



MSF - OPERATIONAL CENTRE BRUSSELS - MEDICAL DEPARTMENT

OCB MEDICAL ACTIVITY REPORT 2013

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OCB Medical Activity Report 2013

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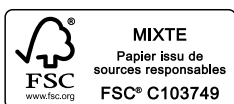
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CONTENTS

	PAGES
01. INTRODUCTION	7
02. EXECUTIVE SUMMARY	9
03. LIST OF ABBREVIATIONS	11
04. A YEAR IN SNAPSHOTS	12
05. MEDICAL DATA	15
06. BIOMEDICAL EQUIPMENT	17
07. EMERGENCY MEDICINE	19
08. EMERGENCY UNIT	22
09. EPIDEMIOLOGY/EPICENTRE	28
10. EVALUATION UNIT	31
11. HEALTH INFORMATICS	32
12. HEALTH PROMOTION AND SOCIO-ANTHROPOLOGY	34
13. HIV/AIDS AND TUBERCULOSIS	36
14. INFECTION CONTROL	43
15. INTENSIVE CARE	45
16. LABORATORY	47
17. MALARIA	49
18. MEDICAL STRUCTURES - INPATIENT DEPARTMENT	52
19. MENTAL HEALTH	55
20. NUTRITION	58
21. OPERATIONAL RESEARCH AND DOCUMENTATION	62
22. PAEDIATRIC CARE	66
23. PHARMACY	71
24. SEXUAL AND REPRODUCTIVE HEALTH	77
25. SURGICAL ACTIVITIES	82
26. VACCINATION	86
27. WATER, HYGIENE AND SANITATION	89
28. ANNEX OF TABLES AND DATA	93



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 sixth edition of the OCB Medical Activity Report, which provides an overview of the 22 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 2013, Médecins Sans Frontières – Operational Centre Brussels (OCB) was involved in 32 missions with a medical component, comprising 78 projects. Overall, there were 1,806,530 consultations in the outpatient department (OPD) and 127,936 admissions to the inpatient department (IPD).

Major emergency interventions included assistance to internally displaced persons, refugees and war wounded (in Syria, Mali, Mauritania and South Sudan) and assistance following the cyclone in the Philippines. 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:

32,569 new HIV patients initiated on antiretroviral therapy (ART)

214,505 confirmed malaria cases

34,941 with severe acute malnutrition

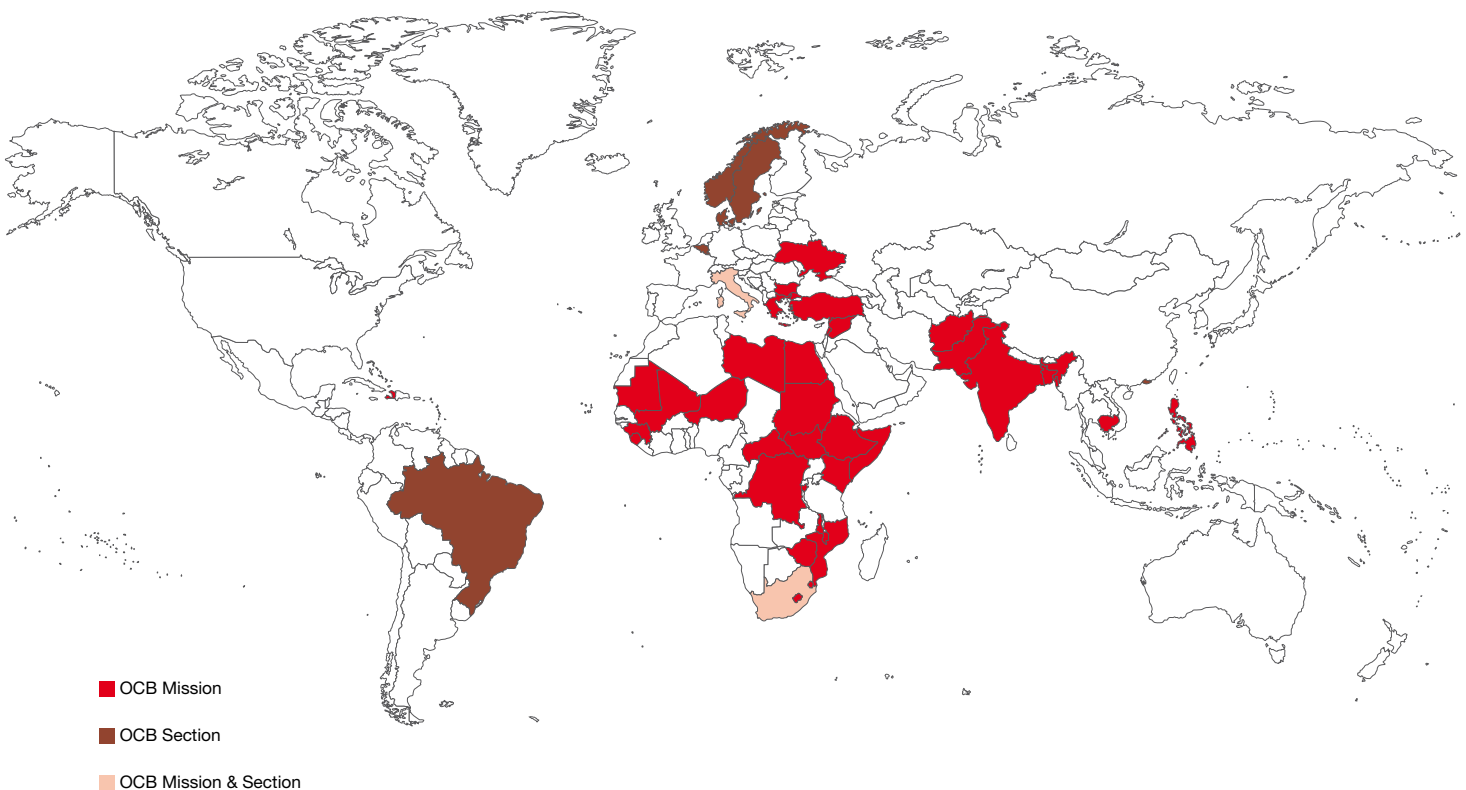
52,525 deliveries

14,199 new surgical cases

210,591 emergency department (ED) consultations

530,226 individuals vaccinated for measles during outbreaks

Figure: Global OCB sections and missions, 2013



1. YEAR IN REVIEW

2013 saw an increase in OCB medical activities across a number of domains including HIV, TB, surgery, intensive care, vaccination, health promotion (HP) and mental health (MH), whilst other domains such as laboratory, nutrition, sexual and reproductive health (SRH), malaria, paediatrics and emergency medicine noted reductions in their activities. The latter was generally due to project closures or handovers.

Considerable progress was made in relation to certain operational priorities, notably an increase in the volume and scope of surgical activities, rationalisation and focusing of hospital care, improved quality of life-saving medical services, increased capacity to respond to acute emergencies - including emergencies related to acute conflict - and successful pursuit of a series of particular public health and political objectives in the field of HIV and TB, including drug resistant TB.

Innovations included the deployment of MH activities in a number of new fields including care for victims of torture/ill treatment and care for epileptic patients; preparation of a malaria project in Cambodia involving a Targeted Malaria Elimination component; introduction of microbiology technology for the detection of antibiotic resistance; expansion of community based models of antiretroviral therapy (ART) delivery to improve retention in care; scale up of routine viral load monitoring in most OCB projects; further 'roll out' of rapid molecular testing for TB and drug resistance (Xpert MTB/RIF); and implementation of human papillomavirus (HPV) screening for HIV positive women at antenatal care (ANC).

