dialogues with stake-holders, 5) leadership development (MPHs, Fellows, PhDs), and 6) continued monitoring and evaluation. The objective would be to focus on national and regional level Programmes and adapt SORT IT to operational needs. Introduction of mixed-methods research is also envisaged.
- Develop adapted models for country-level OR capacity building, involving OCB's field staff, and collaborating with operations. A first initiative is the Cairo OR workshop. A second initiative may be OR training in Lebanon. By being embedded within operations, these initiatives are more likely to result in policy and practice change.
- Establish and sustain an epidemiology and OR support pool, including research alumni. This will include enhanced participation of these individuals in the LuxOR dynamic, support to development of relevant OR agendas at field level, and provision of necessary tools (data and analysis softwares, etc). In addition, we will work on formalizing a strategy and package that attracts epidemiologists. LuxOR will play a supportive role in their recruitment.
- Where possible, we will collaborate with other MSF units and international partners to maximize synergies in OR, capacity building, advocacy and funding.
- Finally, activate the Luxembourg MSF Foundation to serve as a complimentary structure to boost sustainable capacity building, networking and humanitarian reflection based on OR evidence.

PAEDIATRIC CARE

1. OVERVIEW

In 2015 an OCB policy was written to guide medical actions regarding the paediatric population. Although paediatric care concerns children from birth through adolescence, children under five years of age are the focus in this report since they remain a primary target for intervention. Data for children 5 to 14 years of age are not systematically collected and therefore, not analysed in this report.

As in previous years, OCB data show that malaria, lower respiratory tract infections (LRTI), acute diarrhoea, severe acute malnutrition (cf. Nutrition section) and neonatal conditions are the main causes of disease and death in children under five.

Updated 2015 OCB neonatal guidelines were disseminated and implemented at field level.

Integrated community case management was piloted in Pibor-South Sudan while, in Kenema -Sierra Leone, health centre level support was provided for the management of malaria, diarrhoea and LRTI covering an entire district. The Guidan Roumdji project in Niger represented over one fourth of all inpatient and one fifth of all outpatient activities for the under-fives. Handover of this large nutrition and paediatric project is planned for April 2016.

2. PROGRAMME ACTIVITIES

2.1. UNDER-FIVE CARE

2.1.1. Under-five outpatient care

In 2015, 509,079 under-five outpatient consultations, excluding ambulatory therapeutic feeding centres (ATFC), Emergency room and Antenatal Care, were conducted in OCB projects across 16 countries, representing 24% of all outpatient department (OPD) consultations. A decrease in its proportion of 14% compared to 2014

Among the projects in which standardized data were available through the EpiTools or MINOS (cf. Health Informatics section), there were 476,866 under-five outpatient consultations. 18203 additional under-five outpatient consultations were done in the emergency interventions in the Balkan and Ukraine. Since morbidities were reported in a non-standard fashion, data for these interventions could not be included in figure 1. Nearly one fifth (18%) of all under five outpatient consultations (including health post interventions during the malaria peak) were in Guidan Roumdji, Niger, a project which will be handed over to the Ministry of Health in April 2016.

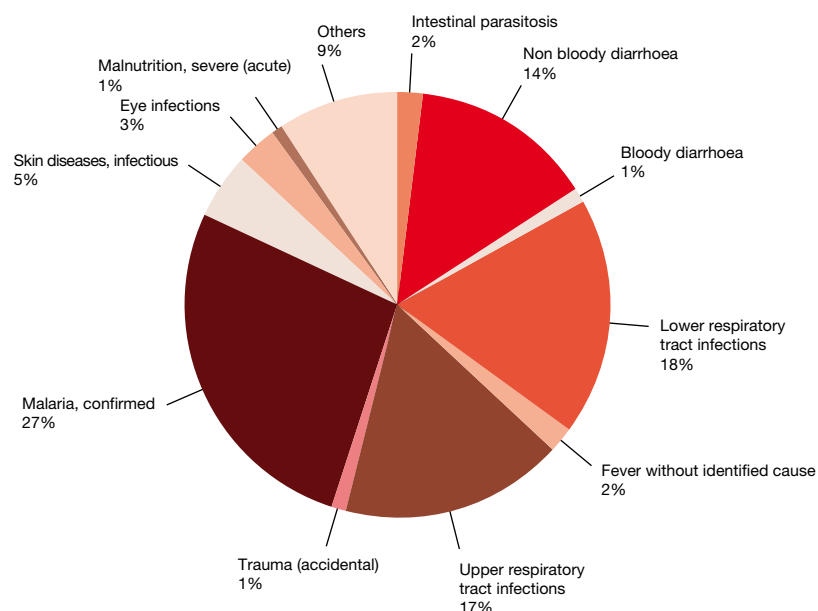
The morbidity pattern for children under five was similar to that of previous years: respiratory tract infections represented 35% of

under-five morbidity, followed by confirmed malaria (27%), non-bloody diarrhoea (14%), infectious skin diseases (5%), eye infections (3%), fever without identified cause (2%) and intestinal parasitosis (2%) (Figure1). In projects that differentiated between severe and uncomplicated malaria cases, the proportion of severe cases was 5%. Over half (52%) of respiratory tract infections were LRTI, suggesting possible over-diagnosis and the need for further focus on accurate differentiation between lower and upper respiratory tract infections. This could also help

rationalize antibiotic use at OPD level. Only 63 tuberculosis (TB) cases were reported in total, the number decreasing yearly since 2012. Some cases of fever without identified cause (2% of all morbidity), may represent undiagnosed TB. Screening for TB at health centre level should be improved to allow earlier detection of TB in young children, as also highlighted in section 2.1.2 (inpatient care for children 1-59 months).

Integrated community case management (ICCM) activities were implemented in Le-

Figure 1: Disease profile in children < 5 years in OCB Out-patient departments, 2015



kuangole, Pibor, in February 2015. Activities focused on the management of uncomplicated malaria and diarrhoea at community level and screening and referral for severe acute malnutrition. Management of LRTI was not integrated. Due to various constraints, adequate supervision was not possible, and the intervention was progressively discontinued beginning December 2015.

In Kenema district, Sierra Leone, from July through December 2015, 76 of 123 primary health units (PHU) received support (i.e., training, materials/drugs, and light supervision) targeting treatment of malaria, LRTI, and diarrhoea in under-five's. This was an atypical OCB activity, aiming to help fill a gap in the health care system caused by the unprecedented Ebola epidemic. Data from this intervention were not included in the aggregated data. In total, 109,691 children under five years of age were treated for malaria, LRTI, or diarrhoea, representing 78% of under-five consultations at those PHU. Capitalization on the intervention is foreseen in 2016.

2.1.2. Inpatient care for children 1-59 months

In 2015, 29,522 children 1-59 months were admitted to the inpatient services in 17 OCB projects in 8 countries, representing 33% of all admissions to the inpatient department (IPD). A decrease in its proportion of 25% compared to 2014. Guidan Roudji in Niger accounted for 27% of all exits.

Detailed data for the paediatric inpatient wards, excluding inpatient therapeutic feeding centres (ITFC), were aggregated for 14 projects using the Epitools or MINOS (cf. Health Informatics section). This year, for the first time, data for children 1-59 months were analysed separately since the near doubling of neonatal inpatient activities skewed under-five proportional morbidity and mortality figures. A total of 26,788 children 1-59 months exited from these projects. Data for severely malnourished children admitted to ITFC are reported elsewhere (cf. Nutrition section).

Severe malaria (44%), LRTI (24%), and non-bloody diarrhoea (9%) were the leading exit diagnoses from OCB hospitals (Figure 2).

In total, there were 642 deaths of children 1-59 months of age. The inpatient mortality rate of children 1-59 months was 2.4%, the lost to follow-up rate 1.3 %, and the referral rate 2.6%, all within established target. (For

Figure 2: Main exit pathologies in children 1-59 months in OCB, In-patient departments, 2015

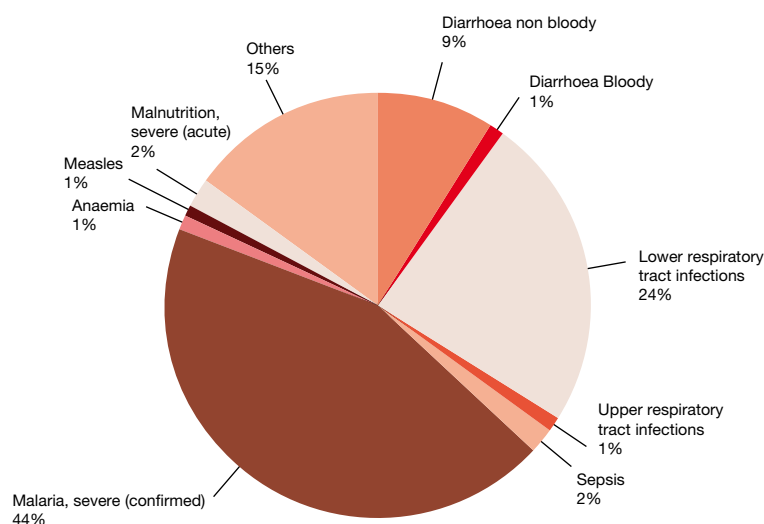
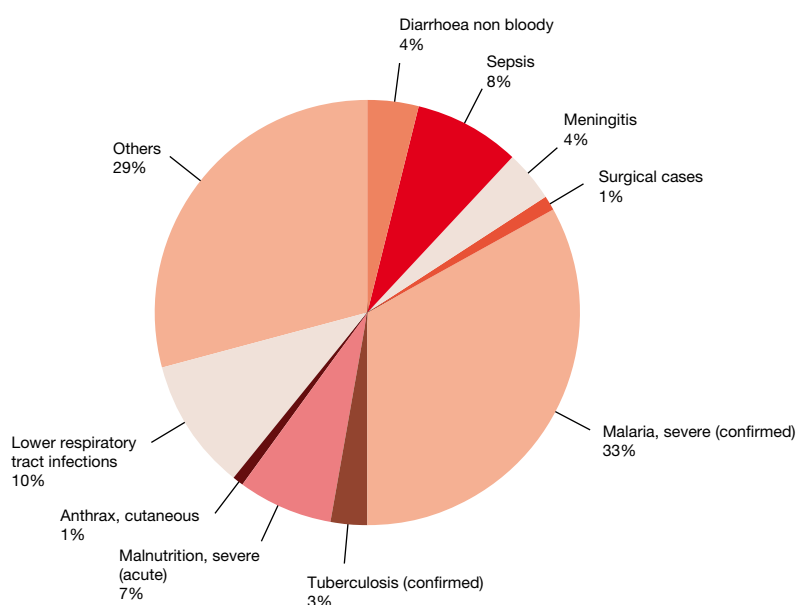


Figure 3: Main causes of mortality in children 1-59 months in OCB In-patient departments, 2015



defaulter and referral rates, it was not possible to exclude neonates from the overall figures). It is important to look beyond these favorable hospital outcome indicators in order to address quality of care.

The most important causes of hospital mortality for children 1-59 months were severe malaria (33%), LRTI (10%), sepsis (8%), severe acute malnutrition (7%), meningitis (4%), acute non-bloody diarrhoea (4%) and tuberculosis (3%) (Figure 3). Case fatality rates for these top contributors to hospital mortality are reported in figure 4.

Severe malaria remains the top cause of death in children 1-59 months, even though the case fatality rate for severe malaria has decreased over recent years (from 5.4% in 2012 to 1.8% in 2015), presumably largely due to the widespread implementation of

injectable artesunate. Some children may have another severe illness (for example bacterial sepsis or severe pneumonia), but are classified as severe malaria cases because of a positive malaria test. Improved diagnostics, including use (when available) of the new pan pLDH RDT, a more specific test for malaria, could help reduce misclassification. Moreover, a very high antibiotic use rate (specifically with Ceftriaxone) has been reported in hospitalized children with malaria. As 10% of children with severe malaria are co-infected (based on the literature), antibiotic use in some cases is justified. However further work is needed to better identify children whose clinical evolution with antimalarial treatment could be monitored before starting antibiotics.

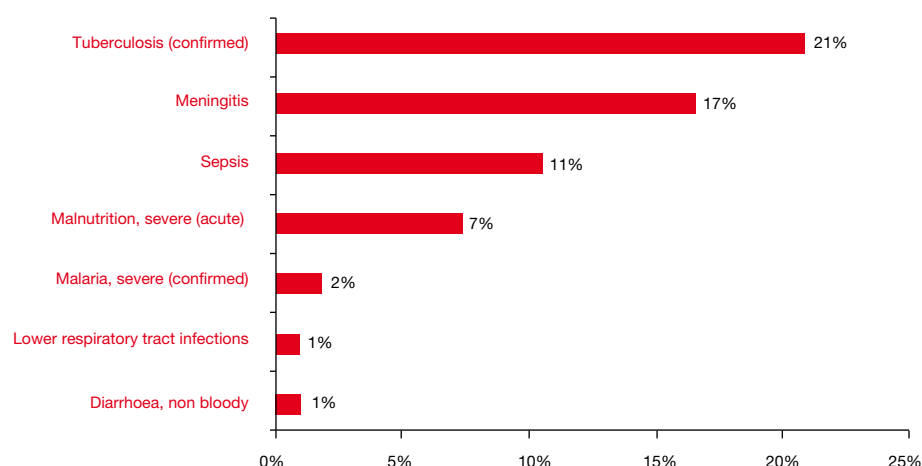
Sepsis, contributing 8% to under-five inpatient mortality with a case fatality rate of 11% warrants a specific focus in OCB programmes. A chart review done in Masisi, DRC also raised the possibility of sepsis cases secondary to nosocomial infections, highlighting the need to continue reinforcing infection control and prevention measures. This project also faces an unusually high bed-occupancy rate, which may also impact on the implementation of infection control measures.

Severe acute malnutrition contributed 7% to the inpatient mortality rate, with a case fatality rate of 7%. Improving the management of children with severe acute malnutrition in the intensive phase and more specifically, the management of children with Kwashiorkor is a priority for the OCB medical department.

Mortality due to confirmed tuberculosis (i.e., cases started on TB treatment as per the current OCB case definition for children) contributed 3% of overall mortality, even though only 86 cases were diagnosed in total. This can be explained by the high case fatality rate for tuberculosis (21%) among children admitted to hospital. Late diagnosis of TB among children and insufficient attention to the diagnosis of childhood TB upstream (e.g., at health centre level) likely contributes to this high case fatality rate. A greater focus on the implementation of paediatric TB screening and diagnostic algorithms (c.f. MSF Tuberculosis guide) is recommended. Although a specific focus on paediatric TB was planned in the refugee camp (Mbera) in Mauritania, this could not be achieved in 2015 due to difficulties in negotiating access to treatment for smear-negative TB cases through the local Ministry of Health-run TB programme. This focus remains on the agenda for 2016.

Twenty nine percent of the causes of death for children 1-59 months are in the category 'Other'. Multiple individual diagnoses, each contributing to a few deaths, make up 4% of deaths in IPD. However, for 25% of deaths, no specific cause was reported. This requires specific attention in order to further reduce mortality for the under-fives years in OCB programmes. Even though multiple factors contribute to this gap in knowledge, improved diagnostic tools and data reporting systems that would allow attributing a death to multiple causes might help.

Figure 4: Case fatality rates for children 1-59 months in OCB In-patient departments, 2015



2.2. NEONATAL CARE

2.2.1. Neonatal inpatient care

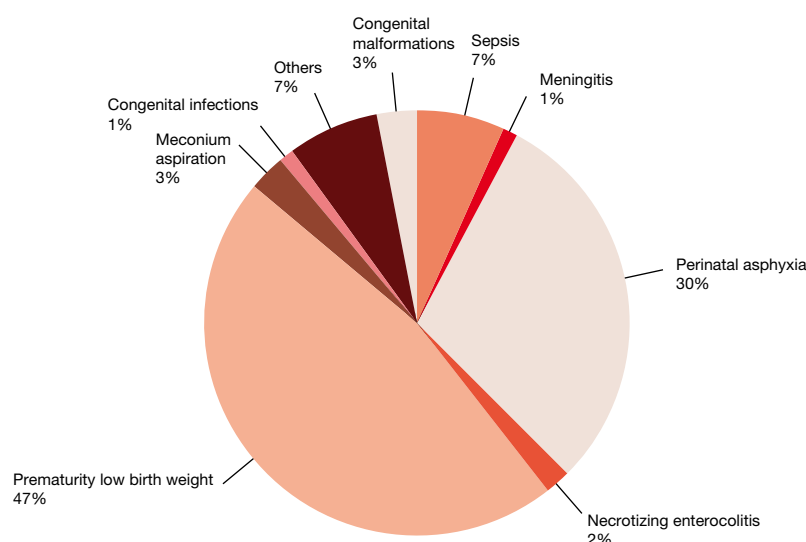
Data were analysed for the projects using the Epitools, MINOS, or the individual neonatal database (cf. Health Informatics section). Six OCB structures used the individual database (Khost and Ahmad Shah Baba (ASB) in Afghanistan, Castors and Bangassou in CAR, Masisi in DRC, and Timergara in Pakistan).

In 2015 there were in total 6558 exits from inpatient neonatal services and 781 neonatal deaths. The volume of neonatal inpatient activities increased quite significantly compared to the previous year (3882 exits in 2014). This can be explained by the opening of Castors, a vertical maternal-neonatal programme, and the near doubling of activities in Khost. Over half (54%) of neonatal exits were from vertical maternal neonatal programmes (Khost, Timergara, and Castors). In integrated hospital projects, there

were 3006 neonatal exits, and 269 neonatal deaths. Overall, the inpatient neonatal mortality was 12%, relatively unchanged compared to 2014.

Among projects that implemented the individual database (accounting for 83% of total neonatal exit diagnoses), 37% of deaths in the neonatal wards occurred within 24 hours of life, suggesting that a non-negligible proportion of deaths are related to intrapartum complications. Perinatal asphyxia was responsible for 30% of inpatient neonatal deaths, requiring further attention, as some of these deaths are preventable (e.g. through implementation of basic birth resuscitation). An operational research study is planned in Timergara, Pakistan in 2016 to take a closer look at possible delays (applying the 3-delays model) contributing to morbidity and mortality from perinatal asphyxia. This model was originally developed to assess the cause of maternal death, but has also been used to analyse perinatal deaths.

Figure 5: Main causes of mortality in neonates in OCB In-patient departments, 2015

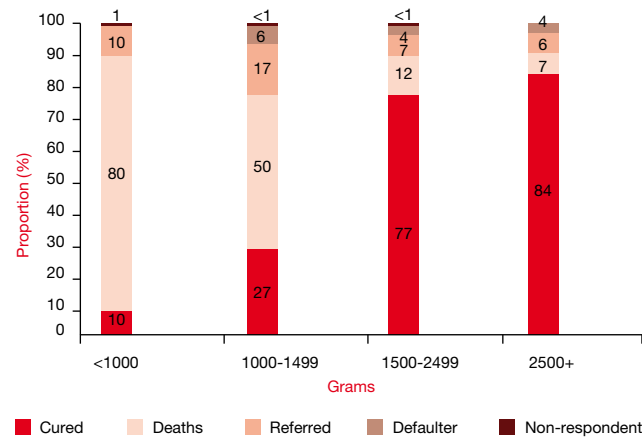


It comprises delays in deciding to seek care (delay 1), delays in reaching the health facility (delay 2), and delays in receiving quality care at health care facility (delay 3).

Major contributors to inpatient neonatal mortality are presented in figure 5.

Stratification of outcomes by birth weight was possible by aggregating data from projects that implemented the individual neonatal database (Figure 6). Neonates with a birth weight <1000g and those with a birth weight between 1000-1499g accounted for 2% and 7% of exits from inpatient neonatal services, respectively. With the technology and means available within OCB structures, the highest impact on mortality is achievable for neonates with a birth weight above 1500 grams. Referral rates were higher among children weighing less than 1500 grams. However, compared to 2014, a better estimate of inpatient mortality was obtained for children less than 1500 grams due to a decrease in the referral rate, and improved reporting of outcomes among neonates receiving supportive/palliative care. An operational research study will be conducted in 2016 to examine whether a birth weight

Figure 6: Neonatal inpatient outcomes stratified by birth weight in OCB In-patient departments, 2015



cut-off can be used to inform limitations of care and what kind of therapeutic interventions should follow.

In a follow-up study of 146 low birth weight neonates (<2500 grams) two years post-discharge from the CURGO project in Burundi (handed over in 2013), 23% were lost to follow-up and 4% had died. Among children alive at follow-up, 17% were perceived by caretakers (using a validated screening tool)

to have a functional limitation in one or more domains (motor, speech, comprehension, etc.). Having one or more functional limitations was significantly associated with very low birth weight (<1500 grams). Of particular concern, more than half of the children were moderately or severely malnourished, highlighting the need for a greater focus on the post-discharge follow-up of these highly vulnerable children.

3. LOOKING BACK AND AHEAD

LESSONS LEARNED IN 2015

Addressing a high bed occupancy rate on paediatric wards will require exploring various possible solutions (e.g. decentralization of care, work on efficiency of care, etc.) so that quality of care is not compromised.

While neonatal care in maternal and under-five inpatient OCB programmes has improved over the past years, challenges remain, in particular for the management of very low birth weight babies (<1500 grams). It is important to make sure that the provision of essential neonatal care remains the priority in all contexts. Follow-up of specific high risk neonates after hospital discharge may be recommended and considered based on feasibility.

Lessons to be learned: Pilot or novel projects for OCB such as the ICCM intervention in Pibor, South Sudan or, the wide-scale district level health centre intervention in Kenema, Sierra Leone should be evaluated so that lessons can be learned for future similar interventions.

PROSPECTS FOR 2016

Two new paediatric hospital projects are anticipated, a maternal-paediatric hospital project in Sierra Leone and an emergency care-paediatric hospital in Haiti (Simbi project). The medical specifications for these projects will be defined in collaboration with other disciplines. Specific paediatric protocols will also be adapted for these projects.

Further focus on integrated nutrition activities in several key projects (e.g. Bili in DRC, Simbi in Haiti, etc.).

Community-based activities may be further developed in Sierra Leone (Goroma-Mende project) and South Sudan (Blue Nile).

Various packages of neonatal and paediatric care will be progressively developed, and adapted for various contexts, to facilitate implementation of quality paediatric care.

Various operational research studies concerning neonatal care will be started and/or completed (c.f. section 2.2.1)

Potential contribution to the antimicrobial resistance file (e.g., starting with improved monitoring of antibiotic use in the field).

PHARMACY

1. OVERVIEW

The continuing emergencies in Syria and Ukraine and increased MSF activity in countries with constraints for importing drugs and material - such as in Egypt, South Africa, Kenya, Ukraine, Pakistan, India, Lebanon and Syria (via Turkey) - continued to represent significant challenges to the medical supply chain. These challenges, compounded by the complexity of the global pharmaceutical market and the evolving regulations in developing countries, have made it necessary for MSF to tailor its supply chain to each context and also to interact more closely with the National Drug Regulatory Authorities (NDRA). Support to the medical and logistic teams on quality monitoring, rational medical procurement, and data quality continued improving in 2015.

In the framework of the end-to-end approach, the good distribution practice (GDP) field support activity continued in 2015 focused on four main axes: mission assessment/implementation, training, back office and research and development. On demand, support has been also given for emergency interventions requiring a complicated pharmaceutical setup.

The integration implementation progressed slower than planned and the objective to integrate 100% of existing medical stocks under the supply department by the end of 2015 was not reached. The key performance indicators (KPIs) for medical stocks were revised and increased to 12 indicators and sub-indicators. A new position of "Pharmacy Management Referent", focusing on organization of medical processes and medical stock management in end-user units, was opened within the medical department.

During the last years, Good Pharmacy Practice (GPP) remained an important topic in OCB. The GPP aim can be defined as: "contributing to health improvement" and "helping patients to make the best use of their medicines". In order to support this practice it is essential that there is an established framework of quality standards and guidelines. The Pharmacy Unit is working on the first edition of 'Good Pharmacy Practice in end-user unit' guidelines, split into a policy on drug distribution and control and a policy for medication administration. These two policies will provide structured and professional support for both enhancing patient-centered, safe and high quality pharmaceutical care in MSF projects, and promoting and ensuring rational drug use and safe medication practices.

2. THE MSF QUALITY ASSURANCE SCHEME

2.1. UPDATES OF THE MSF MEDICAL LIST

Each year, the typology of procured medicines, which overlaps and is published in tandem with the standardized protocols of the Clinical Guideline, is updated according to new protocols, specific field needs, and the

WHO Essential Medicines List (EML) (Table1). Some key new inclusions and replacements in 2015 were: Fixed dose-combination pediatric TB medicines, Drug-resistant TB medicines and Hepatitis C medicines.

2.2. MSF CODIFICATION PROJECT

The European Supply Centers (ESCs), the Operational Centers (OCs), and the International Technical Coordination (ITC) have been

working on a project to harmonize article codification rules, often called the "Codification project". The objective was to create a common article database – UniData – that will standardize article information and speed up supply processes while preventing mistakes currently caused by miscommunication.

With this project some major changes in the codification of articles are currently ongoing, such as: adding new drug families, moving

Table 1: Number of new codes created for medical articles in the MSF list of essential medicines (2008-2015)

Type of articles	New codes created								Number of active medical codes in 2015	Number of codes de-activated in 2015
	2008	2009	2010	2011	2012	2013	2014	2015		
Drugs	137	106	41	75	52	49	158	42	623	27
Medical Supplies & Equipment	404	224	236	141	215	133	457	286	2,169	68
Total	541	330	277	305	267	182	615	328	2,792	95

drug families to the correct group, defining and applying rules for creating codes and labels.

The UniData software - the first MSF-wide online supply article database harmonizing information across the entire Movement with user-generated updates - is now completed.

The “going live” of this UniData was planned to be by mid-November 2015. As this demands major changes in the field as it will have a big impact in the mission, the preparations for the whole migration plan was not ready in time, hence the starting off data was postponed until June 2016.

2.3. IDENTIFICATION AND VALIDATION OF DRUG SOURCES

Nine products were validated by MSF pharmacists in 2015 (Table 2). In addition, one exceptional validation was approved by the Medical Directors due to Active Pharmaceu-

tical Ingredient (API) variation in the two Guilin products - Sulfadoxine/Pyrim 250/12.5mg 1 tab + AQ 75mg 3 tab coblister and Sulfadoxine/Pyrim 500/25mg 1 tab + AQ 150mg 3 tab coblister. Four exceptional validations were extended in 2015.

2.4. ALERTS ON QUALITY AND THE AWAKENING VOICE OF LOCAL MARKETS

With the increasing presence of mission pharmacists in OCB missions, the reporting of quality problems for internationally and locally procured medical items continued to increase (Tables 3 and 4).

Evidence of problems was reported for products marketed in highly regulated countries and also in countries where products were purchased locally (Lebanon, India and Kenya).

Considering the weaker regulations applied to pharmaceutical production and distribution in resource-poor settings, quality monitoring/pharmacovigilance procedures must be enforced at all levels of the medicine's life cycle, particularly in countries that lack post-marketing surveillance systems. With a wider presence of pharmacists in MSF missions we see a steady improvement.

3. MEDICAL PROCUREMENT

3.1. ENFORCEMENT OF LEGISLATION INCREASES PROCUREMENT WORKLOADS

During 2015, evaluations of the local pharmaceutical markets were conducted in 14 countries. Approval outcomes are described in table 5. On the other hand, four manufacturers and 37 wholesalers were not approved. These pharmaceutical market evaluations reflect the need for local medicine procurement in countries where MSF cannot import or faces importation constraints, rather than an overall improvement of the pharmaceutical market. Reporting on local procurement continued to improve, although it still remains underreported in some countries. The risk/benefit evaluation of local procurement and final approval too often rely on scarce evidence and information.

In 2015, 18 out of 33 missions dealt with challenging medical procurement systems: nine of these missions relied on the local market for their medical procurement, six received part of their medicines from the public distribution flow and the remaining three faced difficult importation regulations, leading to sporadic local purchases (Figure 1). In countries where local purchase was unavoidable, the unreliability of the local pharmaceutical market complicated the supply and led to a heavy workload. This situation was compounded by the fact that enforcement of the quality of medicines on local markets is typically outpaced by the regulations enforced by the NDRA in medical humanitarian organisations such as MSF. Thus, there are an increasing proportion of medicines, purchased from local markets, for which MSF cannot guarantee the quality to the same level as the ones from the European procurement centres. The quality of medicines cannot be assessed at the product level in the field, and therefore securing the supply chain through international procurement will remain the priority. Additionally, MSF continued to enforce its medical accountability for local purchases through:

Table 2: Number of drug dossiers approved (2009-2015)

Validation route	Drug dossiers approved						
	2009	2010	2011	2012	2013	2014	2015
MSF full product assessment	15	25	20	15	11	14	9
WHO pre-qualification	28	35	35	48	62	53	35
Medical Director Waiver*	1	0	6	2	4	1	1

* Exceptional approval based on risk/ benefit analysis. WHO: World Health Organisation

Table 3: Number of quality related communications issued by MSF Supply (2010-2015)

Quality related communications	Number of communications					
	2010	2011	2012	2013	2014	2015
Quality alert	3	4	7	3	4	5
Batch recall	3	3	2	3	2	3
Total	6	7	9	6	6	8

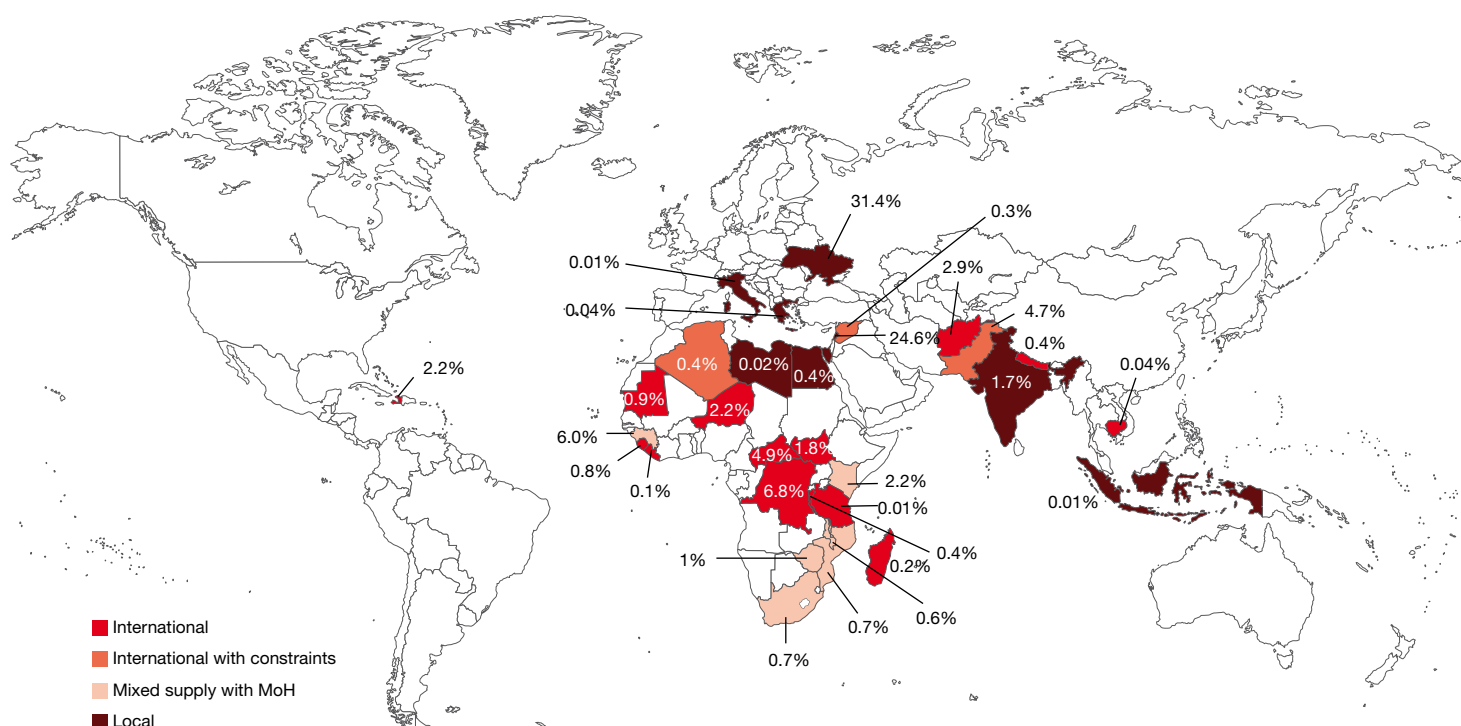
Table 4: Quality related problems reported by 5 Operational Centres (2013-2015)

Year	Total number of quality problems reported	International Procurement source	Local Procurement source
2013	27	20	7
2014	15	11	4
2015	18	14	4

Table 5: Evaluation of local pharmaceutical market (2010-2015)

Year	Number of manufacturers approved	Number of wholesalers approved	Number of countries evaluated
2010	5	28	14
2011	6	11	9
2012	14	69	12
2013	31	66	8
2014	9	55	9
2015	7	106	14

Figure 1: Medicines procurement typologies in OCB missions



% indicate the amount spent per country on medicines procurement as proportion of the total OCB expenditure in medicines

- Improved centralisation of information on local purchases
- Enhanced intersectional collaboration on local procurement through mutual procurement activities and an increased number of intersectional pharmacy positions (e.g. Pakistan, India, East Africa)
- Developing methods for easier local procurement with higher quality assurance, such as better practices of visual inspection at reception and quality monitoring along the medicine shelf-life
- Integrated pharmacovigilance practices as a standard activity in each project
- Increased capacity both to negotiate with NDRAs and to track the local regulatory environment through country pharmacists (cf. §3.3).

In 2015, 26 out of 33 missions purchased medicines locally: four missions were in highly regulated countries (Migrant rescue Boat, European migrations, Greece and Italy), five missions (Lebanon, Egypt, India, Kenya and Ukraine) had a database implemented, seven missions submitted validation forms to approve the local purchases (Burundi, Haiti, Libya, Madagascar, Malawi, Mozambique and Pakistan) and ten missions purchased locally without any recommendation regarding quality (Afghanistan, Cambodia, DRC,

Guinea, Indonesia, Nepal, Niger, Sierra Leone, South Africa and Zimbabwe). The validation forms to approve local purchases and donations are available at mission level and were used by most missions. Linked to this, the Standard Operation Procedure (SOP) – for Local Purchase and Donation are also available to all missions.

3.2. MSF EXPENDITURE

The total medical expenditure for OCB in 2015 was 35.0M€, of which 19.0M€ were procured through MSF Supply. This amount represents approximately 6.4M€ more than in 2014 (Table 6). An additional 0.7M€ was spent on therapeutic food, mainly in South Sudan, CAR, Madagascar, DRC, Migrant rescue Boat and Niger.

Approximately 74% of the total expenditure on medicines lay with just five out of 33 missions (Figure 2): Ukraine for the conflict in the Donbass, Lebanon for the conflict in Syria, DRC remain the third largest OCB operation, CAR for the conflict and Guinea for the ARV's programme and gap filling of the public distribution system.

Figure 2: Top five missions in terms of medicine procurement expenditures in 2015

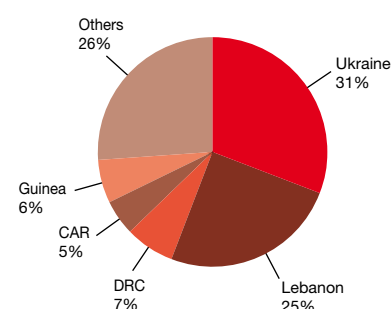


Table 6: OCB Total Medical Expenditures 2012-2015

Medical items	OCB Total Medical Expenditure (M€)			
	2012	2013	2014	2015
Medicines	12.4	15.5	13.7	22.5
Vaccines	0.6	1.0	0.7	1.1
Small medical supplies	4.0	4.9	9.6	6.8
Medical equipment	2.7	2.3	2.4	3.3
Medical kits	2.4	1.8	2.2	1.3
Total	22.1	25.5	28.6	35.0

19 items of the medical procurement list were responsible for 21% of the total expenditure of MSF Supply medical turnover (27M€). Among others, these 19 items include 3 anti-retroviral drugs, 3 rapid diagnostic tests (HIV, Hepatitis C and malaria), two vaccines and therapeutic food. Alcohol-based hand rub solution and examination gloves are also part of this top 19.

3.3. COLLABORATION WITH THE NDRA

The development of pharmaceutical regulations in developing countries, while in principle is positive, has generated importation constraints, with NDRAs enforcing regulations which previously did not apply to MSF. In addition, the NDRAs in developing countries are not yet able to enforce international standards of quality on their local markets, and, as such, these markets remain relatively unlegislated, leading to increased risks with local purchases (cf. §3.1). Moreover, national laboratories often lack the capacity and budget for quality control activities. As such, a lot of time and resources are devoted to counter-analyses by MSF while batches of medication are quarantined. This results in shortages at field level.

The negotiation space at country level is usually limited. Pharmacists from HQ have set areas of collaboration with the NDRA during field assessments, but there is a need to monitor the evolution of importation requirements and, if necessary, to maintain collaborations.

Finally, it is imperative that the possibility of importing medical items is assessed during exploratory missions and that all new project plans include medicine supply in their Memorandum of Understanding (MoU).

4. GOOD DISTRIBUTION PRACTICES (GDP)

In 2015, the assessed countries were: Afghanistan, Malawi, Mozambique, Zimbabwe and Haiti while the emergency support was provided for the 'Search and Rescue' project in the Mediterranean Sea and the Migrants intervention in Greece. All the above mentioned missions are supposed to remain under close follow up till the implementation of the recommended corrective actions and preventive actions (CAPAs) in order to reduce any potential risks to the patients related to the incorrect storage and distribution of the medicinal products.

Table 7: Top 19 items responsible for 21 % of the 27M €MSF Supply medical turnover in 2015

Description	Expenditure (€)	% of Tot turnover (27M€)
TENOFOVIR 300 mg/ LAMIVUDINE 300 mg/ EFVIRENIZ 600 mg, comp	771,099.80	3%
MALARIA HRP-2 TEST (SD Bioline), whole blood, 1 test 05FK50	660,669.65	2%
(BM) NucliSENS EasyQ HIV-1 v2.0, ref285033, 1 tst	617,912.29	2%
READY TO USE THERAPEUTIC FOOD, paste, 500 kcal, 92 g sachet	344,865.33	1%
HEPATITIS C TEST (OraQuick HCV), ser/pl/wb, 1 test 1001-0270	313,236.18	1%
MEASLES VACCIN, 1 dose, fl. multidose (Serum I)	312,683.07	1%
ALCOHOL-BASED HAND RUB, solution, 500 ml, bottle	299,225.77	1%
GLOVES, EXAMINATION, latex, s.u. non powdered, medium	272,811.27	1%
IMMUNOGLOBULIN, HUMAN, ANTITETANUS, 250 IU/ml, syr.	228,966.38	1%
ARTESUNATE 60 mg, powder, vial +NaHCO3 5% 1ml +NaCl 0.9% 5ml	226,602.19	1%
COMPRESS, GAUZE, 10 cm, 12 plies, 17 threads, sterile	215,970.55	1%
RIBAVIRINE 200 mg, caps	213,033.13	1%
ATAZANAVIR 300mg / RITONAVIR 100mg, tab	198,038.74	1%
IG anti-Rho (D), RhoGAM ultrafiltered, 300g, prefilled syr.	194,134.58	1%
CAPREOMYCINE sulfate, eq. 1 g base, powder, vial	180,428.18	1%
VACCIN DPT / HEPATITIS B / Hib, 1 dose, multidose vial	179,332.30	1%
PARACETAMOL, 10 mg/ml, 50 ml, sol., bot. (Perfalgan)	164,762.23	1%
GeneXpert module + UPS	163,431.11	1%
MODULE, AUTOCLAVE, STEAM, TBM 90 I	163,226.33	1%
Total	5,720,429.00	21%

Consistent attention was given to cold chain management reorganizing and updating key training modules (within the PPD and the BLOC-MHS trainings) and by creating and leading a new OCB cold chain interdisciplinary platform.

Concerning the research and development, the main focus was on solutions for controlled temperature transport, a remote temperature control for active cold chain. A specific solution for transport was developed for the safe management of the HIV viral load reagents (to be kept at -20°C) in use in DRC and Malawi.

Due to the interdisciplinary nature of several GDP related issues, close collaboration with the Logistic Back office became a key factor for GDP implementation success.

5. PHARMACY MANAGEMENT

Although the objective to integrate 50% of pre-existing medical stocks under supply department was achieved by the end of 2014, the implementation progress in 2015 was not as fast as planned and only three stocks (16%) of the 19 scheduled were integrated. Postponement was due to field operational activities and context changes in addition to a lack of support available from the back-offices. Fixing sustainable and comparative

achievement targets remained complex as numerators and denominators were varying all the time.

By January 2016 the ratio of integrated pre-existing medical stocks was 67% (20 out of 30). Integration of "new" stocks or handed over stocks (from EPOOL) also needed to be considered as a part of the implementation activity planning. Although out of the scope of the project, the reached target was 45% (5 out of 11).

Packages of tools to allow performing the four steps of implementation were revised and available in both English and French languages.

A large effort was made to move forward on elaboration of SOP's and working instruction (WIs) for stock management and reporting, in parallel with the update of documents on the KITSCH/OOPS key (tools for accessing soft-copy documents either online or via USB key).

The number of missions using stock management tools remained 100% during 2015. A total of 65 software databases were installed over the missions: Isystock was utilized by 48% (31 databases); Logistix utilized by 31% (20 databases); and Unifield utilized by 10% for which the deployment started in

2015 (6 databases in Kenya, Haiti and Pakistan). Two other tools were used by 11% (OCA tool in projects in Afghanistan; Excel spreadsheet in a project in Greece).

With the progress of the End-to-End ("E2E") Supply Chain, it was appropriate to revise the full set of key performance indicators (KPIs) in order to strengthen performance and quality analysis of OCB stocks. Their number increased from eight to 12 indicators, with sub-indicators distributed across three categories: financial pertinence of stock management (value of stocks and value of the losses); quality of stock management; and monitoring. Data were collected for all OCB medical stocks at coordination, project and hospital levels but unfortunately these were not fully compiled at the time of this report.