Efforts to standardise the quality of care and ensure a minimum standard across the spectrum of OCB projects continued to improve: a growing number of projects were following the basic infection control recommendations; 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 requirements (WHS) were respected in established missions; more projects with an emergency department were successfully using the South African Triage Scale (SATS); basic levels of care in the three OCB-supported intensive care units were achieved; standardisation of the

essential medicines lists and matching overall needs with procurement forecasts at the central level by MSF Supply was achieved; and annual medical forecasts and order chronograms were pooled for all missions allowing anticipation of global needs and facilitating the medical procurement flow. Finally, there was better implementation of various activities such as the HIV minimum care package in projects with HIV prevalence <1 %, Prevention-of-Mother-To-Child-Transmission (PMTCT), psychiatric care in medical activities and the Ante-natal Care (ANC) package at the start of projects.

At the level of data monitoring and evaluation, the in-house data collection system MINOS (Medical Information Network for Operational support) was rolled out further, and by the end of the year accounted for 31% of all OPD data and 18% of all IPD data. Overall, there seemed to be a stronger level of commitment towards quality of data collection and a more proactive mindset towards utilising routine data to identify knowledge and implementation gaps in OCB programs. For example the analysis of missed vaccination opportunities in various projects can be used as a means to respond to gaps in routine vaccination activities. 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 antibiotic resistance, neonatology and migrant health. OCB in collaboration with Epicentre and partners continued to contribute to an extensive profile of clinical and operational research in vaccine preventable diseases, nutrition, HIV 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. Infection Control (IC), HP and MH integration in medical activities; and between different MSF sections. Many domains now have intersectional working groups and there are a large number of intersectional trainings.

2. CHALLENGES AND PROSPECTS

Many of the challenges encountered over 2013 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. 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 2014 are exciting. Over the last few years, the reorientation of the OCB portfolio to larger, more specialised projects, particularly large hospital-based projects, has seen extensive investment in IPD capacity. Hospitalisation is essential and life-saving but IPD facilities are often heavy to manage and tend to absorb a lot of the attention of field teams, often to the detriment of care for the surrounding communities. Thus, while OCB will sustain its ambition of investing in IPD capacity, 2014 aims 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 emergencies and in other areas such as sexual violence (active case finding), surgery (post-operative home care), HIV and Hepatitis C (community based chronic care), sexual and reproductive health (home-based postnatal care as a possible strategy for improving neonatal and maternal morbidity), and nutrition (community management of acute malnutrition).

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 to remain a watchdog for system failures), TB (with a particular focus on drug resistant TB) and hospital care. Furthermore, there will be a stronger emphasis on emergency responses and OCB interventions in conflict areas. Beyond these priority areas, other areas that will receive new

or ongoing attention are neonatology, vaccination, care for burns victims, care for victims of torture, interventions for displaced persons and those with hepatitis C. Alongside the technical and operational capacity that will be invested into these areas, operational research will play a substantive role in guiding the way that OCB tackles some of these areas.

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 pro-

jects 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
AIDS: Acquired Immune Deficiency Syndrome
ALSO: Advanced Life Support in Obstetrics
ANC: Antenatal Care
ARO: Annual Review of Operations
ART: Antiretroviral Therapy
ASB: Ahmad Shah Baba hospital
ATFC: Ambulatory Therapeutic Feeding Centre
BASIC DHS: Basic Assessment and Support of Seriously Ill Patients in Developing Healthcare Systems
BCG: Bacille Calmette-Guérin (TB vaccination)
BEmONC: Basic Emergency Obstetric and Neonatal Care
BLoC: Basic Logistics Courses
BraMU: Brazilian Medical Unit
CAR: Central African Republic
CDC: Centres for Disease Control
CEmONC: Comprehensive Emergency Obstetric and Neonatal Care
CFR: Case Fatality Rate
CMAM: Community Management of severe Acute Malnutrition
CPAP: Continuous Positive Airway Pressure
d4T: Stavudine
DBS: Dried Blood Spot
DPT: Diphtheria-Pertussis-Tetanus vaccine
DR-TB: Drug Resistant Tuberculosis
DRC: Democratic Republic of Congo
DST: Drug Susceptibility Testing
E-Unit: Emergency Unit
ED: Emergency Department
ELBW: Extremely Low Birth Weight
EML: Essential Medicine List
EPI: Expanded Programmes of Immunisation
Eprep: Emergency Preparedness
EP TB: Extrapulmonary Tuberculosis
ERB: Ethics Review Board
Explo: Exploratory Mission
FP: Family Planning
GAM: Global Acute Malnutrition
GAS: Gynaecology, Anaesthesia, Surgery
GDP: Good Distribution Practices
GRC: Gondama Referral Centre
HIV: Human Immunodeficiency Virus
HP: Health Promotion
HQ: Headquarters
HR: Human Resources
HTC: HIV Testing and Counselling

IC: Infection Control
ICU: Intensive Care Unit
IDP: Internally Displaced Persons
IM: Intramuscular
IPD: Inpatient Department
IPT: Isoniazid Preventive Therapy
ITC: International Technical Coordination
ITFC: Inpatient Therapeutic Feeding Centre
IV: Intravenous
KAP: Knowledge, Attitude and Practice
KPI: Key Performance Indicators
KZN: KwaZulu Natal
LCC: Logistics Coordinator Course
LN: Long-lasting insecticide-treated Nets
LRTI: Lower Respiratory Tract Infection
LTFU: Loss To Follow-Up
LuxOR: Luxembourg Operational Research
MAM: Moderate Acute Malnutrition
MCC: Medical Coordinator Course
MCI: Mass Casualty Incident
MDR: Multi-Drug Resistant
MedCo: Medical Coordinator
MH: Mental Health
MHS: Management of Health Services
MINOS: Medical Information Network for Operational Support
MIO: Mobile Implementation Officer
MoH: Ministry of Health
MRAC: Musée Royal d'Afrique Centrale
MSF: Médecins Sans Frontières
MUAC: Mid-Upper Arm Circumference
NA: Not Applicable
NCD: Non-Communicable Disease
ND: No Data
NDRA: National Drug Regulatory Authorities
NFI: Non-Food Item
NGO: Non-Governmental Organisation
NICD/NHLS: National Institute of Communicable Diseases/National Health Institute
NTP: National Tuberculosis Programme
OCA: Operational Centre Amsterdam
OCBA: Operational Centre Barcelona
OCB: Operational Centre Brussels
OCG: Operational Centre Geneva
OCP: Operational Centre Paris
OD: Operating Department
OPD: Outpatient Department
OPV: Oral Polio Vaccine
OR: Operational Research