In 2015, more cold chain breakdowns were reported in the field (54% more than 2014) and few more during international transport (6% more than in 2014) (Table 9).

During 2015, 26% of all reported cold chain breakdowns in the field (reported to Dr Cold Chain) occurred in DRC and 71% in five of the 18 missions (DRC, Afghanistan, Haiti, Pakistan, South Sudan). An important increase in cold chain breakdowns was observed among the transit bases.

For the cold chain breakdowns that occurred during international transport (claims sent to MSF Supply), 75% of these claims were reported by four missions (DRC, Haiti, Pakistan, Afghanistan) out of a total of 11 reporting missions

6. RATIONAL USE OF PHARMACEUTICALS

The pharmacist's task is to ensure that a patient's drug therapy is appropriately indicated, is the most effective available and safest possible, and is convenient for the patient. By taking direct responsibility for individual patient's medicine-related needs, pharmacists can make a unique contribution to the outcome of drug therapy and to the patient's quality of life. However, in developing coun-

Table 9: Cold Chain Breakdowns overview (2014-2015)

	Field Cold Chain Breakdowns Report to Dr. Cold Chain		International Cold Chain Breakdowns Claims to MSF Supply	
	2014	2015	2014*	2015
Nr of breakdowns reported	62	96	45	48
Nr of reporting missions	13	18	15	11
Nr of items involved	424	577	NA	NA
Total value of items involved	709,694€	1,039,007€	249,791€	502,034€
Total value of losses	7,915€	11,187€	39€	52€
% of losses	1.1%	1%	0.02%	0.01%

* Note: Value data only for the 41 freights managed directly by MSF Supply

tries, pharmacists are under-utilized as members of the healthcare team, and this is also the case within MSF operations.

As MSF wants to fully integrate the role of a pharmacist with a responsibility for the patient's therapy, pharmacists not only require a high level of knowledge and skills but also a good support of the organization and the health structure. To achieve this, the Pharmacy Unit continues working on the first edition of the 'Good Pharmacy Practice in end-user units' guidelines, in order to provide field pharmacists the basic structure and framework necessary to both enhance patient-centered, safe and high quality pharmaceutical care for patients under care of MSF. A final draft of these guidelines, in the format of two policies, is expected mid-2016.

7. HUMAN RESOURCES

7.1. PHARMA UNIT

During 2015 the position of Pharmacy Management Referent was opened in order to allow a more dedicated focus on medication management at the end-user unit level.

7.2. PHARMACY POSITIONS

During 2015 there were a total of 61 full time pharmacy positions across OCB missions, of which 55 were qualified pharmacists. This includes the regional pharmacist position in South Africa, the intersectional pharmacist position in Ukraine, the emergencies in Ne-

pal and Madagascar and the four temporary coaching positions.

The coverage of pharmacist positions across all OCB missions in 2015 was 94% for Mission Pharmacy Manager positions and 90% for Project Pharmacy Manager positions (0% of Intersectional Pharmacy Manager positions were filled, however this was only 1 FTE).

In terms of expatriate departures, during 2015 this translated to 41 departures to cover 28 expatriate positions (compared with 60 departures to cover 30 expatriate positions during 2014). 25% of departures in 2015 were first mission.

7.3. TRAINING ON PHARMACY MANAGEMENT

The annual drug management courses continued to be run in 2015 - one day on pharmacy management in the BLOC/MHS, a three-day session on pharmacy and supply management added to the two-day Preparation for Departure (PPD) course, Intersectional Advanced Pharma week hosted by OCP, Hospital Management Team Training, Supply Manager course, and the Intersectional Supply and Stock Management course. The new training on Warehouse Management aimed at warehouse managers & supervisors working in Supply (which had been cancelled in 2014 due to lack of participants) took place in 2015.

8. LOOKING BACK AND AHEAD

LESSONS LEARNED IN 2015

The growing complexities related to pharmaceutical markets and the changing legislative framework in many developing countries has continued. This has not only created a heavier workload for HQ and field pharmacists but also for MSF Procurement Centres to provide the increasing number of documents requested by NDRAs. The reinforcement of MSF Quality Assurance Scheme for countries bound to local

purchase has continued with field visits together with the creation or updating of databases. The intersectional pharmacist positions played an important role in coordinating the different MSF sections, ensuring that procurement policies were adhered to and maintaining good working relations with NDRA.

Collection of data on local purchases, donations and cold chain breakdowns continued to improve in 2015, but there are still missions performing local purchase without seeking HQ advice, which is risky. The intersectional checklist for reception control was finalized in 2015 and the Local Purchase and Donation request forms updated in 2015.

The migrant crisis pushed MSF to intervene in highly-regulated contexts (such as EU) with stringent requirement demanded by the NDRA for the setup of pharmaceutical stocks. This new scenario underscores the fact that even in emergencies the lack of compliance to regulatory requirements might turn into an operational constraint.

Implementation of the integration policy remains a very complex process. Due to the difficulty in establishing this, it should remain a part of the continuing activity plan.

PROSPECTS FOR 2016

The lobbying for better adapted paediatric drug formulations in MSF settings should continue in 2016. Medicines with only one approved source should continue to be addressed as well.

Various documents will be worked on or finalised in 2016: 1) In-Country Transport Policy: expected to be fully implemented at field level by 2017 with the support of GDP project; 2) final draft of the Good Pharmacy Practice in end-user units is expected to be produced; and 3) the intersectional checklist for reception control is expected to be implemented in 2016.

The GDP project plans to visit at least five missions, to ensure effective back office support, to continue the development of innovative tools and to give emergency technical support when required.

Success criteria (targets), deliverables, timing and milestones of the project charter on implementation of integration policy should be revised and amended.

Elaboration of SOPs should be finalized with a clear deployment and communication flow allowing the field to apply standard procedures: this is essential to acquire and maintain quality management all over the missions. Priority must be given to simplify and harmonize a monthly reporting system amongst the different software tools used in OCB. "Lessons learned" from the use of Unifield should be analyzed and shared between MSF sections.

Close follow-up and support to the field during the "going live" of Unidata will need to be ensured.

With the position of the Pharmacy Management Referent commencing in February 2016, there is the potential for a more focussed approach towards end-user unit management. This should commence in a structured manner with the formulation of policies and procedures for end-user unit management, followed by the creation of support tools as well as field visits for implementation.

Pharmaceutical care will remain an important point to be developed in 2016. Expanding the focus of pharmacy practice from products and systems to ensuring the best drug therapy and patient safety will raise the pharmacist's level of responsibility, and will require continuing philosophical, organizational and functional changes.

SEXUAL AND REPRODUCTIVE HEALTH

1. OVERVIEW

With a few exceptions, Sexual and Reproductive Health (SRH) activities have decreased in general over the past years and this trend continued over 2015. The exceptions can be found in key areas such as Emergency Obstetric care (EmOC) where total number of deliveries and caesarean sections (CS) increased by 15 and 14% respectively, however the total number of projects providing EmOC decreased. Although the provision of safe abortion care slightly increased, with more projects providing this service, total numbers remain very low, certainly in relation to the increase of women presenting with complications of unsafe abortions being treated. The MSF services providing care to victims of sexual violence saw slightly more victims than last year (3.051 compared to 2.875).

A decrease is observed in postnatal care (PNC) consultations and Family Planning (FP) activities, which is worrying given the fact that contraceptives potentially indirectly reduce maternal mortality. Lastly, MSF OCB has no longer a vertical fistula project, nor are there plans for fistula campaigns for the coming year.

2. PROGRAMME ACTIVITIES

2.1. ANTENATAL CARE

The total number of projects offering ANC decreased by one, and the overall number of consultations had a slight decrease of 1.4% (Figure 1). This decrease can be explained by the closure of four main projects with important activities in 2014: Goma emergency, Democratic Republic of Congo (DRC), Gondama (Sierra Leone), Nyala El Sherif camp (North Sudan), Ouango, Central African Republic (CAR).

At the same time there were some impressive increases in ANC activities: Eye catcher is without doubt Shatila project in Lebanon which had 10,000 ANC consultations more than last year (from 8,691 in 2014 to 18,148 in 2015). Further, noteworthy of mentioning are Kabul which had an impressive 63% increase, Pibor which more than doubled its number and Bajour project which had almost five times more ANC consultations. Even the big ones such as Masisi and Kibera still showed a slight increase in their activities. Decreases in existing projects were rather small with the exception of Mpoko camp (closure foreseen), South Lebanon and Chattisgargh projects. The newly opened projects in 2015 already have some important ANC activities, for example, Bikengue, DRC already reporting 5,199 consultations.

With a recommended minimum of four ANC visits per pregnancy, the rate of 1st ANC

consultations remained the same as in previous years, very high (50%). Compared to last year there was no improvement except for Bajour (from 82% to 63%).

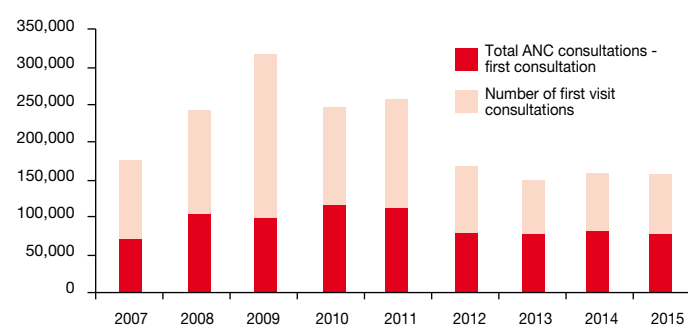
In this year's report we analysed, for a first time, data in relation to syphilis and HIV testing during ANC. Data shows that for syphilis not all projects are yet systematically testing all women at 1st ANC visit as is recommended. Projects which should focus on the improvement of coverage are: Masisi (43%), Bajour (55%), Bangassou (74%) and Pibor (88%). Furthermore, we were challenged by the unavailability of 1st choice treatment. The alternative one for the new-borns of mothers who tested positive, is a 10-day course, causing difficulties to implement due to the bed capacity. So far, no adaptations to the

alternative treatment were recommended in the hope that soon the 1st choice treatment will be available again.

There are several issues around standardized HIV testing and standardized implementation of PMTCT in all projects where the HIV prevalence is >1% as proposed in the guidelines. Either this is not happening or data are not available/incomplete. Only Masisi as a non-vertical HIV project had data available, despite PMTCT activities performed by MSF being stopped in 2014. From the 587 HIV tests performed in 2015, 4.8% of the women tested positive.

Other non-vertical HIV projects that implemented systematic HIV testing in ANC are Kibera (Kenya), Bassikounou (Mauritania) and all projects in CAR. Unfortunately, there

Figure 1: Trend in total antenatal care consultations^{1,2} and first antenatal care visits (2007-2015)



¹ In the typology (overall OCB mission database) the reported ANC consultations are not necessarily providing the full ANC package of care; for some projects it includes PMTCT activities during pregnancy or consultations provided to patients in the labour room who are in false labour. These were not included in the figure presented above.

² Another 69,194 ANC consultations provided in Syria with MSF long distance support are not included in the above total numbers.

were no data for 2015. The existing database will be adapted for better reporting next year.

2.2. OBSTETRICS

Despite a steady decrease in projects performing deliveries (29 in 2013, 22 in 2014 and 19 in 2015), the total number of deliveries increased by 15% over the course of 2015 (Figure 2). Projects with basic emergency obstetric and neonatal care (BEmONC) decreased from 24 in 2014 to 18 in 2015, and the ones offering comprehensive emergency obstetric and neonatal care (CEmONC) from 12 to 11. The increase of total deliveries is explained by the fact that the 'big' maternities (Khost and Kabul, Afghanistan and Timergara, Pakistan) were still increasing their overall number of deliveries. The largest contribution, however, comes from Castors maternity, CAR which increased the number of deliveries from 1,895 (2014) to 7,424 (2015).

Looking at Afghanistan alone, the mission is once more responsible for 47% (n=33,739) of the OCBs total volume of deliveries. Even when this mission is excluded, OCBs total volume of deliveries increased by 18%. The contribution of the two new projects with maternity (Bikengue and Bili, DRC) in terms of volume of deliveries is rather small. Although the number of projects providing CS decreased from 12 to 11 projects, total numbers of performed CS increased by 14%.

To add to the above obstetric activities with those from Syrian hospitals with MSF long distance support: 24,058 deliveries were recorded of which 37% were CS.

Maternal outcomes

Over the course of 2015, MSF projects reported a total of 68 maternal deaths. Highest total numbers were reported in Castors, CAR (n=22), Khost, Afghanistan (n=11), Masisi, DRC (n=7), Bikengue, DRC (n=6) and Billi,

DRC (n=5). Nine other projects had <5 maternal deaths while four maternities reported no maternal deaths. This is most likely due to the fact that: Kabul, Afghanistan frequently refers patients with obstetric complications; Shatila, Lebanon uses very strict referral criteria; and Karachi, Pakistan and Kibera, Kenya which are also BEmONC structures refer patients.

Simply assessing the total number of maternal deaths out of all deliveries occurring in a hospital is not a sensitive enough marker for assessing quality of obstetric care. An alternative is to focus on all women presenting with severe obstetric morbidities, collectively termed as Direct Obstetric Complications (DOC). The number of maternal deaths related to direct obstetric complications (termed as the DOC case fatality rate) is a good indicator of the overall quality of obstetric management. Low case fatality rates suggest high quality of care, since they imply that patients with severe morbidity are unlikely to die as a consequence of their condition. Conversely, high rates suggest gaps in maternal care. This international case fatality rate is set at <1%.

DOC case fatality rates of >1% were observed in both South Sudan projects (Gogrial and Pibor). It is important to interpret these figures with caution because registration and classification of DOCs is not always 100% reliable. Still, this result calls for further analysis.

The analysis of maternal deaths in Castors showed that >80% were already in shock upon arrival (hypovolemic due to severe bleeding and septic in relation to unsafe induced abortions at home). This meant that prognosis were already poor at arrival. The DOC case fatality rate in Khost was 0.6% even with the very high volume of work and human resource challenges.

Neonatal Outcomes

The highest stillborn rates were observed in: Timergara, Pakistan (9.2%), Bili, DRC (7.4%), Mauritania (3.9%) and Castors, DRC (3.7%). We do not know, however, whether these deaths were intra-uterine foetal deaths on admission or intra-partum foetal deaths.

A study conducted in Timergara on the unregulated use of oxytocin (see annex "list of OCB related publications") showed that women who were administered unregulated medication for obstructed/prolonged labour were at higher risk of uterine rupture (RR 4.1, 95% CI 1.7 – 9.9) and severe birth asphyxia (RR 3.9, 95% CI 2.5 – 6.1), and those with antepartum haemorrhage were at risk for stillbirth (RR 1.8, 95% CI 1.0 – 3.1). This study will be used for advocacy purposes.

Activities in relation to low-birth weight neonates and sick new-borns are covered in the paediatrics section of this report.

2.3. POSTNATAL CARE

There has been an important decrease (24%) in number of projects offering postnatal care (PNC) (Figure 3). Fortunately, the total number of performed consultations did not reduce in the same dramatic trend (8%).

Further, worth mentioning is the decrease of PNC activities in those projects still providing this service (Gogrial, South Sudan decreased by two thirds, Bangassou, Mauritania and South Lebanon saw only half the number of patients compared to 2014).

Shatila, Lebanon on the contrary, almost tripled its volume (from 342 to 920) and Pibor, South Sudan increased its PNC consultations fourteen-fold (from 11 to 158). The most important attribution to the total PNC consultations is the 2,690 increase by Masisi, DRC and Kabul, Afghanistan.

Figure 2: Trend in number of deliveries and caesarean sections performed in MSF-OCB projects (2007-2015)

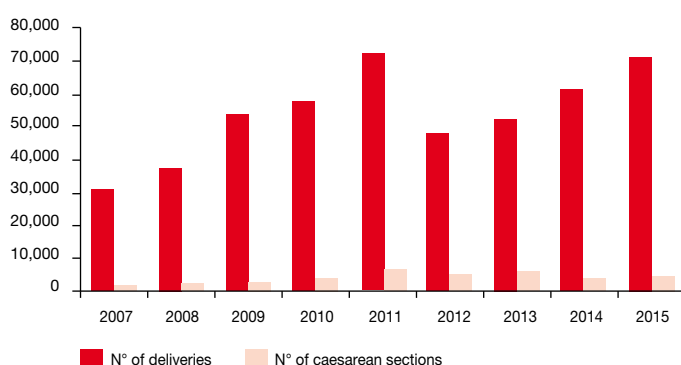


Figure 3: Trend in total number of postnatal care consultations (2007-2015)

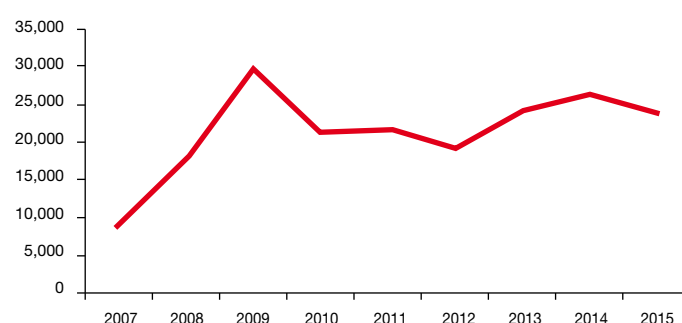


Figure 4: Trend in total numbers of family planning consultations (2008-2015)

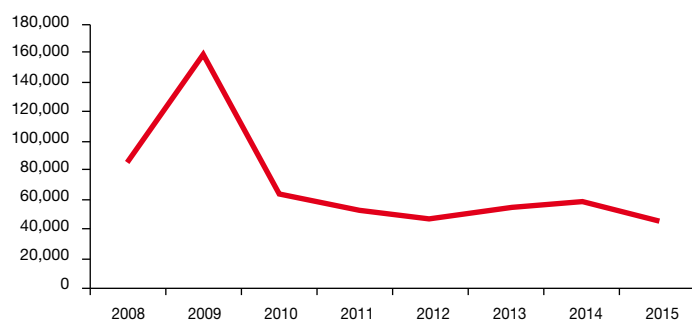
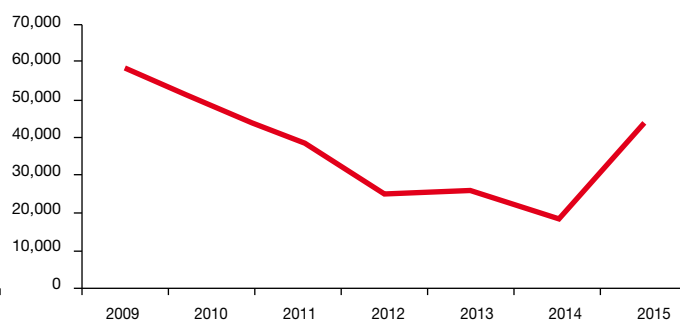


Figure 5: Trend in total numbers of STI consultations (2009-2015)



2.4. ABORTION CARE

All MSF (supported) BEmONC and CE-mONC structures provide post abortion care. In those MSF projects where relevant and feasible, termination of pregnancy (ToP) should be available.

2.4.1. Safe abortion care

Last years' activity report included an overview of challenges and opportunities to implement ToP. Figures show an almost doubling in total number of ToP from 222 last year to 421 in 2015, although the majority (74%) are reported from two projects only.

What is left today is a rather small numbers of ToP being performed in few selected projects. Over the years we have learned that a lot depends on the individuals being involved in abortion, maternity and SV care. Furthermore, the data is not completely representative as reporting is not always systematically done (constraints in relation to HR, activating the ToP file in the data collection tool) or lack of clarity around the case definition (typology).

An abortion leaflet had been designed which explains the rationale of MSF's abortion policy including termination of pregnancy on request. It highlights the opportunities and ways forward to better implement this activity. This is in line with the objective to emphasize the lifesaving nature of this activity as we are seriously lagging behind the organizations expressed ambitions.

A couple of projects, however, adapted their activities in response to being confronted too frequently with maternal deaths due to unsafe abortions. We hope we will be able to report on better access to safe abortion care and to share examples to successfully implement ToP in the years to come.

2.4.2. Post abortion care

Over the course of 2015 there has been a 55% increase (n=5,777) of Post abortion care (PAC) activities. This year, all projects with EmONC activities reported on PAC.

The highest increase was observed in Castors, CAR, with 1,295 women being treated. This is four times higher than last year. We've seen that a significant proportion of maternal mortality in Castors is related to complications of unsafe induced abortion. Therefore, a strategy to increase access to ToP had been designed. Furthermore, efforts were directed to increase family planning uptake, in order to prevent unwanted pregnancies.

2.5. FAMILY PLANNING

The total number of family planning (FP) consultations decreased by 22% (Figure 4).

An explanation of this decrease could be the fact that in Khost consultations went down from 16,126 to 4,786 consultations due to a correction in reporting. Namely, consultations now represent the total number of women accepting a mode of FP rather than only having had a counselling/consultations on FP, which does not say anything about the uptake itself.