OT: Operating Theatre
PCR: Polymerase Chain Reaction
PCV: Pneumococcal Vaccine
PEP: Post-Exposure Prophylaxis
PICC: Peripherally Inserted Central Catheters
PPD: Preparation for Primary Departure
PHC: Primary Health Care
PHU: Primary Health care Unit
PLW: Pregnant and Lactating Women
PLWHA: People Living With HIV/AIDS
PMTCT: Prevention of Mother-To-Child Transmission
PNC: Postnatal Care
POC: Point Of Care
PPD: Preparation for Primary Departure
PSP: Populations in Precarious Situations (course)
PUC: Pool d'Urgence Congo
RDT: Rapid Diagnostic Test
REPEPI: Responding to Epidemics (course)
RIC: Remaining In Care
RIF: Resistance to Rifampicin
RUTF: Ready to Use Therapeutic Food
SAGE: Surgery/orthopaedics, Anaesthesia/reanimation, Gynaecology/obstetrics, Emergency/intensive care
SAM: Severe Acute Malnutrition
SAMU: Southern African Medical Unit
SATS: South African Triage Score
SCD: Sickle Cell Disease
SEU: Stockholm Evaluation Unit
SGBV: Sexual and Gender-Based Violence
SFC: Supplementary Feeding Centre
SFP: Supplementary Feeding Programme
SOP: Standard Operating Procedure
SRH: Sexual and Reproductive Health
STI: Sexually Transmitted Infections
SV: Sexual Violence
TB: Tuberculosis
TDF: Tenofovir
TFP: Therapeutic Feeding Programme
TPR: Termination of Pregnancy on Request
UNICEF: United Nations Children's Fund
VHF: Viral Haemorrhagic Fever
VLBW: Very Low Birth Weight
WaSH: Water, Sanitation, and Hygiene
WatSan: Water and Sanitation
WFP: World Food Program
WHO: World Health Organisation
WHS: Water, Hygiene and Sanitation

A YEAR IN SNAPSHOTS

BIOMEDICAL EQUIPMENT

- The use of advanced medical equipment in OCB projects continued to increase leading to greater needs for technical support. This remained a challenge particularly following a reduction in the number of Mobile Implementation Officers from two to one during the year.
- By the end of 2013, the following missions had the minimum requirements in place to be able to manage their biomedical equipment: Democratic Republic of Congo (DRC), Haiti, Afghanistan, Pakistan, South Sudan, India, Sierra Leone, Somaliland and Burundi
- The biomedical unit has developed greater visibility and voice in MSF through biannual meetings, sharing of information, division of tasks, ensuring presence in medical working groups, and combining project visits with other units.

EMERGENCY MEDICINE

- For many patients, emergency medical care continued to serve as an important point of entry into OCB programmes: it was provided in 15 projects across 10 countries. In most projects, the emergency departments (EDs) were embedded in a hospital structure, while two acted as freestanding EDs.
- A total of 210,591 ED consultations were performed during 2013; the ED of Ahmad Shah Baba hospital (Kabul, Afghanistan) had the highest case load (52,416 consultations).
- The triage setup was strengthened in the EDs of OCB, and the South African Triage Scale (SATS) system, introduced in 2011, was analysed in a multi-centric study: results are expected in 2014.
- The standardised patient-level ED database was used in seven projects; standardisation between projects remained a challenge.

EMERGENCY UNIT

- In 2013, the E-Unit directly managed interventions in ten countries, supported the operational cells in the management of three emergencies, and conducted seven emergency preparedness interventions (Eprep).
- The largest interventions in terms of medical needs and HR/logistics/financial requirements were the provision of assistance to the displaced, refugees and general population in the Syrian conflict, the ongoing intervention in the Sahel (Mali and Mauritania) and the intervention for the displaced in Pibor county, South Sudan.
- Two major new interventions were the post-cyclone in the Philippines and an intervention in the conflict-affected Central African Republic (CAR).
- More than 260 departures for emergency missions were noted over the course of 2013; the specific task force for the management of the Syria intervention was maintained since 2012.

- Supply costs for emergency interventions amounted to € 4,510,930 over the course of 2013.

EPIDEMIOLOGY/EPICENTRE

- Epicentre conducted three field interventions in collaboration with OCB in Syria South Sudan and DRC.
- Clinical and operational research was conducted on vaccine preventable diseases (rotavirus, pneumococcal infections and measles), nutrition, HIV and malaria. In addition Epicentre was involved in a laboratory-based evaluation and was also invited to support the research agenda in OCB's Hepatitis C project in Egypt.
- A structured reflection of Epicentre's functioning, financial mechanisms, activities, impact, recognition of expertise and visibility was undertaken in order to identify innovative ways to improve Epicentre's work and communication.

EVALUATION UNIT

- The Stockholm Evaluation Unit (SEU) managed eight project evaluations and a number of lessons learned workshops and reviews. An extra full-time equivalent was added to the SEU to cope with the workload.
- The Intersectional Evaluation Day was held in Paris to showcase evaluation work across the movement.
- Training was done intersectionally – 24 staff were trained in Athens.
- Field involvement in the evaluations needs to be improved and will be a focus area for 2014.

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 data collection tools being used in OCB projects.
- The Epicentre data collection tool was used in 12 out of 15 missions where its use was indicated; MINOS was being used in four missions at the start of 2013 (Pakistan, South Sudan, Somaliland and Egypt), was introduced in Afghanistan during the year, and was installed/configured in DRC in preparation for its use in 2014.
- There is still scope to improve the quality of data collected in OCB projects, but the mindset towards data collection at a field level is much more positive and pro-active than before.
- As the need for more detailed reporting of MSF activities grows at all levels of the MSF movement, many of these needs are not effectively met using aggregate data that is collected in many projects.

HEALTH PROMOTION AND SOCIO-ANTHROPOLOGY

- Health promotion activities were provided in 28 projects, including four emergency interventions and 24 regular projects.
- There was an increase in the provision of anthropological support to projects which may reflect an increased awareness of the added value of anthropology and an increased interest in community-based approaches.
- Interest in community-based approaches is reflected in the MSF Prospects document 2014-2017, and as HP forms a core part of this type of strategy, going forwards there will thus be a strong focus on building up expertise in this domain.
- All MSF-sections became part of the HP Contact group, with a designated person identified in 2013 to be the focal point for regular contact group meetings; these provide a forum for the sharing of experiences and tools related to HP and anthropology.

HIV/AIDS AND TUBERCULOSIS

- OCB continued to invest in its large vertical programmes but progressively re-orientated its strategy to a "light approach".
- The main focus was on improving retention in care through community based models of antiretroviral therapy (ART) delivery, scaling up viral load monitoring, reinforcing PMTCT (with many countries adopting Option B or B+ for Prevention-of-Mother-To-Child-Transmission) and improving identification of HIV in infants.
- At the end of 2013, OCB was supporting HIV care and treatment in 17 projects across 10 countries, including 14 vertical HIV/TB projects.
- HIV testing was supported by OCB in seven projects, with almost 90,000 tests were performed.
- During the year 24,201 HIV patients and 6089 TB patients were newly registered in OCB-supported facilities.
- A total of 32,569 adults and children were initiated on ART – a marked increase since 2012, due largely to implementation of Option B+ for PMTCT in several projects at the end of 2012.
- A total of 2274 children were initiated on ART; by the end of the year, most OCB programs were initiating ART in HIV-infected children < 5 years regardless of CD4 count.
- Among adults on ART, retention in care ranged between 71% and 91%, with a target of 85%.
- TB treatment outcomes were variable: only two projects achieved the target treatment success rate of >85% for smear-positive pulmonary TB. Death rates exceeding the 10% target were observed in one project and treatment interruption rates > 10% were observed in another two.

Three projects had a treatment success rate >85% among smear-negative pulmonary TB and Extrapulmonary TB cases.

- A total of 536 patients were initiated on treatment for multidrug-resistant TB (MDR-TB) across 13 different OCB projects.