For the two projects in Bangassou, CAR and Masisi, DRC context specific strategies have been worked out with the objective to increase FP uptake. In Bangassou, this was by offering a method at maternity exit followed by offering women to come back to the maternity up till six weeks post partum. This allows the women to discuss first with their husbands as not having an agreement from their partners is often a barrier to start FP. Furthermore, a wide range of FP methods with a focus on long lasting methods such as implants and IUD will be made available at decentralized levels (health centres and through mobile clinics). These activities will be supplemented by extensive training of

staff in FP counselling and provision.

Shatila, Lebanon project started to provide a neonatal care check-up by a paediatrician during the PNC phase after women had accepted a FP counselling consultation besides the one provided at exit. This increased the willingness to come for PNC and FP uptake.

2.6. SEXUALLY TRANSMITTED INFECTIONS (STI)

Capturing all STIs diagnosed was challenging. STI treatment was offered at different service points and in both OPDs and IPDs. Besides, STI is often not the 'end' diagnosis in IPD, therefore STIs are most likely under reported. Despite this, the total number of STI cases (43,333) more than doubled compared to 2014 (Figure 5). We can only account this to better registration, despite ongoing under reporting. We can only account this to better registration, despite the above mentioned under reporting.

2.7. PREVENTION OF MOTHER TO CHILD TRANSMISSION OF HIV (PMTCT)

PMTCT was supported in 12 projects (Gutu, Nyanga, Nsanje, Thyolo, Roma, Khayelitsa, Mavalane, Mpoko, Bangassou, Castors, Matam, and Kibera) in eight countries (Zimbabwe, Lesotho, Malawi, South Africa, Mozambique, CAR, Guinea, and Kenya). Seven of these projects were within the vertical HIV/TB programmes, whilst the remaining five were integrated into projects providing general SRH and OPD services.

A total of 62,524 women came for a first ANC visit. Of these, 28,393 women had an unknown or negative status and were tested. 2,264 women were positive (ranging from 12.7% in Roma (Lesotho), 5.7 % in Gutu (Zimbabwe) to 3% in Kibera (Kenya)).

By the end of 2014, MSF decided to stop PMTCT activities in Masisi due to the low

positivity rate and high loss to follow-up rate. The MoH continues with this activity.

CAR is in the process of implementing option B+. Since April 2015, Castors maternity is offering HIV testing at admission. The country has reported a total of 451 HIV positive women who delivered in 2015 in MSF (supported) facilities and received any PMTCT intervention and/or were put on HAART.

In the reporting countries (CAR, Zimbabwe, Guinea and Kenya) 1,393 eligible babies born in 2015 in MSF (supported) facilities received ARV post-exposure prophylaxis.

Follow-up testing of infants after breastfeeding remained an ongoing challenge. Experiences from Khayelitsha (which reported good results, including virological outcomes), show that greater operational emphasis should be placed on PMTCT counselling in 2016 in order to support retention and adherence.

Khayelitsha is a role model for MSF. It is an integrated model where MSF supports initiation of ART at birth. It shows that near to complete elimination of MTCT is possible in an African setting; out of a total of 332 high-risk infants, 98% were tested and only 2% were positives. The positivity rate after breastfeeding was 1% (+PCR at 6 weeks).

2.8. FISTULA

A dramatic decrease in obstetric fistula (OF) care activities were observed in 2015, due to two facts: no fistula campaign was organized and the closure of the long-term holistic project in Gitega, Burundi in the third trimester of 2015.

The surgical interventions in Gitega reduced to 148 from 259 in 2014. Since 2013 a decrease in number of cases was observed, despite the efforts done for the recruitment of patients.

By the end of the Gitega project, 260 doctors, 1500 nurses and 3000 nursing students had been trained. In the second trimester of 2016 a capitalization report will be disseminated with the objective to share widely the knowledge acquired, challenges encountered, failures made, solutions found, and lessons learned from this innovative OF project.

The closure of this project, during the third trimester of 2015, meant the end of any continuous fistula repair project within OCB, with

the risk of losing rapidly our 'over the years' built up expertise.

2.9. ACTIVITIES IN RELATION TO CERVICAL CANCER

2.9.1. Kibera Kenya project

MSF has been screening for cervical cancer since 2012 in two clinics in Kenya - Kibera South and Silanga within their HIV cohort (5200 patients of which 3600 women enrolled in care). All HIV+ women between 35 and 55 years are offered screening. Screening is performed with visual inspection methods (acetic acid (VIA) and Lugol's iodine (VILI)).

Among 1740 eligible patients, 1409 screenings were done over the last 3 years. Of these, 163 (11.6%) were screened positive. This corresponds with the existing literature. At least seven patients had invasive cervical cancer (<1%) and were referred to Kenyatta National Hospital (KNH). A limited number of patients (<10) were referred for Large Loop excision of the transformation zone (LEEP) while most were referred for cryotherapy to KNH. Although cryotherapy normally can be offered at lower health care levels, the quality of care at such levels was of great concern.

2.9.2. Zimbabwe Gutu project (data until 1/11/2015)

MSF started screening for cervical cancer in the HIV cohort in Gutu, Zimbabwe in August 2015. Zimbabwe opted to screen and treat in the same visit in four of the 30 clinics. 800 patients had already been screened in the four rural sites in the first three months (August-Oct). One in three of the patients screened was HIV positive. Age for screening are according to national Zimbabwe protocol, from 18 until 65 year olds and yearly screening is planned in HIV positive women. Screening is done using acetic acid only (VIA).

The work that had been done by the team on the ground was truly impressive. Reasons for this wonderful screening uptake are: good implementation and mentorship by Newlands clinic from Harare; assigning a nurse for cervical cancer screening only, thus has no other specific tasks; ownership by the staff; and a very reactive MSF team. It was agreed to invest in quality material (even if expensive), and have a very patient-friendly oriented service - no booking lists are made and patients can come any weekday without appointment (cryotherapy in all 4 the sites).

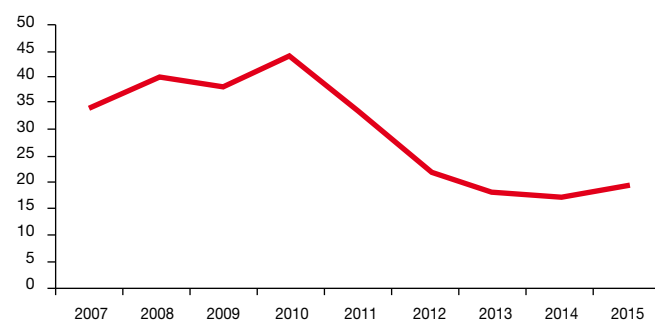
13% of patients screened positive. Five out of 768 patients (0.7%) were suspicious of cancer on screening and were referred. 16/768 (2%) patients needed LEEP.

2.10. CARE FOR VICTIMS OF SEXUAL VIOLENCE

Care for victims of sexual violence (SV) was offered in 19 projects, offering consultation to a total of 3,051 victims (Figure 6). There were two new projects with integrated SV care (Bikengue and Bili, DRC) and two new vertical projects (Rustenberg, SA and Athens, Greece) which also provides care to victims of torture (VOT) and ill treatment). As the Athens project is the second project in OCB providing care for VOT, it will be important to document these experiences - as will be done in the second trimester of 2016 - and is ongoing through OR for the Maadi project in Egypt. As of last year, the majority (90%) of victims were seen in only five projects: Mbare (Zimbabwe), Maadi (Egypt), Masisi (DRC), Castors (CAR) and Kibera (Kenya).

Previous SV related studies had already highlighted the need for tailor-made SV care packages in relation to the context. The Mbare study¹ showed further needs to re-think on packages for specific groups. 17% of the pa-

Figure 6: Trend of total number consulted patients for sexual violence (2007-2015)



¹ Harrison R., Pearson L., Vere M., et al. Comparison of the care requirements for people who are raped and people who consented to seks as a minor in Harare, Zimbabwe.

tients presenting in the Edith Opperman clinic were minors who had consented to sex, but with parents who wanted them to be recognised as rape victims, for several reasons. This group actually require a different care package. There are important gaps found in sex education of young people, and changes are needed to ensure they have access to enough information and protection from HIV, other STIs and unwanted pregnancies.

2.11. EBOLA, PREGNANT AND LACTATING WOMEN²

The Ebola in pregnant and lactating women guidance paper was originally written in August 2014 with five updates in total. With the continuously increasing knowledge on Ebola virus (EBV) positive pregnant women, a latest version was written in July 2015. It was taken up by the American College of Obstetricians and Gynaecologists (ACOG) and by the Royal College of Obstetrics and Gynaecology (RCOG) as no guidelines on managing pregnant women with Ebola existed.

New information on pregnancy and Ebola learned during this epidemic

1. Amniotic fluid remains EBV PCR positive even after cure (PCR negativity in maternal blood) and possibly for longer than one month. This may imply that women who are cured of EBV yet with intact pregnancies remain potentially infectious to the community. Two case studies were published in collaboration with MSF-OCBA and the European Mobile Laboratory in Clinical Infectious Diseases.
2. Fever might not be the first presenting sign. The Liberia team published a case report of a 9-month pregnant patient presenting at an ETC and testing positive for Ebola virus. However, fever only appeared by day 3 of hospitalisation and she died on day 7 of hospitalisation with an intrauterine foetal death.
3. MSF reported two babies born alive during this epidemic from EBV-positive mothers. The first baby was born in Guéckédou and died after 2 days. The second baby, Nubia was born in Nongo, Guinea and is the first documented survivor of transplacental Ebola (article in press). This neonate received several experimental drugs (ZMapp, GS5734) and a white blood cell buffy coat from a survivor and left the ETC alive and in good condition.

4. File revision of all patients inter-sectionally and of all ETCs (Foya, Monrovia, Freetown, Kissi, Magburaka, Bo, Kailahun, Guéckédou, Donka, Nongo) have been finalized. In total, 76 patients were identified as being pregnant and EBV PCR positive during this epidemic. 36 of them survived. There has been, however, an under-reporting of first trimester pregnancies, because routine testing of women in reproductive age in ETCs was only done during the clinical trials (Favipiravir- Convalescent Plasma). The findings from the file revision were presented at the World Obstetrics and Gynaecology conference in Vancouver, Canada in October 2015.

5. In demographic statistics, 4.2% of total populations are estimated to be pregnant. MSF admitted 5200 confirmed cases in ETCs of which only 76 (1.4%) were pregnant women. This indeed suggests an under registration of pregnant women. In future EBV epidemics routine pregnancy testing of women in reproductive age should be standard at admission

6. Despite having deliveries in our ETCs, which carry a very high risk for medical staff, no healthcare workers contracted Ebola while caring for this specific population of pregnant women. The application of very strict recommendations made this possible. It is therefore important to highlight that extra care to pregnant women can be given even in an ETC, with no adverse events to the health workers.

7. There have been no reports of Ebola positive women dying in MSF managed ETCs due to lack of access to emergency obstetric surgery (during the peak of the epidemic it was not feasible to provide this service to any EVD positive patient).

8. There have been important ethical discussions on the inclusion of pregnant women in clinical trials (for Favipiravir – Convalescent Plasma since Brincidofovir stopped prematurely). As providing plasma to pregnant women does not need any ethical consideration (or ethics approval), eight pregnant patients were included in the Convalescent Plasma trial of which six survived. This was not statistically significant and insufficient data were available on pregnant control patients (before the trial started).

9. Favipiravir: initially the company was very reluctant to try this drug in pregnant women (fear of legal consequences for risks of foetal malformation in child survival). Finally, however, pregnant women were allowed to receive Favipiravir for emergency use but not as part of the clinical trial. Up till now only one pregnant woman (the mother of Nubia, the only documented neonate who survived transplacental Ebola) received Favipiravir. She died 24 hours after administration of this drug but her prognosis was, nevertheless, very bad. Pregnant women remained excluded from any vaccination trials as the vaccine is made from a live virus which theoretically causes concerns on the development of the foetus.

3. TRAINING

- Intersectional SRH course: two courses were organized: Brussels and Barcelona.
- Advanced Life Support in Obstetrics (ALSO) provider and instructor course in Denmark: 2 courses where organised (OCB & OCA).
- Decentralized ALSOs with OCB lead: Afghanistan (3), DRC (1), Lebanon (1). Support to courses of OCG and OCBA. Two courses in Pakistan (OCB) were postponed thrice due to visa related issues. Three courses in CAR (OCB) were rescheduled to 2016 due to security incidents RAISE / Marie Stopes International (MSI) Nairobi: three MSF staff participated in the specific ToP, post abortion and family planning care-training organized by MSI Kenya.
- To respond to the need for a context specific and more advanced sexual violence training, the SRH working group developed an intersectional SV training and a "SV training toolkit". The training is available in English and French. The first courses where piloted in Kenya and DRC in 2015. The training package will be adapted and a pool of trainers will be trained with the aim of further rolling out the course next year.
- SRH modules were included in several other OCB trainings.

² Guidance paper Ebola Treatment Centre (ETC): Pregnant & lactating women - Daphné Lagrou & Severine Caluwaerts

4. NEW DEVELOPMENT AND INNOVATIONS

- The MSF obstetrics in remote settings guideline has been completely reviewed and is now called "Essential obstetrics and newborn guide". An entirely new chapter has been added covering technical guidance for termination of pregnancy on request.
- Input to the update of the pediatrics policy.
- Finalization of the fistula toolkit and home-based postpartum care guidance paper.
- The abortion leaflet explaining the rationale of MSFs abortion policy.
- Participation in a book project by John Hopkins university USA (chapter on how to handle obstetrical care in an Ebola epidemic)
- Development of automatic indicator calculator and report generating for MINOS in collaboration with the data management team.
- OR and reports, also see annex "list of OCB- related publications":
 - Ebola viral disease and pregnancy. Black BO, Caluwaerts S, Achar J. *Obstet Med.* 2015 Sep;8(3):108-113. Review.
 - Ebola in Africa: beyond epidemics, reproductive health in crisis. Delamou A, Hammonds RM, Caluwaerts S, et al *Lancet.* 2014 Dec 13;384(9960):2105
- Provision of Emergency Obstetric Care at secondary level in a conflict setting in rural Afghanistan – where are the emergency cases? Lagrou D., Zachariah R., Bissell K. et al. (publication foreseen in 2016).
- Comparison of the care requirements for people who are raped and people who consented to sex as a minor in Harare, Zimbabwe. Harrison R., Pearson L., Vere M., et al. (in depth analysis, OR ongoing)
- Gitega capitalization report by G. Morren, W. van den Boogaard and E. Dominguez.

5. LOOKING BACK AND AHEAD

LESSONS LEARNED IN 2015

- 2015 was a "stabilization year". Pending dossiers were finalized, fine-tuned and translated.
- There is a big need for (re)training of national and international staff. Experiences in this domain so far show the added value and highlight the need for further rolling out of the different courses. The attention it deserves puts forward the discussion on the need for extra HR at international level. Nevertheless, it merits mentioning that all English ALSO courses are mainly followed up by a volunteer in the Denmark office.
- The MIO midwife contract was extended to respond to the continuous demand for MIO support visits following its success.
- Attending the SVRI (Sexual Violence Research Initiative) conference followed by an MSF regional workshop on SV was a positive experience that should be encouraged in the future.
- A team of midwives referents (support & MIO) together with our gynaecology referent provides a nice 'mix' of competencies and availabilities for visits to respond to operational questions and needs.

PROSPECTS FOR 2016

- Focussed support for the implementation of safe abortion care in DRC and CAR.
- A guidance document for adolescent SRH is in development and is planned to be ready for presentation in 2016.
- A report documenting the first piloted activities in MSF in relation to prevention, screening and early treatment of cervical cancer will be written.
- The lessons learned and tools developed by the MIO midwife will be documented and made available for further dissemination. These will be followed by increasing the focus on coaching of first mission midwives by the MIO.
- To finalize the overview article on 'Ebola in pregnant patients in MSF ETCs'.
- Lobby for restoration of maternal health activities by MSF in mainly Sierra Leone and Liberia. At this moment Sierra Leone is the country with the worst maternal mortality in the world. As SRH team we remain extremely committed to improve the survival and health of Sierra Leonean mothers and babies.
- Provision of a "pre-copro" support for new projects is underway in, amongst others, Mauritania, Egypt and Venezuela. We as well aim to re-open a longer term/vertical comprehensive fistula care project.
- Improve workplans on common files in the MCH unit by setting targets and time-frames.

SURGICAL CARE ACTIVITIES

1. OVERVIEW

MSF-OCB's Surgical Policy describes surgical care as the "provision of quality surgery and anaesthesia". In order to reduce mortality, morbidity and disability, surgical care is considered as an integral part of the whole medical care. Although surgery commonly is viewed as a costly and high demanding activity, surgical care provided in low-resourced district hospitals has proven to be cost-effective, just like other selected primary health interventions. In projects by MSF-OCB, we ensure access to quality surgical and anaesthetic care, supporting the MSF values.

In 2015, following the trends of previous years, surgical care in OCB consisted mainly of lifesaving and essential surgery, requiring low technology and based in district hospitals in most of the projects. OCB also continued its operational strategy of developing trauma-related surgery, with high-standard orthopaedic care. Specialized surgical care was provided to women with Obstetric Fistulae (OF). OCB supported emergency interventions following natural disasters (e.g. Nepal earthquake) and provision of care to victims of violence (e.g. Burundi turmoil).

2. PROGRAMME ACTIVITIES

2.1. SURGICAL ACTIVITIES AT COUNTRY AND PROJECT LEVEL

By the end of 2015, there were 12 projects offering surgical care: over the course of the year, three projects conducting surgical care were opened or newly started, and three were closed (Table 1, Annex). The three projects started in 2015 were emergency interventions in Bujumbura (Burundi), and Bikenge and Bili (DRC). Two projects were handed over to the local authorities: Gitega (Burundi) and Gogrial (South Sudan). One project dramatically stopped its activities after being bombed by the US air force: Kunduz (Afghanistan). After the Nepal earthquake, a temporary surgical project was opened in Charikot.

Similar to previous years, surgical activities varied by project, with some projects mainly offering emergency surgical care (Masisi, RDC); some dedicated to obstetric surgery (Khost, Afghanistan) and some dedicated to specific pathologies or conditions (Tabarre, Haiti for trauma care, and Gitega, Burundi for obstetric fistula repair). Here we only report on the projects with direct surgical activities: Nyabiondo project in DRC was excluded as the management of surgery was done by another actor and OCB only provided support to perform surgical activities.

2.2. SURGICAL ACTIVITIES BY INDICATION

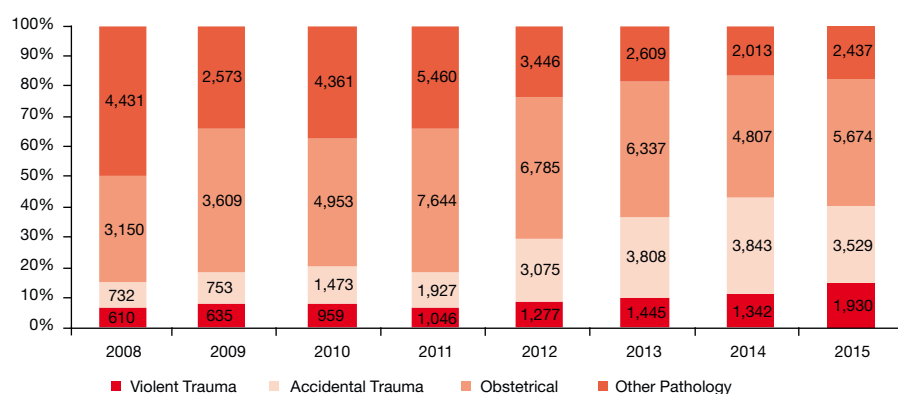
During 2015, there were 13,570 primary interventions (new cases), representing an increase of 13% compared to 2014 (n=12,005). This number also reflects the number of patients (new cases) who benefited from surgical care. This increase in primary interventions on new cases is the highest since 2010 (n=11,746). From 2011 (n=16077) to 2014 there was considerable decreasing trend in new cases. This increase in 2015 can be partially explained by the high level of activities in the new projects (Bujumbura, Bangassou, Castors) and the increase in activities in trauma care centres (Kunduz, Tabarre).

By comparing the proportions of 2015 with those of 2014, it is clear that the same trend

was maintained, particularly the increase in violent trauma cases. However, accidental trauma showed for the first time a decline in caseload. This is not in line with literature supporting the fact that unintentional injuries predominate in populations affected by protracted insecurity or conflict. A possible explanation from Kunduz could be that the escalation of the fights led to a steady increase in violent trauma, but was not associated with an increase in accidental trauma

Violent trauma as an indication for surgery showed an increase in proportion from approximately 7% to 14% of all new cases in the last five years. In absolute numbers there was a sharp increase of approximately 40% in new cases in relation to the previous year. Accidental trauma showed a decline in proportion of approximately 6%, while in absolute numbers the decrease was more signifi-

Figure 1: Indications for surgery, expressed in proportions, 2008-2015



cant, (approximately 8%). In 2015, there was a significant increase in the absolute numbers of obstetric pathology of approximately 18%, while the proportion only increased by approximately 2%. This increase in obstetric causes (new cases) followed the trend noted since 2011. Other pathologies showed similar levels as the two previous years in terms of proportions, while an increase in absolute numbers of approximately 20%.