INFECTION CONTROL

- Infection control (IC) measures continued to be implemented to higher standards in response to the growing number of OCB projects that have intensive care units and more specialised surgical care.
- Extensive IC implementation efforts in the field, together with IC training and briefings at head-quarter level for staff going to the field were instrumental in raising IC awareness in OCB projects.
- A growing number of projects were following the basic IC recommendations by the end of 2013.
- The setting up of infection control committees and the recruitment and training of IC Officers was given greater priority in 2013.
- The successes of the internal fixation interventions in Haiti and Afghanistan have demonstrated that it is possible to implement high levels of hygiene in resource-poor settings.

INTENSIVE CARE

- The focus of OCB is to achieve a good standard of care in basic level Intensive Care Units (ICU).
- The three ICUs reporting data in 2012 (Kunduz, Afghanistan and Tabarre, Haiti and the Gondama Referral Centre (GRC), Sierra Leone) saw a total of 2,453 admissions over the course of the year.
- The Kunduz and Tabarre ICUs have performed well, despite the technical complexity of the care provided – the GRC ICU continued to face high mortality rates, though this is likely linked to the severe patient condition at presentation at the GRC.
- External training on management of the critically ill patient was provided; however, bedside training continues to play an essential role in achieving quality care standards.

LABORATORY

- During the year laboratory activities were supported in 28 projects in 17 countries; the major areas receiving laboratory support were HIV/TB, blood transfusion and hospital services.
- New laboratory activities were implemented in several projects such as the implementation of microbiology for the detection of antibiotic resistance in order to improve patient management, and the installation of more automated HIV viral load equipment.
- A new and simpler test for the diagnosis of cryptococcal disease - the CRAG lateral flow assay - was introduced in several HIV projects, replacing the more complex and more expensive test - the CRAG Fomouze. This will facilitate the systematic screening of cryptococcosis in immunocompromised HIV-infected individuals.

- Two studies from Malawi on HIV viral load monitoring were published

- Results of an operational research study on antibiotic resistance in Afghanistan at the Lashkar-Gah hospital in Helmand will be submitted for publication next year.

MALARIA

- A total of 391,823 RDTs were performed in OCB projects with positivity rates of $\geq 55\%$ in projects in Sierra Leone, DRC and South Sudan
- 214,505 confirmed malaria cases were treated in OCB projects – slightly less than in 2012; 80% of these cases were treated in four missions only: Sierra Leone, DRC, Niger and South Sudan.
- Half of all confirmed cases treated were children under-five years of age, 8% were severe malaria cases, and the highest burden of severe malaria was in the missions of Burundi, Sierra Leone and Niger.
- Adherence rates to ACT (fixed-dose-combinations) have improved but are still below target in OCB projects.
- Injectable artesunate has been successfully implemented in our projects and is confirmed to be feasible, effective and safe.
- Seasonal Malaria Chemoprevention (SMC) was successfully implemented in Niger for young children.
- Knowledge/implementation gaps and areas for improvement still exist in relation to rapid diagnostic tools, the MSF-policy on malaria in pregnancy, malaria transmission in contexts such as South Sudan and DRC, and effective pharmacovigilance systems during interventions such as SMC or mass drug administration.

MEDICAL STRUCTURES - INPATIENT DEPARTMENT

- OCB has decreased its involvement in hospitals over the course of 2013: inpatient care was provided in 25 health facilities, including in four emergency missions.
- The total bed capacity of OCB in stable contexts was 1,313, catered for by a total staff of 3,944.
- The Gondama Referral Centre (GRC) in Bo, Sierra Leone, and the hospital in Masisi, DRC were the largest hospitals in OCB in terms of admissions, staff and bed numbers. Kunduz (Afghanistan) and Tabarre (Haiti) had relatively high staffing levels due to the complexity of their setup (as trauma hospitals).
- The position of Hospital Management Coordinator ended and the function will not be prolonged, while the technical hospital referents in the Logistic and Medical Departments will remain.

MENTAL HEALTH

- During 2013, OCB provided mental health (MH) activities in 25 regular projects across 17 countries and in an additional eight emergency interventions.
- MH activities were much better integrated into emergency interventions than in previous years, especially during emergencies linked to acute conflicts.

- 2013 saw MH activities being deployed in several new fields, namely specific care for victims of torture/ill treatment in Cairo (Egypt), and care for epileptic patients in Kibera (Kenya).

- The integration of psychiatric care into medical activities continued in 2013, with the intention of developing this further in emergencies and in primary health care.

- Tools to help health care providers in OCB projects identify children with MH needs and provide the appropriate interventions for them and their families need to be developed as a matter of priority.

NUTRITION

- 18 nutritional projects across 12 countries were managed by OCB; only one new project was opened (El Serif, Sudan), while seven closed or were handed over. Nutritional support was an integrated component of the measles vaccination campaigns in DRC.
- 34,941 patients with severe acute malnutrition were admitted to Intensive or Ambulatory Therapeutic Feeding Centres and 470 patients with moderate acute malnutrition were admitted to Supplementary Feeding Centres, representing the lowest levels since 2008.
- 2,438 patients received targeted or selective nutritional support. No General Food Distributions were done in 2013.
- For the projects providing outcome data, three out of 14 achieved the target cure rate of >80%. Low cure rates were typically linked to high defaulter rates; mortality rates remained below 5%, except in one project.
- The decrease in the volume of nutrition activities created difficulties to find settings for innovation, pilot projects and maintain experienced expatriates.

OPERATIONAL RESEARCH AND DOCUMENTATION

- The MSF operational research (OR) courses were formally recognised by the World Health Organisation and are now part of a global partnership termed SORT IT (Structured Operational Research Training Initiative). Four courses were launched in 2013.
- The OR portfolio was widened to include new areas such as antibiotic resistance, neonatology, migrant health, and surgery.
- Publication outputs and their diversity increased with over 100 OCB-related scientific publications; the MSF OR courses were a strong driving force behind this achievement.
- Efforts to establish a national MSF ethics review board in India reached an advanced stage and will hopefully facilitate research in India. This is the first MSF-National ethics review board.
- MSF and partners were lead authors in writing part of the 2013 World Health Report entitled "Research for Universal Health coverage". Two of the ten case studies included in this report were from the OCB.
- The scientific advisory group to the European Parliament granted us the opportunity to address the European Union (EU) Parliamentarians on the role and relevance of OR in early

2014. This is an opportunity to bring OR into the core of political decisions in Europe.

- Two initiatives were launched in collaboration with MSF-UK and the Paris Union to enhance monitoring and reporting of the impact of OR on policy and practice.

PAEDIATRIC CARE

- 502,378 (37%) of all outpatient consultations and 34,005 (55%) of all hospital admissions in OCB were for children under five.
- The leading causes of morbidity for paediatric outpatients were similar to the previous years: respiratory tract infections (40%), non-bloody diarrhoea (17%), malaria (17%), infectious skin diseases (4%), and eye infections (4%); for paediatric inpatients, the major morbidities were severe malaria (45%), lower respiratory tract infections (18%), neonatal diseases (13%) and non-bloody diarrhoea (7%).
- The leading causes of paediatric inpatient mortality were neonatal diseases (38%), severe malaria (33%), lower respiratory tract infections (10%), and non-bloody diarrhoea (2%).
- Neonatal pathologies increased as a proportion of under five IPD morbidity and mortality to 13% and 38% respectively.
- The neonatal care programme in Kabezi, Burundi, was handed over, but served as a model for neonatal care as implemented by OCB: a study on characteristics and hospital outcomes of neonates in Kabezi was published, a manuscript on preterm neonates was submitted for publication, and a study on the long-term outcomes of neonates is planned for 2014.
- The five-year vision for the Gondama Referral Centre (GRC), Sierra Leone, was re-defined, to focus primarily on paediatric infectious diseases and Lassa Fever. The project will also focus on improving its emergency and intensive care, and the quality of paediatric inpatient care.