2.3. PERFORMED ANAESTHESIA

During the year 2015, MSF-OCB provided anaesthesia in 21,502 interventions (in all 15 projects with direct activities) which showed a significant increase of approximately 18% compared to previous year (2014, n=18,281). The total number of anaesthetics also indicates the total number of entrances to the Operating Departments (OD), which is higher than the numbers of primary interventions, as some of the procedures were re-interventions. There was an increase of 18% in entrances to OD, which correlated with the increase of new cases (13%). The higher workload (entrances to OD) in relation to the caseload (new cases) can be explained by the significant increase in violent trauma cases which often require re-interventions.

No major differences in the anaesthesia procedures were observed in 2015. The quality of anaesthesia care is challenging to assess in projects, as the types of surgical interventions vary considerably; however, the proportion of spinal procedures for Caesarean Sections (CS) is a useful proxy quality indicator, as spinal anaesthesia is widely recognised as the procedure of choice for this intervention. A rate >75% is regarded as a good quality of anaesthesia provision. It is encouraging to know that 83% (average of spinal anaesthesia) was achieved during 2015. This excellent level of anaesthesia provision for CS is, however, slightly lower than the previous year (88%). This can be explained by the opening of new projects which had a ratio of 70% or below. All efforts are ongoing to improve the anaesthesia management in these settings.

2.4. SURGICAL PROCEDURES BY TYPE

OCB projects performing direct surgical activities reported 25,178 surgical procedures in 2015. This number exceeded the number of entrances to the OD/ performed anaesthetics, as multiple surgical procedures can be performed under the same anaesthesia procedure (in one intervention). It is an im-

Figure 2: Types of anaesthesia, expressed in absolute numbers, 2008-2015

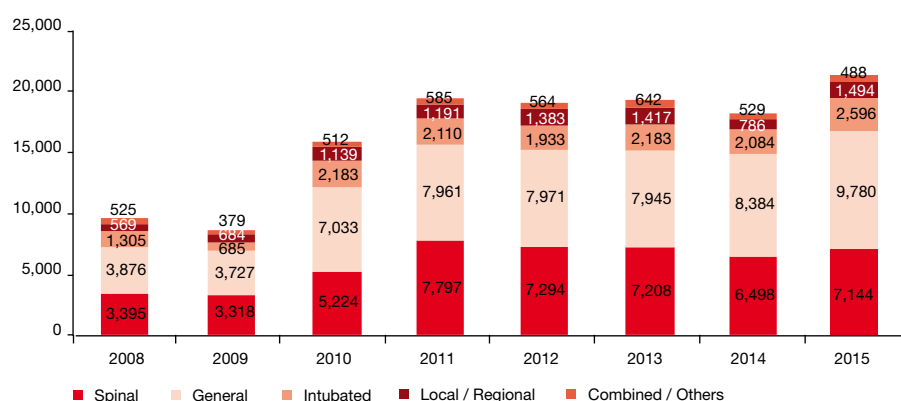
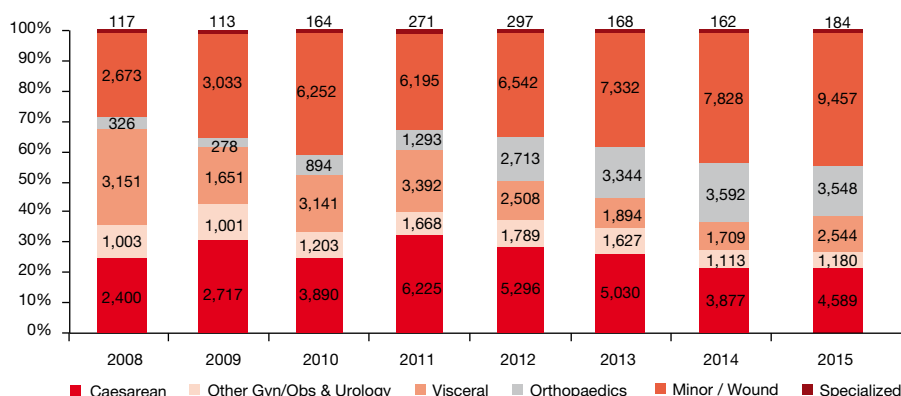


Figure 3: Surgical procedures, expressed in proportions, 2008-2015



portant indicator, showing the work done by the surgical team, and allowing appropriate monitoring of the use of material resources in the project.

As described in previous reports, not all projects were able to record more than one procedure per intervention, and in order to present a systematic and unbiased analysis, only the primary ("type 1") procedures are thus reported on here (n=21,502). The proportion of obstetric procedures (including CS) remained the same compared to the previous year. Visceral surgery showed a discrete increase in proportion (3%), but a notable increase in absolute numbers (45%). This increase can be explained by the increase in violent causes of intervention in 2015 and the need for visceral surgery. Orthopaedic surgery showed a slight decrease in proportion (3%), remaining as previous year in absolute numbers. This is also linked to the increase of violent trauma associated with multiple re-interventions and minor/ wound surgery and the overall decrease in accidental trauma. On the other hand, minor/ wound surgery showed a slight increase in proportion of 2% but 20% in absolute numbers. Again this reflects the increase in violent trauma cases.

2.5. OBSTETRIC FISTULA

Obstetric fistula (OF) is a complication of delivery that occurs in resource-poor countries where there is lack of comprehensive emergency obstetric care, and mainly, provision of CS in time. This pathology affects the poorest in the society. Often women with OF are stigmatised by the population due to the smell and leakages, and even excluded from the community.

During 2015, only Gitega project provided these activities. A total of 148 women underwent OF surgical repair, of whom 109 were new cases and the other 39 were old "returning" cases. Due to operational strategies and context instability, OF activities are not expected in 2016.

2.6. EMERGENT SURGERY

Emergent surgery is defined as urgent (life-saving and acute emergencies) or delayed (with a wait of no more than a few days without significant morbidity) cases, as opposed to elective surgery. In MSF, certain planned procedures are considered essential and address conditions amenable to a proven surgical treatment. The conditions may not affect the patient's health or life immediately but

may result into suffering, handicap and/or disability. Surgical activities can thus be classified into three degrees of urgency: urgent, delayed and planned elective. As urgent versus delayed surgery is a relatively subjective classification, emergent surgery as a whole is a more appropriate indicator across different projects.

In 2015, 20,908 emergent cases were reported, representing 96% of all surgeries and remaining similar in proportions to that of the previous year. The ratio of emergent to planned elective cases is an important indicator in programmatic planning: knowing what types of surgical cases are performed assists in human resource planning (type and number of specialists) and influences the type of infrastructure, medical equipment and supply needed. Additionally, it can help guide operational strategies: e.g. if a surgical programme in a conflict area has many non-trauma and non-emergent cases, then it may be too distant from the active conflict.

2.7. ORDER OF THE INTERVENTIONS

Surgical interventions can be performed as first/ primary, planned re-intervention, and unplanned re-intervention. This indicator is important, as some projects can have a large volume of planned re-interventions, indirectly indicating the type of patients they are managing (e.g. wounded, burn victims). Unplanned re-interventions can be a quality indicator, as they represent post-operative complications of the surgical procedure that can be linked to professional performance (inadequate experience or skills), lack of medical materials and supply, unavailability of a post-operative recovery room, or lack of nursing follow-up of the patient in the hospitalisation ward.

In 2015, 63% of the interventions were primary interventions. This represents a decrease compared to the previous years, reflecting the increase in surgery related to trauma, as these morbidities require several re-interventions during the treatment period.

2.8. INTRA-OPERATIVE MORTALITY

Out of the 21,502 entries into the OD in the 15 projects providing direct surgical activities, 55 intra-operative deaths were reported, representing an overall mortality rate of 0.3%, a slight increase compared to 0.2% in 2014. Intra-operative deaths are defined as any death occurring between the induction of anaesthesia and the patient's discharge from the recovery room. While mortality rates are reported per project, data should not be compared across programmes: intra-operative mortality is associated with patient condition, emergency status, indication for surgery, etc., and is thus a factor of the project objectives as well as the quality of care. Data can, however, be compared within projects over time to assess changes in their performance.

3. HUMAN RESOURCES AND TRAINING

Training is an important core activity in MSF, and particularly of the OCB SAGE unit. Specialist doctors such as surgeons and anaesthesiologists are scarce and those who are willing to operate in resource-limited settings are even more so. The different training schemes targeted different type of GAS (gynaecology/ anaesthesia/ surgery) specialists, taking into consideration their skills and knowledge, and the expected skills and knowledge in relation to the operational strategies and needs. Trainings included:

- Training of expatriate surgeons in developing specific skills:
 - Trauma and orthopaedic surgery: in OCB MSF Hong Kong GAS week and in OCA MSF Germany Surgical Workshop (in Dusseldorf, Germany).
 - Obstetric fistula repair surgery: in Gitega, Burundi.
 - War surgery: ICRC seminar (in Geneva, Switzerland)
- Training of national medical doctors performing surgery in developing specific skills:

- Basic orthopaedic surgery: in OCA MSF Germany Surgical Workshop (in Dusseldorf, Germany), and through bedside training with expatriate general surgeons.
- Advanced orthopaedic surgery: in OCB trauma centres through bedside training with expatriate orthopaedic surgeons.
- General surgery: bedside training with expatriate general surgeons.
- Advanced general surgery: in OCB trauma centres through bedside training with expatriate subspecialized surgeons (e.g. vascular, paediatric)
- Basic neurosurgery: in OCB trauma centres through bedside training with expatriate neurosurgeons.
- Obstetric surgery: bed side training with expatriate gynaeco-obstetricians.
- Management: in OCB MSF Hong Kong GAS week and in the OCB HMTT.
- Training of nurses in anaesthesia management:
 - Hong Kong GAS week.
 - Bed side training with expatriate anaesthesiologists.
- Specific training cycles:
 - Haiti, Tabarre: specialized orthopaedic care as a result of a joint venture with the Haitian university. This training consists of rotations of Haitian residents in orthopaedics

4. OPERATIONAL RESEARCH

During 2015, the SAGE unit published ten peer-reviewed articles in scientific journals (cf. annex list of OCB-related scientific publications). With the help of the Operations department, MSF-OCB participated in two relevant conferences showing the results of operational research studies in the trauma centres of Kunduz and Tabarre. These were presented by the national staff. Additionally, in collaboration with MSF USA, we contributed one chapter in a book¹ on anaesthesiology and global health.

¹ Roth R, Frost EAM, Gevirtz C, Atcheson C. The role of anesthesiology in global health: A comprehensive guide. Springer International Publishing, 2015. Available from <http://www.springer.com/us/book/9783319094229>

LESSONS LEARNED IN 2015

- The destruction of Kunduz Trauma Centre (Afghanistan) was a shock. The sudden stop of activities cancelled some operational ambitions to invest in surgical care (e.g. basic neurosurgery), some operational research studies (e.g. postoperative infections and postoperative functional recovery), development of new techniques (e.g. regional blocks, peripheral inserted central catheters), among others.
- The handover of the Gitega Obstetric Fistula project (Burundi) left OCB with a gap of projects performing such specialized surgeries, with the unavoidable loss of knowledge and trained human resources for similar future projects.
- Quality set-up of surgical care activities in emergency and violent settings. In isolated cases, surgical activities were implemented without the support of the SAGE unit leading to difficulties and frustrations in the field. These were quickly resolved by close collaboration of Operations with the Medical department.
- Lack of technical skills of some expatriates to work in MSF field settings coupled in some cases by the lack of management and training skills.
- Risk of compromising quality of surgical care due to a high turnover of specialists.
- Significant fluctuation of the need for specialists, without maintaining a critical mass in the field to keep efficiency in the pools.
- Obvious impact of the lack of briefings in headquarters of some GAS specialists due to the “urgency” of leaving to the field.
- Lack of appropriate data collection tools for big hospitals, including surgery tools, hindering the follow-up of quality of care. Moreover, almost all available indicators are quantitative and very few are qualitative outcome indicators. This hinders proper insight on process indicators.
- Satisfactory follow-up of performed surgical care activities was assured across all projects. Good communication was maintained between projects, missions and headquarters.
- Improvement in orthopaedic care in the specific trauma centres with inclusion of new tools (e.g. implants) for more advanced orthopaedic management of fractures.
- Good data (statistics) was obtained in surgical care, in compliance with Operating Department databases and development of the hospitalisation one. The use of File Number was more spread across projects.
- Important involvement of medical department in decision making of medical activities in new projects, or required modifications in on-going ones.

PROSPECTS FOR 2016

- Seek support for more specialized activities: sexual and reproductive health activities by general surgeons, orthopaedic programmes, head trauma care (medical and surgical), end-of-life palliative care, thoracic and vascular surgery, and wound management (including flaps).
- Increase the skills of expatriate and local specialists: orthopaedic surgeons in performing external and internal fixation; general surgeons in neuro-, thoracic, vascular and plastic surgery.
- Follow up the quality of surgical care through postoperative site infections databases.
- Follow up of a curriculum to all levels for national staff specialists when possible and available.
- Improvement of care for specific patient conditions: head trauma, polytrauma.
- Consistent and routine monitoring of activities: surgery/ anaesthesia – for proper follow-up and general improvement of OCB projects good quality indicators should be in place.
- Strengthen the response in cases of mass disaster through good coordination between all the actors: emergency medicine doctors, anaesthetists, orthopaedic surgeons, other surgeons, nurses, logisticians.
- Continue publication of operational research studies.
- Continue to foster good collaboration in OCB and other sections, as well as with other external platforms.

VACCINATION

1. OVERVIEW

The year 2015 saw major increase in activity in the fields of routine vaccination and preventive mass vaccination campaigns in OCB projects. Four field visits were done by the Mobile Implementation Officer (MIO) to support the integration and evaluate the quality of routine vaccination activities in MSF programmes. Two planned multi-antigens vaccination campaigns were prepared but had to be postponed due to security reasons.

Although the number of reactive mass vaccinations launched remained stable, there was an important decrease in the total number of reactive vaccine doses given. Two massive outbreaks response interventions were launched for measles in DRC and meningitis in Niger. However, the OCB team in Niger focused on case management and did not take part in any vaccination activity.

The increasing trend in the number of doses of vaccines supplied to the field observed over the last two years was maintained in 2015 (1,603,101 doses in 2015 compared to 1,522,236 doses in 2014 and 1,454,579 doses in 2013). Half of the vaccine budget was allocated to products used as post-exposure prophylaxis, even though these products represented only 2% of the doses given.

The number of vaccination against pneumococcus increased in OCB projects, showing a promising trend. Human Papilloma Virus (HPV) vaccination and vaccination of People Living with HIV (PLHIV) remains a challenge to be tackled.

2. PROGRAMME ACTIVITIES

Like previous years, 57% of the medical OCB projects reported vaccination activities in 2015. A total of 1,170,508 doses of vaccine were administered with the con-course of MSF in 29 projects. This showed an 11% increase in 2015 compared to 2014 (1,052,089 doses), and almost similar to that of 2013 (1,169,232 doses). The distribution data revealed that 46% of the doses (541,795 doses) were given through routine vaccination activities, while 84% of these doses targeted children <5 years old.

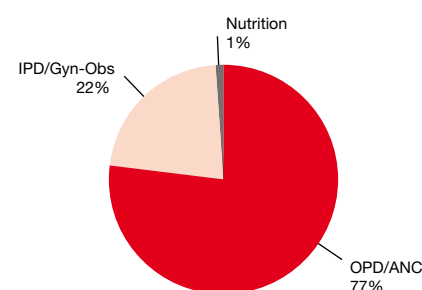
Almost a third of the doses (30%) were given in reactive mass vaccination campaigns (vs 58% in 2014) and one fifth (22%) were given in preventive mass vaccination campaigns.

An estimated total of € 926,500 was spent on the supply of vaccines and vaccine products for all OCB missions in 2015. Immunoglobulins only represented 43% of the vaccine products expenditures, while tetanus vaccine represented 7% of this budget. Note that some of these vaccines supplied in 2015 will get to be used in 2016. An overview of the doses administered over the course of 2015 is provided in table 1.

2.1. ROUTINE VACCINATION

Reporting of routine vaccination keeps improving in OCB projects. MINOS provides consolidated vaccination indicators allowing coordination teams and HQ staff to easily follow-up on their activity. More regular use of this tool should be promoted.

Figure 1: Distribution of routine vaccinations in OCB Programmes, 2015 (n=541,795)



A total of 541,795 routine vaccinations were administered in OCB projects over the course of 2015 (figure 1), representing a 55% increase over the last year (350,668 doses). Three quarters of the doses (453,852 doses) were reportedly given in Outpatient Department (OPD) and in Antenatal Care (ANC), while one fifth of the routine doses were given through the Inpatient Department (IPD) and Gynaecology/Obstetric wards (84,464 doses).

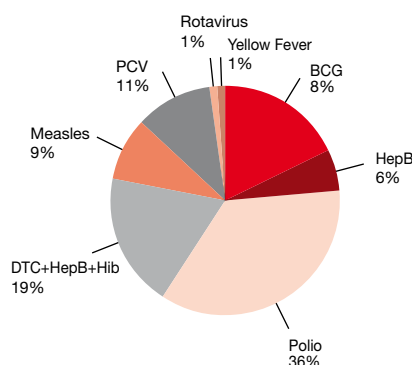
The very low number of vaccinations reported in the nutrition programmes reflects the radical decrease in the number of nutrition programmes sustained by MSF-OCB, and also the integration of nutrition activities into IPD and OPD programmes. Next year, MI-

Table 1: Distribution of doses administered by type of activity, 2015

	Doses	%
Total doses routine vaccination	541,795	46%
Total doses in response to epidemics	350,310	30%
Total doses preventive campaigns	252,419	22%
Total doses post-exposure prophylaxis*	25,904	2%
Total doses administered	1,170,508	

* Immunoglobulin doses for tetanus and rabies are part of the post-exposure prophylaxis protocols

Figure 2: Distribution of antigens administered to children under five in routine vaccination in OCB programmes, 2015 (n= 457,331)



NOS should allow us to follow up and report them separately.

It is sad to observe again this year that not a single dose of vaccine was reported to have been given in any of the HIV projects, despite 1,411 babies being born in PMTCT programmes. Sustained efforts should be maintained to integrate more routine vaccinations (including HPV) in programmes targeting PLHIV in the coming years.

Like in 2014, 84% (457,331) of the vaccine doses given routinely were administered to children less than five years of age, but only 8% of them (37,031 doses) were given to children above 12 months of age. The efforts that had previously paid off to increase the age of routine vaccination to 24-59 months seem to have faded away as only 8% of the children vaccinated in 2015 were older than one year.

Polio vaccine represented more than a third (36%) of the doses administered to children under five in routine vaccination in 2015 (figure 2). About one fifth of the doses given combined five antigens in one vaccine: Diphtheria, Tetanus, Pertussis, Hepatitis B and Haemophilus influenza B (DTP-HepB-Hib), while BCG accounted for another 18% of the doses distributed. Measles-containing vaccines and single Hepatitis B vaccines represented 9% and 6%, respectively.

Like in 2014, pneumococcal vaccines (PCV) vaccine doses represented 11% of the doses given routinely to children less than 5 years of age, but this represents a 49% increase in the absolute number of doses given (49,267 doses). The use of two donations of PCV10 and PCV13 vaccines from pharmaceutical companies balanced the inhibitive price of the vaccine that could have slowed down the implementation of this vaccination in several projects.

Similar to the previous years, we administered more first doses than third doses of pentavalent and polio vaccines (dropout rates estimated at 25% and 26%, respectively). This is partly explained by the missed opportunities for vaccinating older children in our structures.

In 2015, vaccination of new-borns (oral polio vaccine 0 (OPV) and Hepatitis B at birth) represented 21% of the doses administered routinely to children. The lower estimates provided to new-borns in 2014 (8%) were actually due to a software problem and falsely imputed the quality of the activities. In 2015, 35% of the children born in MSF structures received one dose of Hepatitis B vaccination (25,891 doses) and 96% of them received their first dose of polio vaccination (70,979 doses).

In 2015, 70% of the 84,464 doses of tetanus vaccines delivered to women in reproductive age were administered to pregnant women. Almost half of these doses were recorded as a first dose, and a quarter as second dose. Worthy of note is that a total of 10,684 women received their 5th doses of tetanus vaccination through our programmes. These women are now protected for life against tetanus and will contribute to the reduction in the burden of the disease in their communities.

2.2. POST-EXPOSURE PROPHYLAXIS

Over the year, 25,904 doses of vaccines and vaccine products were used for Post-Exposure Prophylaxis (PEP) in MSF-OCB projects (table 2).

Like in 2014, half (51%) of the victims of sexual violence were reported to have received their first dose of Hepatitis B vaccination. The dropout between the first and the third dose was 69%, compared to 64% last year. Similar dropout rates (59%) were found for their tetanus vaccination. The extremely low numbers of rabies vaccinations recorded in 2015 leave us with the suspicion that this fatal disease in unvaccinated persons remains underestimated and improperly managed in our programmes. Similar trends have been noted for snake bites. Specific attention should be paid to reporting and management of these cases.