PHARMACY

- The emergencies in Syria Central African Republic (CAR), Mali and Philippines, and the increased activities in countries with import constraints such as Ukraine, Afghanistan, Pakistan, India and Lebanon continued to represent significant challenges to the medical supply chain.
- Eleven products were validated by MSF pharmacists.
- Three batch recalls and three quality alerts concerning OCB projects were issued during 2013.
- An evaluation of the local pharmaceutical market was conducted in eight countries: 31 manufacturers were approved in five countries, and 66 wholesalers were approved in all eight countries.
- Total expenditure for medical procurement was 25.5 M€, with an additional 1.0 M€ for therapeutic food.
- Within the framework of the end-to-end supply chain objective, the main focus in 2013 was on the development and consolidation of the new OCB Supply Unit.
- Key performance indicators were able to be collected for almost all OCB medical stocks.

SEXUAL AND REPRODUCTIVE HEALTH

- As a result of the overall reduction in the number of OCB projects, the number of projects offering SRH activities also saw a general decrease. The epicentre of SRH activities became Afghanistan, where two major projects (Khost and Ahmad Shah Baba hospital) covered almost half of all deliveries in OCB.
- Antenatal care was offered in 27 projects and 149,692 antenatal consultations were performed – adequate antenatal care coverage (four visits during pregnancy) remained low.
- Deliveries were conducted in 29 projects, all of which offered emergency obstetric care and 13 provided Caesarean sections and blood transfusion. 52,525 deliveries were performed; 6,051 of which by Caesarean section.
- Postnatal care was offered in 22 projects and 24,224 postnatal consultations were conducted.
- Family planning was offered in 28 projects and 54,320 family planning consultations were conducted.
- Termination of pregnancy on request was offered in 11 projects and was provided for 553 women – a strong decrease compared to 2012, as a result of the handover of the abortion clinic in Khayelitsha, South Africa.
- Care for survivors of sexual violence was offered in 18 projects: 2,582 cases were seen.
- The rolling out of the Advanced Life Support in Obstetrics (ALSO) courses in MSF projects was well-received, and was done as an intersectional process: trainers were shared and trainings were provided for the different sections together.

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.
- Operating department data coverage and quality continued to be high.
- 20 OCB projects offered surgical care; for 18 of these OCB was directly responsible for all aspects of surgical care.
- 14,199 new surgical cases were seen.
- The operating department admitted 19,395 surgical cases; 93% of which were emergency cases, 73% were primary interventions, 26% were planned re-interventions, and 1% were unplanned re-interventions.
- Surgical data and indicators were influenced by the relative expansion of the two trauma centres (Kunduz, Afghanistan and Tabarre, Haiti), which have a specific typology of interventions.

VACCINATION

- 22 OCB projects provided data on vaccination activities; this continued to represent an under-estimation, as some projects with vaccination activities did not manage to provide vaccination data.
- A total of 447,808 routine vaccinations were administered in OCB projects during 2013, representing a 44% increase since 2012. This increase is likely the consequence of improved reporting systems.
- Vaccination activities are mainly offered in outpatient departments and at antenatal consultations (84%), but for the first time vaccination was also reported in nutrition activities (9%) and in one vertical HIV project (0.3%). 7% were reported in the inpatient department.
- Among children under five, Polio was the most administered antigen (8% at birth and 26% in the under five population) in routine activities, followed by the pentavalent (diphtheria-pertussis-tetanus-Hepatitis B-Haemophilus influenzae type B) vaccine (26%) and measles containing vaccines (22%).
- Preventive and reactive vaccination campaigns accounted for respectively 13% and 45% of all OCB vaccination activities, while post-exposure prophylaxis accounted for 4%.
- Documentation of missed vaccination opportunities continued, allowing the projects where it was implemented to monitor the activities and to respond to gaps in routine vaccination. Staff in the field was trained about the objectives and correct use of the tool.

WATER, HYGIENE AND SANITATION

- Scanning for Water, Hygiene and Sanitation (WHS) challenges was done systematically, and WHS was involved in almost all ongoing projects.
- A focus was placed on providing expert WHS support to established missions, while the WHS needs in complex emergencies were managed by polyvalent technical staff with technical support from headquarters.
- Specific WHS activities were conducted on interventions in the refugee camps in South Sudan, the events in Central African Republic (CAR), emergency responses to a dengue outbreak in Pakistan and to the threat of a dengue outbreak in the Philippines. Additionally, work on water quality to support a nutritional project in Niger, providing support to set up the Water and Sanitation (WatSan) component in field hospitals in Syria, supporting the refugee camps in Mauretania, and managing Hepatitis E in South Sudan were also key activities.

MEDICAL DATA

1. OVERVIEW

In this section we present an analysis of general outpatient and inpatient department (OPD/IPD) data in OCB. For the analysis, only projects implementing the Epicentre data tools were included, as the other data collection systems in place (Typology, customised project databases, etc.) did not allow refinement of the programme activity data. In the future, data collected through MINOS (cf. Health Informatics section, §2.2.) will also be included.

2. PROGRAMME DATA

2.1. TYPOLOGY – OVERVIEW OF ALL PROGRAMME ACTIVITIES

Based on the 2013 Typology data collection, which covers all OCB projects, 1,806,530 outpatient consultations were conducted including consultations in the OPD (1,346,649), antenatal and postnatal consultations, family planning consultations and Emergency Department (ED) visits, representing a decrease of 6% compared to 2012. There were a total of 127,936 hospital admissions registered including

admissions to the IPD in addition to Maternity and Intensive Therapeutic Feeding Centre (ITFC) admissions. This represents a decrease of 5% compared to 2012.

2.2. ANALYSIS OF DATA COLLECTED USING EPICENTRE TOOLS

In 2013, the Epicentre tools for data involving outpatient and inpatient departments and gynaecology/obstetrics services (OPD/IPD/Gynobs tools) were used in 12 (80%) of the 15 OCB missions that were meant to use them. A global summary of all 2013 outpatient, inpatient and gynobs data

from programmes using these tools is provided in Table 1 (Annex). A total of 699,311 outpatient consultations (compared with 1,095,373 in 2012) were conducted and there were 35,858 inpatient admissions (compared with 58,855 in 2012).

2.1.1. OPD consultations

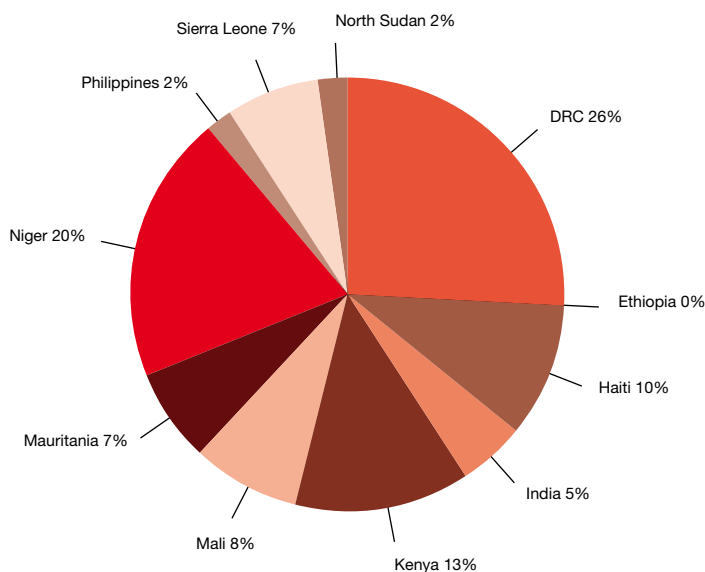
The 2013 distribution of OPD consultations by country and as a proportion of the total OPD consultations is shown in figure 1. The highest proportions of OPD consultations were in the Democratic Republic of Congo (DRC: 26%), followed by Niger (20%) and Kenya (13%).

2.1.2. IPD admissions

The 2013 distribution of IPD admissions as a proportion of the total IPD admissions is indicated by country in figure 2. The highest proportion of IPD admissions was observed in Niger (31%), followed by DRC (23%) and Sierra Leone (20%).

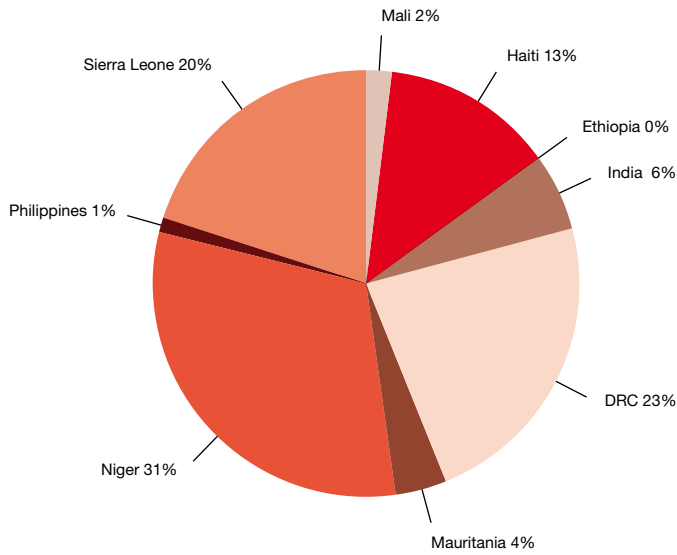
The proportion of adverse outcomes among all hospital exits is shown by country (Fig. 3). For all countries, the proportion of discharges with medical agreement was above the target of >85%; hospital mortality was under the acceptable threshold of ≤5% in all the countries except in Mali (8.7%), in Sierra Leone (8.7%) and in Ethiopia (6.1%).

Figure 1: Distribution of OCB OPD consultations by country in 2013



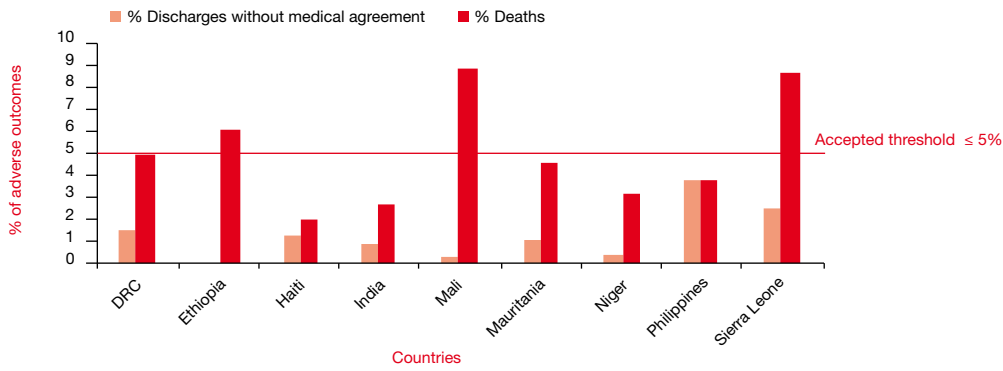
DRC: Democratic Republic of Congo

Figure 2: Distribution of OCB IPD admissions by country in 2013



DRC: Democratic Republic of Congo

Figure 3: Proportion of adverse IPD outcomes (inpatient deaths and discharges without medical agreement) among all hospital admissions, by country in 2013



DRC: Democratic Republic of Congo

BIOMEDICAL EQUIPMENT

1. OVERVIEW

Over the last few years, there has been a substantial increase in the use of advanced medical equipment in OCB projects resulting in increased needs for technical support, but this has not been without its challenges. In 2012, two Biomedical Mobile Implementation Officers (MIOs) were recruited and they have helped to mitigate some of the challenges. However, in mid-2013, the number of MIOs was reduced to one which proved inadequate to meet the demands from the field. Attempts to offset this situation have included training national staff in several missions to better oversee the management of biomedical equipment.

2. PROGRAMME ACTIVITIES

2.1 TECHNICAL SUPPORT

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

- 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 responsible for the monitoring of the equipment
- Maintenance and upkeep must be planned for and carried out as recommended.
- Workshops must be planned for and undertaken for conducting maintenance
- All maintenance activities must be recorded
- Stocks of spare parts must be maintained, and the follow-up of inventories and orders must be ensured

In mid-2012, the OCB Logistics department recruited two MIOs to support missions in implementing the minimum requirements outlined above and undertaking the annual follow-up visits that are then required. Priority was given to those missions

with large hospital projects having complex biomedical equipment. By the end of 2013, the following missions had the minimum requirements in place: Democratic Republic of Congo (DRC), Haiti, Afghanistan, Pakistan, South Sudan, India, Sierra Leone, Somaliland and Burundi.

2.2. FIELD VISITS

A number of field visits were undertaken in 2013. The referent visited the health centres in the Kibera project in Kenya, while the MIOs provided technical support to the following health structures:

- The Gondama Referral Centre in Bo, Sierra Leone.
- The health structures of the Kabul, Kunduz, Khost and Lashkar-Gah (Helmand) projects in Afghanistan.
- Buraio hospital in Somaliland
- The health structures of the Gogrial and Maban (Doro) projects in South Sudan.
- Martissant and Tabarre in Haiti
- Mon hospital in India
- Emergency hospital in the Philippines
- Centre Hospitalier Kabinda (CHK) in Kinshasa and Masisi in the Democratic Republic of Congo (DRC)

3. INTERSECTIONAL COLLABORATIONS

The biomedical unit has developed greater visibility and voice in MSF through biannual meetings, sharing of information, division of tasks, ensuring presence in medical working groups, and combining project visits with other units.

4. TRAINING AND HUMAN RESOURCES

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

- Two five-day biomedical training courses, set up in collaboration between OCA, OCB and OCG
- The biomedical equipment module has been included in the Preparation for Departure (PPD) course.

The biomedical module that was previously included in the Basic Logistic Course (BLoC) was removed in 2013, a decision which may risk compromising staff understanding of the importance of maintenance of biomedical equipment in projects.

5. LOOKING BACK AND AHEAD

LESSONS LEARNED IN 2013

The provision of adequate support in missions where complex equipment is used (particularly specialised laboratory instrument) remains a challenge. Maintenance of advanced laboratory instruments requires specialised training, specialised tools and accessibility of spare parts. Within MSF, the technical competence is lacking and local service providers are often unable to meet the maintenance needs of specific equipment. This has prompted MSF, at an intersectional level, to negotiate service contracts with the relevant equipment manufacturers for provision of the required service through local providers.