2.3. EVALUATION OF MISSED OPPORTUNITIES FOR VACCINATION (MOV)

New evaluations were conducted in Afghanistan, Pakistan and Mauritania. Results are presented in Table 3.

MOV in eligible: proportion of eligible individuals exiting a health structure who have just missed an opportunity of being vaccinated (measure the performance of the system

Table 2: Post exposure prophylaxis: type of patients and vaccines in OCB projects, 2015

Type of victims	Vaccine	Doses	%
Wounded	Tetanus	14,280	55%
	Tetanus Ig	6,855	27%
SGBV	Tetanus	1,940	8%
	Hepatitis B	2,800	11%
Suspected bites	Rabies	29	0%

SGBV: Sexual and Gender-Based Violence

Table 3: Evaluations of missed opportunities for vaccination in OCB projects

Country	Structure	Date	Target	n	MOV in eligible	MOV
Afghanistan	ASB hospital	Jun-16	0-59 months	180	79%	28%
Mauritania	CDS BSK Jr NV	Sep-15	0-59 months	15	100%	40%
Mauritania	CDS BSK	Sep-15	0-59 months	9	100%	22%
Mauritania	CDS Fassala	Sep-16	0-59 months	41	100%	44%
Mauritania	PS Mberra	Sep-15	0-59 months	26	100%	38%
Mauritania	PS Minsa Camp	Sep-15	0-59 months	16	100%	25%
Mauritania	CDS Mberra	Sep-15	0-59 months	36	100%	33%
Mauritania	PS1 camp Mberra	Sep-15	0-59 months	14	100%	43%
Mauritania	PS2 camp Mberra	Sep-15	0-59 months	20	100%	30%
Pakistan	Machar hospital	Jun-15	0-59 months	250	46%	28%

at detecting and vaccinating eligible children); MOV: proportion of individuals exiting a health structure who have just missed an opportunity of being vaccinated; PS: Health post; CDS: Health Centre.

A poster on the evolution of MOV over time in two MSF-OCB projects was presented during the 2015 MSF Scientific Day in London. It won the Best Poster Award. The prize was reinvested in a new vaccination project described in point 3. A consolidation study on all MOV performed by OCB is currently being done with the support of the LuxOR Unit. Results should be available by mid-2016 and possibly would lead to a publication.

2.4. MASS VACCINATION CAMPAIGNS

In 2015, OCB organized or supported three preventive mass vaccination campaigns in CAR, South Sudan and Sierra Leone. A total of 252,419 doses of vaccines were given, of which 53% were measles and 17% were polio (two campaigns included both antigens). Two multi-antigen vaccination campaigns in three rounds were also prepared in CAR and DRC, but had to be postponed to 2016 because of security constraints. The massive increase in preventive mass vaccination activities - five times increase compared to

2014 - reveals a positive change of MSF attitude towards primary prevention, especially in contexts where the Expanded Programme of Immunisation has shown clear limitations (insecure contexts and chronic crisis).

In response to measles epidemics, OCB organized nine reactive mass vaccination campaigns in DRC (5), CAR (3) and Pakistan (1). A total of 350,310 doses of vaccines were used for this purpose, of which 24,071 were polio vaccines used in a combined campaign in DRC.

A massive international response was also given during the meningitis outbreak in Niger. However, the OCB intervention remained focused on case management.

2.5. VACCINATION COVERAGE SURVEYS

Vaccination coverage surveys were organized in DRC, South Sudan and CAR. Another survey was planned in Pakistan but could not be organized due to security reasons.

3. DEVELOPMENTS AND INNOVATIONS

- The study on the use of measles vaccines under Controlled Temperature Chain (CTC) supported by the Innovation Fund

was completed. Results showed that the potency of the vaccine exposed to heat decreases faster after reconstitution than in the non-exposed vaccines, but discussions are still on-going to understand exactly the consequences of these findings for mass vaccination campaigns.

- A new E-tool (JennerX) for the follow-up of multi-antigens vaccination campaigns in multiple rounds has been developed and will be pilot-tested in early 2016. Full results on the use of JennerX will be available next year.

4. TRAINING

- OCB gave support to the Populations in Precarious Situations (PSP) course in Paris. Vaccination modules were given during the Health Promotion training and in the Management of Health Services (MHS) course.

- A training session was given to the Tropical Medicine students at the Institute of Tropical Medicine in Antwerp.

5. LOOKING BACK AND AHEAD

CHALLENGES AND ACHIEVEMENTS IN 2015

- The position of International Vaccination Focal Point in DRC remained vacant for the entire year. Job profile and salary scale were revised to make the post more attractive.
- The international survey about the implementation of routine vaccination activities in nutritional programmes was finalised. Results will be shared in 2016.
- Results of MOV evaluations were shared in several platforms and forums.

PROSPECTS FOR 2015

- Provide a comprehensive set of tools to easily implement and follow-up multi-antigens vaccination campaigns in multiple rounds, including a performing E-tool (JennerX).
- Keep focus on increasing the use of PCV and other new vaccines in MSF-OCB projects, as well as increasing the age for vaccination up to 59 months.
- Once recruited, give full support to the position of Vaccination Focal Point in DRC.
- Improve the appropriate use of anti-rabies and snake antivenom products in our missions.
- Enhance the collaboration with HIV projects to improve attitude towards vaccination of PLHIV.
- Publish the results of the studies on the "coup de poing" strategy and Missed Opportunities for Vaccination.

WATER, HYGIENE AND SANITATION

1. OVERVIEW

The year 2015 was a transitional year in many aspects. Significant effort was spent to recalibrate the Water, Hygiene and Sanitation (WASH) operational support from the overwhelming Ebola outbreak to the regular missions support.

In 2015, the “Where is Everyone” review of the humanitarian aid system response in displacement of populations had initiated a reinvestment in salvaging WASH activities in the MSF movement. The crucial and enabling role of the WASH unit work expertise during the 2014 Ebola outbreak in West Africa resulted in a clear formalized plan and ambition to substantially increase its role in the MSF movement.

MSF should go beyond the technical “water only” approach and include waste, excreta disposal and vector control as part of its holistic public health approach. This should ensure added value for patients in terms of quality and quantity of health services; allow better control of ongoing disease outbreaks and prevent recurrent ones; and also prevent outbreaks in precarious situations of population concentration resulting from war or natural catastrophes. Below a short overview of the operational highlights of the year 2015 are presented.

The intersectional WASH working group continued to serve as an expedient platform for development and dissemination of tools and guidelines and for harmonizing intersectional WASH activities. This resulted in the standardization and development of a large number of WASH activities tools. All outputs of this intersectional collaboration were shared through the website of MSF Tukul. The Public Health Engineering guideline was translated in French.

The WASH unit is quite involved in MSF internal as well as external training. Additionally, a number of operational research and innovative initiatives were also launched over the course of the year.

2. PROGRAMME ACTIVITIES

2.1. ACTIVITIES AT A COUNTRY AND PROJECT LEVEL

Majority of OCB projects included a WASH component to minimise hospital-acquired infections and optimise infection control. A systematic scanning of WASH needs was performed for all OCB projects. As such WASH support was provided to established missions to ensure that the essential WASH requirements in the medical infrastructures were respected. Trained WASH personnel from the pool were sent to the field if the WASH needs proved to be complex or of a large scale for the field staff. WASH needs in the large OCB emergency interventions were mainly addressed by specialised staff with technical support from headquarters. In 2015, about 63 WASH experts supported projects in 19 countries (Malawi, Guinea, Mozambique, Tunisia, Nepal, South Sudan, Tanzania, Afghanistan, Greece, CAR, DRC, Belgium, Serbia, Niger, Zimbabwe, Burundi,

Madagascar, Mauretania and Haiti). In 2015, the six experts of the WASH unit spent a total of 221 days in the field providing direct support in Liberia, DRC, Guinea, CAR, Afghanistan, Pakistan, Zimbabwe, Kenya, Mozambique, Uganda and Haiti. The WASH unit also participated in multiple international, MSF internal as well as external meetings.

2.2. SPECIFIC WASH INTERVENTIONS AND FIELD VISITS

- Some effort of the WASH unit in 2015 was devoted to continue supporting the MSF response to the declining Ebola outbreak in West Africa. The unit also provided full support to the capitalisation and evaluation effort of MSF's response to this historic outbreak.
- The floods in Malawi were a significant challenge and required considerable support in defining appropriate prevention activities which were within a suitable scale of the MSF WASH ambition.

- The cholera outbreak in Mozambique triggered the implementation of household water treatment methodologies rather than centralised water provision. This stimulated an effort to capitalize the intervention aimed at evaluating the impact of these community-based activities.
- The refugee crisis and consequent discovery of dead human bodies in the open sea, in dinghies or on the coast of Tunisia required a WASH expert to provide training to fishermen and coast guards on how to safely and respectfully collect these human bodies/remains while preventing exposure to infectious diseases.
- In South Sudan context (Pibor, Gogrial, Bor and Doro), an emergency WASH support was provided in the medical infrastructures and to some extent to the displaced and refugee populations. In such high malaria burden contexts, most of these activities were delegated to other organisations. Resultant sub-optimal support resulted in

- increased burden of communicable diseases inside the MSF medical infrastructures.
- A WASH expert provided brief support to the Burundi refugee population in Tanzania until other MSF sections started deploying impressive WASH support to these refugee camps.
 - In Afghanistan (Kabul, Lashkargah, Kunduz, Khost, Ahmad-sha-Baba) WASH support was provided to ensure the essential WASH requirements in health structures, support the definition of the E-prep strategy and follow-up on the issues of contamination of water with chemicals.
 - In Greece, the MSF support to migrants in transit/detention/reception centers or spontaneous settlements and mobile clinics necessitated involvement of WASH expertise. This became clear during the set-up of the informal transit camp during the summer in the heart of Brussels, where the WASH unit was involved in setting up the water provision, excreta disposal facilities and identifying flood mitigation strategy of the refugee crisis.
 - In CAR, the Bangui and Bangassou projects required significant WASH involvement especially to support the provision of potable water in collaboration with ACF and in a context where the malaria burden is high. Support was also provided to the medical infrastructures to ensure the essential WASH requirements.
 - The PUC, Kinshasa, Masisi, Bikenge and Bili projects in DRC with the potential new project in Maniema required a particular WASH focus to support the numerous medical infrastructures, training of the dispersed staff and evaluating typhoid transmission in Kikwit. Additionally, this included well digging, bat control and support to the E-prep. Unfortunately, the Bikenge exploration to investigate the possibility of opening a project in a context of mining with correlation between environmental contamination and health issues did not take place.
 - In Nepal, the involvement of the WASH unit in managing the emergency situation following the earthquake and aftershocks was minimal and restricted to supporting the medical infrastructures and Charikot hospital.
 - MSF team in Serbia supported thousands of migrants and asylum seekers crossing the country on their way to Northern Europe. The cold winter posed important constraints on the construction and renovation of toilet and shower facilities at two temporary asylum centres located in Sjenica and Tutin.
 - In the Guidan Roumdji district, Niger, water scarcity is common as its supply is largely dependent on often-dysfunctional boreholes. MSF has run an outpatient therapeutic feeding programme in the district for the past three years. The quality and quantity of village water supply are important determinants for the length of stay of outpatients; borehole construction is expensive, time consuming, resource-demanding and not always successful. As an alternative, MSF has collaborated in the diagnosis and regeneration of existing boreholes with the Ministry of Health, Niger Water Bureau, and Idées-Eaux - a hydrogeological engineering consultancy firm. The aim of this innovative project was to improve access to safe drinking water and save costs and resources by repairing and re-using the existing boreholes rather than discarding and rebuilding new ones. This project was presented during the UK Scientific Day in London in 2015.
 - Projects in Harare (Zimbabwe) and Niger at risk of water-related outbreaks like typhoid and cholera are involved in diagnosing and rehabilitating existing boreholes rather than creating new ones.
 - In South Africa, an evaluation took place in the Khayelitsha slum of Cape Town as an effort to reduce sexual violence linked to outdoor defecation practices at night. Unfortunately, the population was very adamant regarding the use of flush toilets, and MSF was not in a position to engage in a project of such scale and objective.
- ### 3. INTERNATIONAL COHERENCE
- The intersectional working group on WASH has been active since 2007 to improve the intersectional coherence on WASH issues. Over the course of 2015, activities of the WASH working group included:
- Four meetings of the working group, with minutes and presentations disseminated through Tukul.
 - Organisation of a technical day in Brussels with the insecticide industry presenting new tools and innovations, in collaboration with the Malaria working group.
 - Organisation of a technical day on Ebola with participation of Prof Paul Hunter from the University of East Anglia.
 - Conference calls were organised to discuss the follow-up on the Ebola intervention given the increasing intersectional support to the response.
 - An intersection policy paper is being developed for further cohesion on WASH between different sections.
 - Significant effort was devoted to streamline the IRFFG review between sections and preparation of key job descriptions.
 - A workshop on Dengue Fever was organized in collaboration with OCG which was opened to medical and WASH profiles in MSF.
 - A workshop on malaria was organised in collaboration with the malaria working group in Dakar, Senegal.
 - Systematic updates of the WASH working group space on Tukul, including technical documents, digital maps, presentations and meeting minutes.
- ## 4. DEVELOPMENTS AND INNOVATIONS
- ### 4.3. DOCUMENTS AND GUIDELINES
- The WASH unit, in close collaboration with the intersectional working group, was involved in the generation of a broad array of documents and guidelines including:
- The “Public Health Engineering in Precarious Situations” translated into French in 2014, was reviewed and presented for final editing to the Intersectional Guideline Project in 2015.
 - Several technical updates/files were implemented in the International Technical Coordination (ITC) catalogue in close collaboration with the international office.
 - WASH contributed to two chapters of the oxford humanitarian handbook
- ### 4.4. TOOLS AND STRATEGIES
- The WASH unit, in close collaboration with the intersectional working group and ITC was involved in the physical inspection of kits sent out to emergencies and those stored in the MSF logistics warehouse in Bordeaux.
- ### 4.5. OPERATIONAL RESEARCH
- The close collaboration with the Operational Research Unit (LuxOR) enabled the WASH

working group to launch a considerable number of operational research initiatives that hopefully will be ready for submission in 2016. However, in 2015, a lot of effort was spent rather on recalibrating the operational support between the Ebola outbreak and regular missions.

4.6. COMMUNICATION

MSF experience in WASH activities was actively shared at multiple platforms through scientific presentations and discussions, including:

- Participation to the Global Cholera Task Force conference in New York.
- Present the Niger REFRESH approach during the UK scientific day.

- Co-organise the Emergency Environmental Health Forum in Nairobi.
- Present the Niger REFRESH approach to Engineers without Borders in Ghent.
- Written feedback and participation to the advisory board meeting of the Humanitarian Innovation Fund in London.
- Participation as an observer to WASH cluster meeting in Geneva.

5. TRAINING & HUMAN RESOURCES

The WASH unit was involved in over 50 full-time days of dedicated trainings – including the WASH module of the Populations in Precarious Situations (PSP) training, the WASH in Emergencies training (English and French), the Response to Epidemics (REPEPI) course

and the Water, Engineering and Development Centre course – as well as providing WASH components for trainings such as the Preparation for Primary Departure (PPD) course, Management of Health Structures (MHS) course, Basic Logistics Course (BLoC), and others trainings (TLB, LTT, MMC, PMC).

In addition, the WASH unit also provided external training to a number of public health masters in international centres such as the Liverpool School of Public Health, the Institute for Tropical Medicine in Antwerp (2 complete new modules), Bioforce WASH. The WASH unit also intervened during the Pharma week in Geneva.

6. LOOKING BACK AND AHEAD

LESSONS LEARNED IN 2015

- The intersectional working group continued to demonstrate its worth and has managed to harmonise the WASH activities of the different sections. The dedicated working group space on Tukul is a well-suited communication channel for the group, but information flow could benefit from further attention.
- The formalized and clear ambition to increase the role of WASH in MSF movement in 2016 will require a careful laid out plan to overcome the resistance for change; and the overwhelming belief that WASH is a technical field concerned only with taps and toilets instead of setting upstream strategic and important public health role in an emergency medical organisation such as MSF.
- An increased number of operational research studies focusing on WASH have been launched but further follow-up is needed for publication in peer reviewed journals and translation into policy. This can be improved through further collaboration with academic institutes and in close collaboration with LuxOR.
- The need for an intersectional Water, Hygiene and Sanitation Policy Paper is required and requested by the medical directors.

PROSPECTS FOR 2016

- Translate the formalized and clear ambition to increase the role of WASH in the MSF movement in 2016 into a concrete plan.
- To ensure the experienced WASH coordinators will be available more frequently in relevant countries. The emergency strategy should be expanded with increased focus on WASH (e.g. drilling machine) to enable broadening of WASH activities in emergencies. This in turn will facilitate the hand-over to other agencies (e.g. easier to transfer hand pumps maintenance than water trucking activities); the perspective of an easy exit strategy will lower the threshold to engage in WASH activities. Operational targets and process indicators will be defined to follow-up on the process. The WASH unit will be reinforced to augment their proximity to emergencies and to deal with the expected increase of recruitment, pool management and training.
- In practice, the focus will be on improving monitoring of WASH in MSF supported infrastructures; WASH involvement in emergencies; and following up 2-3 projects in both rural and urban contexts with recurrent health risk or within projects by choice, with potential OR, innovation and advocacy opportunities.
- The operational agenda for 2016 is interesting with new tools addressing the increasing burden of diseases such as dengue fever and Zika which are gradually coming into the spotlight of the international community. Attention will be given to lobby for approaches addressing highly contagious airborne diseases or hazardous waste that is increasingly difficult to manage due to the complex and toxic nature of the molecules involved in diagnostic test.

- The high level of technical support to the field on all WASH issues will be maintained, and the systematic scanning of WASH needs in projects, feeding into the Annual Review of Operations process, will continue. Particular attention will be devoted to the improved information flow between headquarters and the field, improved knowledge and skills both at headquarters and field levels through intersectional WASH trainings, and further roll-out of innovative tools. Additionally, the unit will attempt to influence the WASH agenda and strategies of other actors in the field through increased sharing of the MSF experience through different communication channels (including conferences, peer-reviewed literature, etc.).