Finally, the issue of long delays encountered when equipment has been sent to Brussels for repair, needs to be resolved in collaboration with MSF Supply.

PROSPECTS FOR 2014

Technical support will continue to be provided both to those missions with the minimum biomedical equipment requirements already in place (that require follow-up visits), and to new missions that need support implementing the biomedical equipment management system.

In 2014 a series of documents will be released including:

- User and Maintenance Protocols for standard biomedical equipment. These will provide clear and succinct explanations about the equipment together with pictures and diagrams for further clarity.
- A reference tool to aid inventory keeping, planning of maintenance activities and ordering of necessary parts.
- Biomedical Policy for OCB.

EMERGENCY MEDICINE

1. OVERVIEW

The emergency department (ED) is the first point of contact for the majority of patients during emergencies and for those suffering life-threatening injuries. Therefore, improved organisation and planning for provision of trauma and emergency care is an essential part of integrated health care delivery. Every country and community can and should provide emergency care services.

Over previous years, efforts have been made to provide well-organised and -planned EDs in our projects in order to lower mortality, reduce disability, and prevent other adverse health outcomes. Throughout 2013, a focus was placed on strengthening the triage setup of the emergency units, as appropriate triage is key to ensure prompt care for severe cases.

2. PROGRAMME ACTIVITIES

2.1. EMERGENCY DEPARTMENT STRUCTURES

In most OCB projects with ED activities, the ED is integrated into a hospital (hospital-based ED). Hospital-based EDs are usually backed by a complete care provision system, including an operating theatre and in-patient wards, where continuity of good quality care is assured.

In certain situations, the ED is set up in a separate location from that of the hospital premises (freestanding ED). Usually this option is adopted in situations where hospital-based emergency services are inaccessible to and/or distant from the target population. This arrangement should be planned and coordinated with a referral hospital, which will be responsible for ongoing care of emergency patients, providing services such as surgery and hospitalisation.

By the end of 2013, two EDs - Martissant in Haiti and Karachi in Pakistan - were operating as freestanding EDs within OCB. Freestanding units are confronted with many challenges, as they are not supported by the other services needed for the continuity of patient care.

There are important differences between EDs within MSF; most receive general emergencies where a wide range of pathologies and patients are treated, while others are specialised centres, such as the paediatric emergency centre in the Gondama Referral Centre (GRC) in Bo, Sierra Leone, or

the trauma centres in Kunduz (Afghanistan) and Tabarre (Haiti). The Tabarre centre also treats other surgical emergencies.

2.2. ACTIVITIES AT PROJECT AND MISSION LEVEL

2.2.1. Emergency department activities

In 2013, emergency medical care was provided in 15 OCB projects across ten different countries: Afghanistan, Democratic Republic of Congo (DRC), Ethiopia, Haiti, India, Pakistan, Sierra Leone, Somalia, South Sudan and Syria. The South African Triage Scale (SATS) was used successfully in nine projects, including an emergency setting in Syria.

Compared with the previous year, there were two fewer projects that had an ED component: Lashkar-Gah and Lubutu, which were handed over respectively to MSF-OCA and the Ministry of Health (MoH) during 2012. This report includes data from two projects that were not reported in 2012, East-Imey in Ethiopia and Jabal-Akkrad in Syria.

A total of 210,591 emergency medicine consultations were performed during the reported period (table 1, Annex). The ED in the Kabul project in Afghanistan had the highest patient caseload with 52,416 consultations, almost one fourth of all the ED consultations done in OCB during the year.

The proportion of patients younger than five differed according to the characteristics of the project: the highest proportion was reported in the GRC in Sierra Leone

(89.2%), a paediatric hospital, while the lowest proportions were observed in the trauma centres in Kunduz and Tabarre (7.9% and 6.4% respectively).

The proportion of female patients was >40% in all EDs, except in the trauma centres and in the conflict project in Syria, where the number of male patients was approximately double that of the females. These observations are in line with the higher risk of trauma for males.

2.2.2. Emergency department typology

Trauma cases were more frequent, as expected, in the trauma centres of Kunduz in Afghanistan and Tabarre in Haiti (100% and 98% respectively). In Martissant (Haiti), 78% of the cases were related to trauma. As this is a freestanding unit, most of these cases were referred to Tabarre hospital if admission was required. Violent trauma cases were highest in the Haiti projects: 12.3% in Martissant and 14.8% in Tabarre, reflecting the increasing violence in this country. These rates surpassed all those in other missions, even those in conflict settings (table 1, Annex).

2.2.3. Quality indicators

A patient's outcome from the ED can be discharge, hospital admission, referral, death or defaulting (abandonment). The proportions of these outcomes are related to the services provided in the health facility, e.g. provision of surgical capacities and specialised hospitalisation care. For example admission rates are expected to be

Table 2: OCB emergency departments using the SATS system in 2013

Country	Afghanistan		DRC	Haiti		Pakistan		Sierra Leone	Somalia	Syria
Project ED	Kabul	Kunduz	Masisi	Martissant	Tabarre	Karachi	Timurgara	GRC-Bo	Burao	Jabal-Akkrad
Mean cases per month	4368.0	1433.3	494.0	3888.2	564.8	1422.1	2167.2	653.9	N.D.	1697.9
Percentage of red cases	3.1	2.6	17.3	2.2	2.8	2.1	5.0	31.8	N.D.	N.D.
Percentage of orange cases	11.9	17.4	38.5	10.5	20.0	15.6	N.D.	34.4	N.D.	N.D.
Percentage of yellow cases	49.3	44.1	29.3	41.1	63.4	67.9	N.D.	22.8	N.D.	N.D.
Percentage of green cases	35.5	35.8	14.9	46.2	13.8	14.1	N.D.	10.9	N.D.	N.D.
High acuity proportion	15.1	20.1	55.7	12.7	22.8	17.7	N.D.	66.3	N.D.	N.D.
Percentage of overtriage	N.D.	35.4	24.8	78.6	19.4	90.8	N.D.	2.5	N.D.	N.D.
Percentage of undertriage	N.D.	5.4	15.2	1.9	6.9	0.7	N.D.	87.1	N.D.	N.D.
Mortality rate ¹	0.13	0.09	0.13	0.04	0.07	0.01	2.7	1.0	N.D.	0.13
Data tool used	MINOS	Individual	Individual	Individual	Individual	Individual	Excel aggregated	Individual	Individual	Excel aggregated
Months of data	Jan-Dec	Jan-Dec	June-Dec	Jan-Dec	Jan-Dec	Jan-Dec	Jan-Dec	Jan-Dec	Jan-Aug	Mar-Dec

ED: Emergency department; DRC: Democratic Republic of Congo; GRC: Gondama Referral Centre

highest in referral centres and lower (or zero) in freestanding facilities. Likewise, projects with a high proportion of severe cases (the “high acuity proportion”) are also expected to admit more patients. The referral proportion correlates indirectly with the resources/offered services of the health facility, and directly with the capacity of the surrounding health structures. Outcome results are also used as surrogate markers to assess the validity of the triage systems. For OCB settings, the assumption is that most “red” and “orange” cases will be admitted, die or be referred, while most “green” cases will be discharged.

Quality indicators were followed up to better understand the care given in the EDs of OCB – of these, the mortality rate and over- and undertriage rates were analysed in detail (tables 1 & 2).