MSF - OPERATIONAL CENTRE BRUSSELS - **MEDICAL DEPARTMENT**

OCB MEDICAL ACTIVITY

ANNEX OF TABLES AND DATA

**MSF-OCB - BELGIUM - BRAZIL - DENMARK - HONG KONG - ITALY - LUXEMBOURG -
NORWAY - SOUTH AFRICA - SWEDEN**

CONTENTS

	PAGES
SECTION 9: HEALTH INFORMATICS	
TABLE 1: MSF – OCB Global Summary of Outpatient and Inpatient data using Epicentre OPD/IPD/Gynobs Tools in 2015	87
SECTION 10: HEALTH PROMOTION AND SOCIO-ANTHROPOLOGY	
TABLE 1: OCB emergency interventions with HP activities, 2015	88
TABLE 2: OCB projects with HP/anthropological activities, 2015	88
SECTION 13: INTENSIVE CARE	
TABLE 2: OCB ICU activities in Afghanistan and Haiti, 2015	90
SECTION 14: LABORATORY	
TABLE 1: OCB laboratory activities, 2015	91
SECTION 16: MENTAL HEALTH	
TABLE 1: OCB MH activities in emergency/short term interventions, 2015	92
TABLE 2: MH activities integrated into OCB medical projects, 2015	93
SECTION 17: NUTRITION	
TABLE 3: OCB therapeutic feeding programmes in 2015 by project	95
SECTION 18: OPERATIONAL RESEARCH AND DOCUMENTATION	
List of OCB-Supported Scientific Publications, 2015	96
SECTION 22: SURGICAL ACTIVITIES	
TABLE 1: Overview of OCB surgical activities per project, 2015	100

SECTION 09:

HEALTH INFORMATICS

TABLE 1: MSF – OCB Global Summary of Outpatient and Inpatient data using Epicentre OPD/IPD/Gynobs Tools in 2015

Countries	CAR	DRC	Haiti	Kenya	Lebanon	Niger	Total
N° of Consultations	50,911	67,208	61,650	34,568	NA	17,070	231,407
New cases	48,730	59,440	50,167	33,058	NA	16,396	207,791
N° of <5 yrs	18,810	22,348	7,324	12,111	NA	16,396	76,989
N° of IPD	22,488	3,350	1,437	NA	NA	7,598	34,873
<5 yrs	8,921	2,494	1,023	NA	NA	7,598	20,036
Exits	22,426	3,293	1,374	NA	NA	7,335	34,428
Discharged %	98.8	91.6	93.8	NA	NA	95.6	97.3
Defaulters %	0.4	1.2	4.6	NA	NA	0.6	0.7
Deaths %	0.8	7.4	1.6	NA	NA	3.5	2
N° of ANC	NA	NA	NA	9,543	18,815	NA	28,318
N° of deliveries	NA	446	NA	2,469	1,527	NA	4,442
C. sections %	NA	13.9	NA	NA	NA	NA	1.4
N° of Family Planning	NA	46	NA	9,218	4,186	NA	13,450

NA: Data not available

SECTION 10:

HEALTH PROMOTION AND SOCIO-ANTHROPOLOGY

TABLE 1: OCB emergency interventions with HP activities, 2015

Country	Emergency in 2015	Type of HP activities
Guinea	Conakry – Ebola	<ul style="list-style-type: none"> - Promotion of MSF services through testimony of survivors - Health education on Ebola in the EMC and community - Continuous cultural assessment of the context - Continuous adaptation of core messages and tools - Support to the opening of a new EMC
	Forecariah - Ebola	<ul style="list-style-type: none"> - Health education on Ebola in the community - Continuous cultural assessment of the context - Continuous adaptation of core messages and tools - Cooperation with other actors on the ground
Lebanon	Beirut	<ul style="list-style-type: none"> - HP support for refugees in Shatila (three refugee camps): Hygiene promotion sessions in PHC, health therapeutic education session for diabetes and epilepsy, mapping & community networking - HP support in the South project: hygiene promotion, security risk analysis, crowd control, awareness session on mental health
Indonesia	Aceh	<ul style="list-style-type: none"> - Hygiene promotion in camp setting
Madagascar		<ul style="list-style-type: none"> - Nutrition surveillance in the community - Community mobilisation for mobile clinics - Health education sessions on nutrition and vaccination - Adherence support for ATFC clients
Mozambique	Tete	<ul style="list-style-type: none"> - Community health education on cholera - Health education in CTC on cholera - Support to MoH in management of networks of community volunteers
Niger		<ul style="list-style-type: none"> - Health education and community mobilisation for meningitis vaccination
Greece	Lesbos	<ul style="list-style-type: none"> - Promotion of MSF medical services - Health and Hygiene awareness - Provision of information (geography, itinerary, border situations, regulations, etc.)
South Sudan	Gogrial	<ul style="list-style-type: none"> - Health promotion support during distribution of LLIN

TABLE 2: OCB projects with HP/anthropological activities, 2015

Country	Project	Key activities in 2015
Afghanistan	Helmand (OCA)	<ul style="list-style-type: none"> - Project under MSF Amsterdam, with support from the HP flying position - Health education on all relevant medical topics in the different services of the hospital and support to the mobile clinic - Specific support on blood donation: development of a leaflet and a short movie
	Kabul	<ul style="list-style-type: none"> - Health education on all relevant medical topics in the different services of the Ahmad Shah Baba Hospital (maternal health, nutrition, triage, blood donation, etc.) - Awareness raising on primary health care (including EPI) and preventive messages within the mobile clinics - Support different studies in the hospital and the mobile clinics: knowledge on MSF, mortality & birth spacing in maternity, and antibiotic resistance in OPD
	Kunduz	<ul style="list-style-type: none"> - Health education on personal and environmental hygiene, physiotherapy, and mental health - Development of adapted HP tools - Specific focus on blood donation and care takers rules
	Khost	<ul style="list-style-type: none"> - Health education on maternal and child health care with a special focus on breastfeeding, ANC, PNC and Kangaroo mother care
	Kandahar (OCA)	<ul style="list-style-type: none"> - Project under MSF Amsterdam, with support from the HP flying position - Reflection for design of TB project, HR set-up and needs regarding situation analysis
	Dasht-e-Barchi (DeB) (OCP)	<ul style="list-style-type: none"> - Project under MSF Paris, with support from the HP flying position - Starting up of HP activities (recruitment and training of the HP team) - Health education on maternal and child health care with a special focus on breastfeeding, ANC & PNC
Algeria	Annaba & Tamanrasset	<ul style="list-style-type: none"> - Organisation of a community workshop/ social mapping - Technical support to design and follow-up community activities, implemented by 2 local NGOs
Burundi	Gitega	<ul style="list-style-type: none"> - Support to the capitalisation of experiences on Health promotion and Community engagement

Cambodia	Preah Vihear	<ul style="list-style-type: none"> - Qualitative study on perception of TME project and explanation of low uptake of MDA - Empowering and strengthening of the Volunteer malaria workers network - Support for passive and active malaria detection - Social mobilization of the target population for the new prevalence survey
DRC	Masisi	<ul style="list-style-type: none"> - Health education on all relevant medical topics in the hospital, the two health centres and the mobile clinic - Specific focus on sexual violence & intensified vaccination activities - Support to various emergencies: measles vaccination, malaria in Nyabiondo, and cholera in Kasengy camp - Conduct a qualitative study on perception of family planning
	Bikengue	<ul style="list-style-type: none"> - Anthropological study on health seeking behaviour and community dynamics - Set-up of the HP team and start of activities
	Kinshasa PUC	<ul style="list-style-type: none"> - Support for most of the assessments and interventions related to malaria, measles, vaccination, IDP's, nutrition, cholera, yellow fever, typhoid fever and haemorrhagic fever all over DRC (Bolomba, Tembo, Maniema, Boende, etc.)
	Kinshasa Coordination	<ul style="list-style-type: none"> - Work on HP monitoring indicators and database - Routine HP activities - 5 day Health promotion training for in-country HP supervisors and HPs
Egypt	Migrants in Cairo	<ul style="list-style-type: none"> - Awareness and promotion of the service activities in standby during the move of the clinic to the Maadi area - Mapping of the different migrant communities in Cairo - Support during the opening of the new clinic - Redefining the HP activities and messages to support changes in the project
Haiti	Martissant & Tabarre	<ul style="list-style-type: none"> - Ongoing HP activities - Discussion on reorientation of HP activities for Martissant project
India	Chhattisgarh	<ul style="list-style-type: none"> - HP activities supporting all the medical activities in the different health facilities and catchment areas: PHC, malaria, nutrition, tuberculosis, maternal health, etc. - Intersectional Health promotion training for India teams - Anthropological study into health seeking behaviour and perception of MSF health care services
Niger	Guidan Roudji	<ul style="list-style-type: none"> - HP activities in the community: nutrition and tuberculosis defaulter tracing, community meetings, individual interviews of patients lost to follow up - HP activities in ATFC: health talks, appetite tests, individual interviews, reference briefings, referral briefings - HP activities in ITFC: specific support on routine vaccination, health talks, television spots, recreational activities, cooking demonstrations, counselling - Preparation for closing of project
Mauritania	Bassikounou	<ul style="list-style-type: none"> - Promotion of MSF services in camps and among the local population - Health education inside the health facilities on primary health care, ante & postnatal care, nutrition, family planning, water hygiene & sanitation, vaccinations, cholera, malaria - Health surveillance (mortality, pregnancy, nutrition screening, etc.) and health awareness raising in the camps
Pakistan	Timurgara	<ul style="list-style-type: none"> - HP activities in the hospital to support all relevant medical topics: hygiene, maternal health, diabetes, etc. - Introduction of new HP monitoring indicator - Specific focus on use & overuse of oxytocin - Community HP on dengue - Support to distribution of NFIs during earthquake
	Karachi	<ul style="list-style-type: none"> - HP activities in the community: promotion of the services targeting specific communities and specific HP sessions - HP activities in the clinic to support all relevant medical topics: PHC, maternal health care, information on MSF - Support to the measles vaccination campaign in Machar colony through awareness sessions and social mobilization
	Bajaur	<ul style="list-style-type: none"> - Training of new community health worker - Health education sessions in the health facility
Sierra Leone	Kenema	<ul style="list-style-type: none"> - Qualitative and quantitative assessment of impact of Ebola on use of health facilities and knowledge on 3 killer diseases - Health promotion activities in 2 chiefdoms in Kenema on key child diseases - Proposal for HP strategy for future project in Kenema district
Central African Republic	Bangui	<ul style="list-style-type: none"> - Promotion of MSF services - Networking with community leaders and social mapping of associations and other actors - Health surveillance in the camps: mortality, nutrition, etc. - Health education on all relevant medical topics (malaria, measles, SRH, nutrition, etc.) in the hospital, the health posts and the camps & the host community
	Bangassou	<ul style="list-style-type: none"> - Health education activities in the hospital and in the community on malaria, hygiene, SRH and blood donation
Zimbabwe	Mbare (SGBV)	<ul style="list-style-type: none"> - Special focus on health promotion activities carried out in the Mbare hostels to increase awareness on sexual violence amongst adults - Support the decentralization of SV services to other polyclinics in the city
South Africa	Rustenburg (SGBV)	<ul style="list-style-type: none"> - Community assessment on perceptions on sexual violence

ANC: Antenatal care; **ATFC:** Ambulatory therapeutic feeding centre; **CTC:** Cholera Treatment Centre; **EMC:** Ebola Management Centre; **EPI:** Extended Programme on Immunisation; **HP:** Health Promotion; **HR:** Human Resource; **IDP:** Internally Displaced Persons; **IPD:** Inpatient Department; **ITF:** Intensive therapeutic feeding centre; **LLIN:** Long-lasting insecticide treated net; **MDA:** Mass Drug Administration; **MoH:** Ministry of Health; **NFI:** Non Food Items; **NGO:** Non-Governmental Organization; **OPD:** Outpatient Department; **PHC:** Primary health care; **PNC:** Post-natal care; **PUC:** Pool d'Urgence Congo; **SGBV:** Sexual and gender-based violence; **SRH:** Sexual and Reproductive health; **SV:** Sexual violence; **TME:** Total Malaria Elimination

SECTION 13:

INTENSIVE CARE

TABLE 2: OCB ICU activities in Afghanistan and Haiti, 2015

ICU 2015		Jan	Feb	March	April	May	June	July	Aug	Sep ¹	Oct	Nov	Dec	Total
Admissions														
Kunduz		36	29	50	52	58	38	45	36	25	ND	-	-	369
Tabarre		40	45	48	46	51	43	32	51	42	42	40	52	532
Mortality														
Kunduz	N°	9	4	6	9	4	5	10	5	ND	ND	-	-	52
	%	25.0	13.8	12.0	17.3	6.9	13.2	22.2	13.9	ND	ND	-	-	14.1
Tabarre	N°	4	6	10	7	5	11	0	7	7	3	7	ND	67
	%	10.0	13.3	20.8	15.2	9.8	25.6	0.0	13.7	16.7	7.1	17.5	ND	12.6
Bed occupancy rate (%)														
Kunduz (7 beds)²		47	67	67	87	80	95	98	91	ND	ND	-	-	66
Tabarre (9 beds)		62	73	72	64	86	85	84	63	77	67	69	137	78
Average length of stay (days)														
Kunduz		2.9	4.1	3.2	3.6	2.9	5.1	5.0	5.1	6.7	ND	-	-	4.1
Tabarre		4.4	4.2	4.3	3.9	4.8	5.1	6.5	3.8	4.7	4.7	4.8	6.8	4.9

ICU: intensive care unit; **ND**: no data available¹ Data for Kunduz Trauma Centre is only available until 18/09/2015; further data was lost due to the US air force attack on the 03/10/2015.² The number of beds was increased during the year from 5 to 8; we have considered 7 as a mean number of beds for this calculation

SECTION 14:

LABORATORY

TABLE 1: OCB laboratory activities, 2015

Country	Project	No. of Labs	HIV & TB	Transfusions (only)	Hospital (transfusions included)	Other	Project status
Algeria	Annaba	1	1				Ongoing
	Tamanrasset	1	1				Ongoing
DRC	Kinshasa	1	1				Ongoing
	Masisi	1			1		Ongoing
	Nyabiondo	1		1			Closed end 2015.
Burundi	Bujumbura	1		1			New
RCA	Bangassou	1			1		Ongoing
	Bangui	1	1				New
Kenya	Nairobi	1	1				Ongoing
Guinea	Conakry	1	1				Ongoing
	ETC-Conakry	1				EBOLA	Closed end 2015
South Sudan	Pibor	1			1		Ongoing
	Gogrial	1		1			Ongoing
Niger	Guidan Roumdji	1			1		Closing 2016
Haiti	Port-au-Prince	1			1	1 (Microbiology (referred))	Ongoing
Ukraine	Donetsk	1	1 (+MDR)				Closed end 2015
Zimbabwe	Birch. B.	1	1				Ongoing
	Gutu	1	1				Ongoing
	Harare */ NMRL	1	1				Ongoing
	Murambinda	1	1				Handed over
Malawi	Thyolo	1	1				Handed over
	Nsanje	1	1				Ongoing
LESOTHO	Roma	1	1				Closed
Mozambique	Maputo	1	1				Ongoing
	Tete	1	1				Ongoing
Afghanistan	Kabul	1			1		Ongoing
	Khost	1		1			Ongoing
	Kunduz	1			1	1 (microbiology)	Ongoing
Pakistan	Timurgara	1		1			Ongoing
Total Active LABORATORIES		29	16	6	7	3	

ANC: Antenatal Care; DRC: Democratic Republic of Congo; HAT: Human African Trypanosomiasis; MDR-TB: multidrug resistant tuberculosis; TB: tuberculosis.

*: support to various actors

SECTION 16:

MENTAL HEALTH

TABLE 1: OCB MH activities in emergency/short term interventions, 2015

Country	Project	Type of activities	No of new patients	No. individual consultations ¹	No. group sessions
Guinea	Conakry	MH and psychosocial support to patients affected by Ebola, their family and community (ETC and home)	841	3,611	ND
	Gueckedou	MH and psychosocial support to patients affected by Ebola, their family and community (ETC and home) –closed end of March	29	178	15 (57)
Liberia	Monrovia	MH and psychosocial support to patients affected by Ebola, their family and community (ETC and home) –closed end of April	ND	2,603	36 (286)
	Monrovia	MH support for Ebola survivors and their families	ND	716	NA
Nepal	Earthquake	Psychosocial support to individual, families and groups affected by the earthquake	ND	ND	71
	Sanga	Technical support of the MH team within local rehabilitation centre treating injured people from earthquake/ MH care for patients and their families (May to Nov)	99	285	161 (1991)
South Africa	Durban	Mental health and psychosocial support to foreign nationals displaced in camps due to xenophobic attacks	ND	113	259
Italy	Sicily	Psychological First Aid project for the survivors of shipwrecks/ accidents in the main landing ports and Reception Centers of Sicily, Calabria, Puglia and Lampedusa island (May-Oct= 15 interventions)	ND	960	ND (2,450 people assisted)
Belgium	Brussels	Technical support to MDM (Médecins du Monde) for the implementation of MH activities in the transitory camp for newly arrived migrants	NA	NA	NA

¹ Not including HIV counselling sessions

IPD: inpatient department; OPD: outpatient department; IDP: internally displaced persons; MH: mental health; ATFC: ambulatory therapeutic feeding centre; SW: social worker; ND: No data available; NA: Not applicable; ETC: Ebola treatment centre

TABLE 2: MH activities integrated into OCB medical projects, 2015

Country	Project	Type of activities	No. of new patients	Total no. individual consultations ¹	No. group sessions
NEW MH ACTIVITIES					
Italy	Roma	Care for victims of torture (mainly migrants) - including psychological and psychiatric care (opened in Oct)	27	117	NA
Greece	Eidomeni	Psychosocial and psychological support for migrants in transit	248	279	813 (13,961)
	Kos	Psychosocial and psychological support for migrants in transit	161	212	526 (4,101)
	Leros	Psychosocial and psychological support for migrants in transit	78	92	300 (1,697)
	Lesbos	Psychosocial and psychological support for migrants in transit	208	222	441 (2,888)
Serbia	Precevo	Psychosocial and psychological support for migrants in transit	331	152	205 (1,857 persons for the 3 locations)
	Sid	Psychosocial and psychological support for migrants in transit	ND	109	105
	Belgrade	Psychosocial and psychological support for migrants in transit	ND	53	96
Ukraine	Dnepropetrovsk	Psychological and psychiatric support of MDR-TB/HIV patients in prison	ND	ND	ND
Sierra Leone	Freetown	Psychological support for the Ebola survivors and their family	140	239	NA
Indonesia	Aceh Langsa	Psychosocial support for Royingas migrants from Myanmar in refugee camps (started in Sept)	128	241	30 (219)
	Aceh Lhokseumawe	Psychosocial support for Royingas migrants from Myanmar in refugee camps (started in Sept)	52	60	22
Malawi	Blantyre	Psychiatric care for inmates in the prison of Maula	ND	83	NA
DRC	Bili	Psychological support integrated to medical activities (OPD/IPD/Mobile clinics) for refugees from CAR and local population	788	1,556	NA
South Africa	Rustenburg	Mental health support to survivors of sexual gender based violence	62	91	NA
ONGOING MH ACTIVITIES					
Italy	Sicile/Ragusa province	Screening and psychological support/referral for specialized care for asylum seekers in CAS (centre for reception and first aid)	1,052	327	69 (559)
Greece	Athens	Care for victims of torture (mainly migrants) - including psychological and psychiatric care			
Ukraine	Artemovsk	Psychological support for displaced people (individual and groups) and external training/capacity building for local resources (MH staff-non specialized professionals)	2,345	3,339	MH support groups 682 (5,713) External training 50 (720)
Egypt	Alexandria	Psychological support for Syrian refugees in detention centre	432	598	154
	Cairo	Psychological and psychiatric support for migrants from different communities across the city, and specific care for victims of sexual violence and torture/ill treatment	1,948	10,448	20
Pakistan	Karachi	MH support integrated into an OPD/hepatitis C project in an urban slum	1,543	2,704	134 (2,188)
	Timurgara	Psychological support integrated into the MSF medical services (postoperative care, emergency room, OPD and mother and child health)	3,731	4,559	Group counselling 44 (363) Psychoeducation 485 (7,008)
Afghanistan	Kunduz	Psychological support for patients and relatives at the MSF Trauma Centre	564	2,083	ND
Kenya	Kibera	SV care, integrated within the PHC			
	Kibera	MH support integrated within the PHC and HIV/TB consultations	337		NA
South Sudan	Doro	MH support to refugees from Blue Nile state (group and individual sessions) in MSF health facilities and in the community, with particular focus on the beneficiaries of nutritional activities	1,758	3,302	Health facilities: Psychostimulation 324 (6,939) Psychoeducation 1,225 (588,580 Community: Group discussions 232 (4,459) Family visits 70 51400) Psychoeducation 56 (1,148)
DRC	Masisi	Psychological support to victims of violence, including SV, integration of psychological support in the different medical departments (HGR, health posts and mobile clinics)	822	1,611	Therapeutic/discussion 18 (812) Psychoeducation 20 (1,600)
RCA	Bangui-Mpoko	Psychosocial and psychological support for displaced people in refugee camp	1,471	2,215	151 (10,939)
	Bangui-Castor	Psychological support to Sexual violence victims and women in need of psychological support	2,044	2,928	197
Zimbabwe	Murambinda, HIV project	Psychological support to victims of sexual, domestic or political violence provided by counsellors to the patients of the HIV cohort			

Zimbabwe	Mbare	Care of victims of sexual violence	1,361	2,319	NA
India	Mumbai	Psychological and psychiatric support for MDR-TB/3 rd line HIV patients			
Haiti	Tabarre	Psychological support and external referrals for specialized care in the MSF trauma centre	623	1,390	6 (31)
Lebanon	Beirut OPD	Psychological support in Shatila camp in PHC for Syrian refugees/vulnerable Lebanese	204	954	OPD: 145 (1,254) Community 21 (174)
	Beirut women center	Psychological support in Shatila camp in PHC for Syrian refugees/vulnerable Lebanese	131	470	NA
	South Lebanon	Psychological support for Syrian refugees/Iraqi refugees/vulnerable Lebanese/ (groups, family and individual sessions)	192	780	24 (290)
PROJECT CLOSURES					
Ukraine	Donetsk	Psychological support for displaced people and capacity building for local resources - closed beginning of August	1,036	1,592	MH support groups: 331 (3,808) External trainings: 15 (144)
	Lugansk	Psychological support for displaced people and capacity building for local resources - closed end of July	1,597	2,584	MH support groups: 532 (5,750) External trainings: 16 (343)
	Dnepropetrovsk	Training for MH professionals (packages of 2-days training)	NA	NA	6 (112)
	Donetsk	Psychological and psychiatric support of MDR-TB/HIV patients in prison	ND	ND	ND

¹ Not including HIV counselling sessions

OPD: Outpatient Department; **MoH:** Ministry of Health; **SV:** Sexual Violence; **PHC:** Primary Health Care; **TB:** Tuberculosis; **MDR-TB:** multidrug resistance tuberculosis; **SRH:** Sexual and Reproductive Health; **MH:** Mental Health; **ND:** No data available; **NA:** Not applicable; **OCA:** Operational Centre Amsterdam

SECTION 17:

NUTRITION

TABLE 3: OCB therapeutic feeding programmes in 2015 by project

Country	Project locations 2015	Number of patients	% hospitalised	% cured	% died	% defaulted	Remarks
Vertical Programmes / Emergencies							
DRC	Equateur (Bolomba)	940	5.0%	81.0%	0.3%	8.1%	9.8% discharged with ration at program closure
	Equateur (Nord Ubangui)	2,220	22.4%	71.0%	3.7%	19.7%	
Madagascar	Grand Sud (Androy - Anosy)	1,304	16.8%	47.7%	1.1%	6.5%	22% transfers to other NGO
Integrated Programmes							
Afghanistan	Kabul	360	41.4%	88.0%	0.6%	9.6%	
CAR	Bangassou / Ouango	181	100.0%	41.1% ¹	7%	0.0%	
DRC	Nord Kivu (Masisi)	1,719	41.5%	76.3%	0.1%	11.1%	mortality underestimated: majority of ITFC deaths reported in paediatric statistics
	Maniema (Bikenge)	284	46.1%	51.9%	5.5%	41.7%	
Kenya	Nairobi (Kibera)	490					
Mauritania	Hodh El Chargui (Bassikounou + Mbera and Fasala refugees camps)	588	36.6%				
Niger	Guidam Roumdji	8,198	39.0%	82.1%	6.3%	5.5%	Trim 1: 5 ATFC From Trim 2: 1 ATFC
Pakistan	Bajaur	146					
South Sudan	Gogrial	229	100.0%	62.5%	5.3%	8.3%	
	Jonglei (Pibor)	653	6.4%	77.3%	0.7%	19.6%	
	Maban (Doro)	1,376	18.8%	78.3%	2.7%	13.3%	
Targeted Supplementary Feeding Programmes (TSFP)							
Afghanistan	Kabul	119	ND	ND	ND	ND	ND
DRC	Nord Kivu (Masisi)	1,165	ND	ND	ND	ND	ND
	Maniema (Bikenge)	119	ND	ND	ND	ND	ND
Kenya	Nairobi (Kibera)	830	ND	ND	ND	ND	ND
Target and Selective Nutrition Programmes							
Afghanistan	Kabul	360					
DRC	Bandundu (Kinshasa)	ND					
	Nord Kivu (Masisi)	1,719					
	Maniema (Bikenge)	284	NA				
Kenya	Nairobi (Kibera)	5,513	NA				
South Sudan	Gogrial	229	NA				
	Jonglei (Pibor)	653	NA				
	Maban (Doro)	1,376	NA				= Family ration for ATFC beneficiaries

CAR: Central African Republic; DRC: Democratic Republic of Congo; ND: no data; NA: not applicable

¹ CAR: 41% cured + 52% stabilised = 93%

SECTION 18:

OPERATIONAL RESEARCH & DOCUMENTATION

List of OCB-Related Scientific Publications, 2015

A. OPERATIONAL RESEARCH

1. **State of the art:** Schopper D, Dawson A, Upshur R, Ahmad A, Jesani A, Ravineto R, et al. Innovations in research ethics governance in humanitarian settings. *BMC Med Ethics*. 2015;16:10. Epub 2015/04/19.
2. **Viewpoint:** Nagaraja SB, Menezes RG, Zachariah R, Wilson N. Ethics approval: a challenge for public health researchers in India. *Indian journal of medical ethics*. 2015;12(2):121-2. Epub 2015/04/30.
3. **Viewpoint:** Rusen ID, Harries AD, Zachariah R, Ramsay A. Capacity Building in Operational Research: More than One Way to Slice the Cake. *Frontiers in public health*. 2015;3:176. Epub 2015/07/29.
4. **Original research:** Guillemin N, Tayler-Smith K, Dar Berger S, Bissell K, Kumar AM, Ramsay A, et al. Research output after participants complete a Structured Operational Research and Training (SORT IT) course. *Public Health Action*. 2015;5(4):266-8. Epub 2016/01/15. **(SORT IT Course)**

B. HEALTH POLICY

5. **Viewpoint:** Phillips M, Derderian K. Health in the service of state-building in fragile and conflict affected contexts: an additional challenge in the medical-humanitarian environment. *Confl Health*. 2015;9:13. Epub 2015/04/24.
6. **Original research:** Kihara A-B, Harries AD, Bissell K, Kizito W, Van den Bergh R, Mueke S, et al. Antenatal care and pregnancy outcomes in a safe motherhood health voucher system in rural Kenya: 2007-2013. *Public Health Action*. 2015;5(1):23-9. **(SORT-IT course participant)**
7. **Original research:** Delamou A, Dubourg D, Beavogui AH, Delvaux T, Kolie JS, Barry TH, et al. How Has the Free Obstetric Care Policy Impacted Unmet Obstetric Need in a Rural Health District in Guinea? *PLoS One*. 2015;10(6):e0129162. Epub 2015/06/06. **(SORT-IT course participant)**
8. **Original research:** Sinanovic E, Ramma L, Vassall A, Azevedo V, Wilkinson L, Ndjeka N, et al. Impact of reduced hospitalisation on the cost of treatment for drug-resistant tuberculosis in South Africa. *Int J Tuberc Lung Dis*. 2015;19(2):172-8. Epub 2015/01/13.

C. HEALTH SYSTEMS & PROGRAMME MONITORING

9. **State of the art:** Harries AD, Kumar AM, Karpati A, Jahn A, Douglas GP, Gadabu OJ, et al. Monitoring treatment outcomes in patients with chronic disease: lessons from tuberculosis and HIV/AIDS care and treatment programmes. *Trop Med Int Health*. 2015;20(7):961-4. Epub 2015/03/18.
10. **Review:** Wilkinson LS, Skordis-Worrall J, Ajose O, Ford N. Self-transfer and mortality amongst adults lost to follow-up in ART programmes in low- and middle-income countries: systematic review and meta-analysis. *Trop Med Int Health*. 2015;20(3):365-79. Epub 2014/11/25.
11. **Viewpoint:** Grimsrud A, Wilkinson L, Cornell M. The Challenge of Retention Within Antiretroviral Treatment Programmes and the Need for Recent Data. *J Acquir Immune Defic Syndr*. 2015;70(1):e27. Epub 2015/06/04.
12. **Original research:** Ganga Devi NP, Ajay KM, Palanivel C, Sahu S, Selvaraj M, Valan AS, et al. Implementation and Operational Research: High Loss to Follow-up Among Children on Pre-ART Care Under National AIDS Program in Madurai, South India. *J Acquir Immune Defic Syndr*. 2015;69(3):e109-14. Epub 2015/07/17. **(SORT-IT course participant)**
13. **Original research:** Jatau B, Avong Y, Ogun-dahunsi O, Shah S, Tayler Smith K, Van den Bergh R, et al. Procurement and Supply Management System for MDR-TB in Nigeria: Are the Early Warning Targets for Drug Stock Outs and Over Stock of Drugs Being Achieved? *PLoS One*. 2015;10(6):e0128500. Epub 2015/06/23. **(SORT-IT course participant)**
14. **Original research:** Kerschberger B, Boule AM, Kranzer K, Hilderbrand K, Schomaker M, Coetzee D, et al. Superior virologic and treatment outcomes when viral load is measured at 3 months compared to 6 months on antiretroviral therapy. *J Int AIDS Soc*. 2015;18(1):20092. Epub 2015/09/26.
15. **Original research:** Philip S, Isaakidis P, Sagili KD, Meharunnisa A, Mrithyunjayan S, Kumar AM. "They know, they agree, but they don't do"--the paradox of tuberculosis case notification by private practitioners in Alappuzha district, Kerala, India. *PLoS One*. 2015;10(4):e0123286. Epub 2015/04/25.
16. **Original research:** Wilkinson L, Duvivier H, Patten G, Solomon S, Mdani L, Patel S, et al. Outcomes from the implementation of a counselling model supporting rapid antiretroviral treatment initiation in a primary healthcare clinic in Khayelitsha, South Africa. *S Afr J HIV Med*. 2015;16(1).

D. HIV

17. **State of the art:** Bernheimer JM, Patten G, Makeleni T, Mantangana N, Dumile N, Goemaere E, et al. Paediatric HIV treatment failure: a silent epidemic. *J Int AIDS Soc*. 2015;18(1):20090. Epub 2015/07/26.
18. **State of the art:** Nelson A, Maritz J, Giddy J, Frigati L, Rabie H, van Cutsem G, et al. HIV testing and antiretroviral therapy initiation at birth: views from a primary care setting in Khayelitsha. *S Afr J HIV Med*. 2015;16(1).
19. **Review:** Duncombe C, Rosenblum S, Hellmann N, Holmes C, Wilkinson L, Biot M, et al. Reframing HIV care: putting people at the centre of antiretroviral delivery. *Trop Med Int Health*. 2015;20(4):430-47. Epub 2015/01/15.
20. **Review:** Ford N, Stinson K, Gale H, Mills EJ, Stevens W, Perez Gonzalez M, et al. CD4 changes among virologically suppressed patients on antiretroviral therapy: a systematic review and meta-analysis. *J Int AIDS Soc*. 2015;18(1):20061. Epub 2015/08/11.
21. **Review:** Harries AD, Takarinda K, Zachariah R. *AIDS Review. Africa Health*. 2015;37(2):37-8.
22. **Viewpoint:** Campion EW. Treating millions for HIV--the adherence clubs of Khayelitsha. *N Engl J Med*. 2015;372(4):301-3. Epub 2015/01/22.
23. **Viewpoint:** Ellman T. Demedicalizing AIDS prevention and treatment in Africa. *N Engl J Med*. 2015;372(4):303-5. Epub 2015/01/22.
24. **Viewpoint:** Isaakidis P, Gupta S, Das M, Ferrer D, Nalinikanta R, Reid T, et al. HIV viral load messages should go viral in India. *The lancet HIV*. 2015;2(10):e414-5. Epub 2015/10/02.
25. **Original research:** Dlodlo RA, Hwalima ZE, Sithole S, Takarinda KC, Tayler-Smith K, Harries AD. Are HIV-positive presumptive tuberculosis patients without tuberculosis getting the care they need in Zimbabwe? *Public Health Action*. 2015;5(4):217-21. Epub 2016/01/15. **(SORT-IT course participant)**
26. **Original research:** Jobanputra K, Parker LA, Azih C, Okello V, Maphalala G, Kerschberger B, et al. Factors associated with virological failure and suppression after enhanced adherence counselling, in children, adolescents and adults on antiretroviral therapy for HIV in Swaziland. *PLoS One*. 2015;10(2):e0116144. Epub 2015/02/20. **(SORT-IT course participant)**
27. **Original research:** Phillips A, Shroufi A, Vojnov L, Cohn J, Roberts T, Ellman T, et al. Sustainable HIV treatment in Africa through viral-load-informed differentiated care. *Nature*. 2015;528(7580):S68-76. Epub 2015/12/04.
28. **Original research:** Shroufi A, Ndebele W, Nyathi M, Gunguwo H, Dixon M, Saint-Sauveur JF, et al. Risk of death among those awaiting treatment for HIV infection in Zimbabwe: adolescents are at particular risk. *J Int AIDS Soc*. 2015;18(1):19247. Epub 2015/02/26.
29. **Original research:** Teshome W, Belayneh M, Moges M, Endriyas M, Mekonnen E, Ayele S, et al. Who takes the medicine? Adherence to antiretroviral therapy in Southern Ethiopia. Patient preference and adherence. 2015;9:1531-7. Epub 2015/11/26. **(SORT-IT course participant)**
30. **Original research:** Vandendyck M, Motsamai M, Mubanga M, Makhakhe S, Tunggal S, Jonckheere S, et al. Community-based ART resulted in excellent retention and can leverage community empowerment in rural Lesotho, a mixed method study. *HIV/AIDS Res Treat Open J*. 2015;2(2):44-50.
31. **Original research:** Vogt F, Tayler-Smith K, Bernasconi A, Makondo E, Taziwa F, Moyo B, et al. Access to CD4 Testing for Rural HIV Patients: Findings from a Cohort Study in Zimbabwe. *PLoS One*. 2015;10(6):e0129166. Epub 2015/06/18. **(SORT-IT course participant)**
32. **Original research:** Vogt F, Ferreyra C, Bernasconi A, Ncube L, Taziwa F, Marange W, et al. Tracing defaulters in HIV prevention of mother-to-child transmission programmes through community health workers: results from a rural setting in Zimbabwe. *J Int AIDS Soc*. 2015;18:20022. Epub 2015/10/16.

33. Original research: Vogt F, Van den Bergh R, Bernasconi A, Moyo B, Havazvidi L, Bastard M, et al. Using BD Vacutainer CD4 Stabilization Tubes for Absolute Cluster of Differentiation Type 4 Cell Count Measurement on BD FacsCount and Partec Cyflow Cytometers: A Method Comparison Study from Zimbabwe. *PLoS One*. 2015;10(8):e0136537. Epub 2015/08/22.

E. HIV/TUBERCULOSIS CO-INFECTION

34. Review: Isaakidis P, Casas EC, Das M, Tseretopoulou X, Ntzeni EE, Ford N. Treatment outcomes for HIV and MDR-TB co-infected adults and children: systematic review and meta-analysis. *Int J Tuberc Lung Dis*. 2015;19(8):969-78. Epub 2015/07/15.

35. Viewpoint – comment on (34): Subbaraman R, Pai M. A killer combination that must be stopped. *Int J Tuberc Lung Dis*. 2015;19(8):877-8. Epub 2015/07/15.

36. Original research: Daniels JF, Khogali M, Mohr E, Cox V, Moyo S, Edginton M, et al. Time to ART Initiation among Patients Treated for Rifampicin-Resistant Tuberculosis in Khayelitsha, South Africa: Impact on Mortality and Treatment Success. *PLoS One*. 2015;10(11):e0142873. Epub 2015/11/12. **(SORT-IT course participant)**

37. Original research: Kanyerere H, Mganga A, Harries AD, Tayler-Smith K, Zachariah R, Jahn A, et al. Decline in adverse outcomes and death in tuberculosis patients in Malawi: association with HIV interventions. *Public Health Action*. 2015;5(2):116-8. Epub 2015/09/25. **(SORT-IT course participant)**

38. Original research: Kanyerere H, Harries AD, Tayler-Smith K, Jahn A, Zachariah R, Chimbwandira FM, et al. The rise and fall of tuberculosis in Malawi: associations with HIV infection and antiretroviral therapy. *Trop Med Int Health*. 2016;21(1):101-7. Epub 2015/10/29. **(SORT-IT course participant)**

39. Original research: Mohr E, Cox V, Wilkinson L, Moyo S, Hughes J, Daniels J, et al. Programmatic treatment outcomes in HIV-infected and uninfected drug-resistant TB patients in Khayelitsha, South Africa. *Trans R Soc Trop Med Hyg*. 2015;109(7):425-32. Epub 2015/05/17.

40. Original research: Owiti P, Zachariah R, Bissell K, Kumar AM, Diero L, Carter EJ, et al. Integrating tuberculosis and HIV services in rural Kenya: uptake and outcomes. *Public Health Action*. 2015;5(1):36-44. Epub 2015/09/25. **(SORT-IT course participant)**

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F. TUBERCULOSIS (INCLUDING DRUG-RESISTANT TUBERCULOSIS)

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- ## J. NUTRITION
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- ## K. NON-COMMUNICABLE DISEASES
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- M. SEXUAL AND REPRODUCTIVE HEALTH**
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- 117.Original research:** Dogra V, Khanna R, Jain A, Kumar AM, Shewade HD, Majumdar SS. Neo-natal mortality in India's rural poor: Findings of a household survey and verbal autopsy study in Rajasthan, Bihar and Odisha. *Journal of tropical pediatrics*. 2015;61(3):210-4. Epub 2015/04/01. (SORT-IT course participant)
- 118.Original research:** Groen RS, Trelles M, Ca-luwaerts S, Papillon-Smith J, Noor S, Qudisia B, et al. A cross-sectional study of indications for cesarean deliveries in Medecins Sans Frontieres facilities across 17 countries. *Int J Gynaecol Ob-stet*. 2015;129(3):231-5. Epub 2015/03/17.
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N. SURGERY, ANAESTHESIA & EMERGENCY DEPARTMENT

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- 121.Original research:** Flynn-O'Brien KT, Trelles M, Dominguez L, Hassani GH, Akemani C, Naseer A, et al. Surgery for children in low-income countries affected by humanitarian emergencies from 2008 to 2014: The Medecins Sans Frontieres Opera-tions Centre Brussels experience. *Journal of pedi-atric surgery*. 2015. Epub 2015/10/12.
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- 123.Original research:** Sharma D, Hayman K, Stewart BT, Dominguez L, Trelles M, Saqeb S, et al. Care of surgical infections by Medecins Sans Frontieres Operations Centre Brussels in 2008-14. *Lancet*. 2015;385 Suppl 2:S31. Epub 2015/08/28.

- 124.Original research:** Stewart B, Wong E, Papillon-Smith J, Trelles Centurion MA, Dominguez L, Ao S, et al. An Analysis of Cesarean Section and Emergency Hernia Ratios as Markers of Surgi-cal Capacity in Low-Income Countries Affected by Humanitarian Emergencies from 2008 - 2014 at Medecins sans Frontieres Operations Centre Brussels Projects. *PLoS currents*. 2015;7. Epub 2015/04/24.
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- 127.Original research:** Wong EG, Trelles M, Domini-guez L, Mupenda Mwana J, Kasonga Tshibangu C, Haq Saqeb S, et al. Operative procedures in the elderly in low-resource settings: a review of Medecins Sans Frontieres facilities. *World J Surg*. 2015;39(3):652-7. Epub 2014/12/03.
- O. CONFLICTS & HUMANITARIAN EMERGENCIES**
- 128.Original research:** Alvarado O, Trelles M, Tayler-Smith K, Joseph H, Gesline R, Wilna TE, et al. Or-thopaedic surgery in natural disaster and conflict settings: how can quality care be ensured? Inter-national orthopaedics. 2015. Epub 2015/05/15.
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P. MEDICAL EQUIPMENT

- 130.Original research:** Fajardo E, Metcalf C, Piriou E, Gueguen M, Maman D, Chaillet P, et al. Er-rors generated by a point-of-care CD4+ T-lym-phocyte analyser: a retrospective observational study in nine countries. *Bull World Health Organ*. 2015;93(9):623-30. Epub 2015/10/20.
- 131.Original research:** Wright V, Dalwai M, Smith RV, Jemmy JP. Medecins Sans Frontieres' Clinical Guidance mobile application: analysis of a new electronic health tool. *Public Health Action*. 2015;5(4):205-8. Epub 2016/01/15.

SECTION 22:

SURGICAL ACTIVITIES

TABLE 1: Overview of OCB surgical activities per project, 2015

Mission		AFG	AFG	AFG	BDI	BDI	CAF	CAF
Project		Kabul	Khost	Kunduz	Bujumbura	Gitega	Bangassou	Castors
Patients	number	1,166	713	1,664	262	114	967	1,224
Cases	number	1,195	729	3,462	873	168	1,611	1,344
Procedures	number	1,241	846	4,889	941	176	1,618	1,406
Mean Age	years	26	31	24	31	32	27	25
Female	%	66.0	100.0	13.1	10.3	100.0	52.8	100.0
All trauma	%	4.4	0.0	99.9	100.0	0.9	13.3	0.1
Violent trauma	%	2.0	0.0	47.5	95.4	0.9	1.8	0.1
Caesarean section	%	38.3	77.7	0.0	0.0	0.0	14.3	67.4
Post-op infection	%	0.9	0.7	10.2	ND	5.3	ND	ND
Primary interventions	%	97.6	97.8	48.1	30.0	67.9	60.0	91.1
Emergent cases	%	91.6	100.0	100.0	100.0	0.6	92.2	100.0
Minor / wound surgery	%	8.2	0.4	60.8	87.4	4.8	65.6	9.2
Spinal anaesthesia	%	77.5	68.3	19.6	10.5	91.1	15.8	37.8
Spinal procedure / C-section	%	97.3	85.9	NA	NA	NA	66.7	61.6
Intraoperative mortality	%	0.2	0.5	0.3	0.6	0.0	0.1	0.1
Occupancy rate	minutes/ day	272	150	881	254	91	209	223

NA: not applicable; ND: no data; spinal procedure: spinal and combined anaesthesia; *: Indirect activities
AFG: Afghanistan; BDI: Burundi; CAF: Central African Republic; COD: Democratic Republic of Congo; HTI: Haiti; MRT: Mauritania; NPL: Nepal; PAK: Pakistan;
SSD: South Sudan

COD	COD	COD	COD	HTI	MRT	NPL	PAK	SSD
Bikenge	Bili	Masisi	Nyabiondo (*)	Tabarre	Bassikounou	Charikot	Timurgara	Gogrial
281	255	2,224	200	3,129	278	70	1,129	95
300	338	3,400	200	6,409	324	89	1,162	98
322	363	3,572	200	7,980	327	89	1,304	104
23	28	25	23	28	24	28	33	23
74.7	54.9	79.1	89.5	26.3	73.0	67.1	100.0	63.2
4.6	13.7	15.5	4.0	92.3	19.0	24.3	0.3	27.4
0.0	2.7	3.5	1.5	23.9	1.8	0.0	0.0	17.9
42.7	25.1	56.3	72.5	0.0	43.5	52.9	87.5	45.3
2.8	ND	1.4	ND	4.2	ND	ND	0.5	ND
93.7	75.4	65.4	100.0	48.8	85.8	78.7	97.2	96.9
97.0	82.8	96.1	100.0	100.0	100.0	100.0	100.0	100.0
27.0	27.0	50.9	22.5	49.4	43.5	40.4	1.2	14.2
33.7	34.0	36.9	68.5	22.7	40.4	51.7	79.9	43.9
70.8	37.5	90.5	91.7	NA	88.4	97.3	88.5	88.4
0.0	0.3	0.1	0.0	0.3	0.0	1.1	0.5	2.0
69	57	490	26	1509	61	45	192	24



OCB Medical Activity Report 2015

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