The mortality rate refers to the proportion of patients who die during their stay in the ED; cases classified as “blue” (dead on arrival) as per the SATS system, are not included in this indicator. The target is a mortality rate < 1%. Only two projects, Timurgara in Pakistan and the GRC in Sierra Leone, did not meet this target. For the GRC, the reported mortality rate was 1.0%: the severity (the “high acuity proportion” or proportion of truly urgent cases was 66%) and late presentation of patients could explain this observation. Similarly, the ED of Timurgara

only saw red and orange cases, and was thus faced with a higher proportion of severe cases.

Overtriage is the overestimation of the severity of an illness or injury. This indicator is calculated from the proportion of discharged “red” and “orange” cases over the total number of “red” and “orange” cases. An acceptable overtriage rate is less than 50%: this is a relatively wide margin, in order to avoid underestimating a patient’s illness. This target was not reached in Martissant and Karachi, the only freestanding EDs, with overtriage rates of 79% and 91% respectively. Analysis of the data indicated that most of these cases were acute medical conditions that could be treated, stabilized and discharged home safely, such as asthma attacks.

Undertriage is the underestimation of the severity of an illness or injury. This indicator is calculated from the proportion of admitted, died or referred “green” cases over the total number of “green” cases. Acceptable undertriage rates are < 10%. Two EDs, Masisi and the GRC, had an undertriage rate above this threshold (15% and 87% respectively). For the GRC, a possible explanation may be the high volume of children presenting with severe anaemia and/or malnutrition, which are two conditions that are not included in the SATS list of discriminators.

2.3. SPECIFIC ACTIVITIES

2.3.1. Data collection

During 2013, ED data was collected through four different tools, which represented a challenge for comparison and follow-up of projects. Seven projects used the standardised ED individual database following the recommendations of the SAGE unit, as the use of this tool allows each project to better understand, monitor and evaluate its activities. The other eight projects collected ED data in an aggregated way; using the Epitools, MINOS or a customised excel data tool (cf. Health Informatics section). ED indicators on the use of services and quality of care, together with surveillance of specific epidemiological indicators, were incorporated in the project logframes to allow a better monitoring and evaluation of each project’s activities.

2.3.2. Triage

One of the cornerstones of a well-functioning ED is an efficient triage system; in OCB it was decided to implement the SATS in our health facilities. During 2013, to better assess the performance of this system and to assess its current limitations, a study was designed and conducted in the EDs of projects in Afghanistan, Haiti and Sierra Leone. Results from this study will allow a better understanding of the adequacy of this triage system for the different EDs in OCB.

¹ Mortality rates may be overestimated for Kabul and Jabal-Akkrad as they probably include blue cases (dead at arrival), as it is not possible to review aggregated databases.

3. LOOKING BACK AND AHEAD

LESSONS LEARNED IN 2013

- Data collection tools within MSF should be standardised to facilitate the comparison of projects.
- High turnover of expatriate team at field level jeopardises the continuity and homogeneity of data collection: when possible, a focus person should be responsible and easily reachable for this purpose.
- The care provided in opening EDs needs to be standardised from the beginning, to avoid subsequent modifications and unnecessary workloads.

PROSPECTS FOR 2014

- Expatriate staff will continue to be followed up by the emergency medicine referent.
- The SATS discriminator list will be analysed and modified if necessary according to the results of the study conducted in 2013.
- Measures to ensure greater standardisation of care in our emergency departments need to continue in order to improve the quality of care delivered.

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 2013, the E-Unit intervened in ten countries with direct management, supported three interventions (in two countries) managed by the cells, and conducted Emergency preparedness interventions (Eprep) in seven countries.

Major interventions in 2013 were assistance to internally displaced persons (IDP)/refugees/wounded/general population in Syria (including operations both inside and outside the country – Lebanon and Turkey) and the emergency intervention following the cyclone in the Philippines. Other major emergency projects included the ongoing intervention in the Sahel (Mali and Mauritania) and the Pibor county intervention in South Sudan for displaced. Additionally, an intervention in the Central African Republic (CAR) started mid-October. Some of these interventions are discussed in detail below.

2. PROGRAMME ACTIVITIES

2.1. EMERGENCY ACTIVITIES IN 2013

Over the course of 2013, 13 interventions (direct and support) were performed by the E-Unit (table 1). These included management of disease outbreaks, care for IDP due to conflicts and natural disasters, care for refugees and care for war-wounded. In seven countries an Eprep was conducted (general or specific).

2.2. MAJOR EMERGENCY RESPONSE ACTIVITIES IN 2013

2.2.1. Philippine post-cyclone intervention

Typhoon Haiyan, known as Typhoon Yolanda in the Philippines, was an exceptionally powerful tropical cyclone that devastated the central Philippines (the Visayas group of islands) on November 8, 2013. It was the deadliest Philippine typhoon on record, killing at least 6,201 people in that country alone. The typhoon caused catastrophic destruction, including to governmental health structures in the Southern part of Samar Island and Leyte. The OCB emergency response targeted collectively what is called the Guiuan Inter-Local Health Zone (Guiuan, Mercedes, Salcedo, Mac Arthur, and Hernani).

Table 1: Emergency activities managed by the E-Unit (direct, support and Eprep), 2013

Managed by the E-Unit	Reason for intervention	Comments
Lebanon	Connected to Syria conflict: refugees and remote support	Ongoing since 2011
Syria/Turkey	Conflict, IDP, war-wounded, general population needs	Ongoing since 2012
Egypt	Post-clash tensions	Situation analysis (1 month)
Mauritania	Refugees (connected to Mali conflict)	Since 2012 – handed over to regular cell mid-August 2013
Mali	Conflict, nutrition	Since 2012 – end of intervention November 2013
South Sudan	Conflict Pibor County: IDP, war-wounded	Started July 2013
South Sudan	Refugees Maban County	Since 2012 – handed over to cell March 2013
CAR	Conflict: IDP	Started October 2013
Philippines	Natural catastrophe – Cyclone	Started November 2013
DRC	Conflict: IDP (Goma/Bulengo)	From November 2012 to April 2013, then handed over to cell
Support to cell		
Pakistan	Cholera	Support HR
Pakistan	Dengue	Support HR
DRC	Measles	Tech support & HR
Eprep		
South Sudan	Movement of population preparedness	Specific for Maban
Lebanon/Turkey/Syria	War wounded	
Mali	General Eprep	
Mauritania	General Eprep	
CAR	General Eprep	

CAR: Central African Republic; DRC: Democratic Republic of Congo; Eprep: emergency preparedness; HR: human resources; IDP: internally displaced persons

The objective of the medical activities of the intervention was to restore the governmental health services in five municipalities of Eastern Samar province. MSF activities included providing support to Abrigo Memorial hospital in Guiuan (inpatient department - IPD) and to the Guiuan Rural Health Units (outpatient department - OPD), and provision of outreach activities (inland and on the islands), mental health services, and health promotion. Statistics of the intervention by the end of 2013 are presented in table 1.

The logistic activities were developed in five municipalities and included: setting up a tented hospital in the grounds of the Abrigo referral hospital; non-food items (NFI) distribution (tents, cooking & hygiene kits), with a particularly focus on reconstruction material distribution for houses and boats; and support for the reconstruction and/or rehabilitation of five Rural Health Units (table 1).

The Water and Sanitation (WatSan) activities included emergency WatSan management in the municipality of Guiuan where 90% of the water system was destroyed and no electricity was available for the operation of water pumps. In collaboration with the International Committee of the Red Cross (ICRC) and the national authorities, the aim was to cover the gap and rehabilitate the system.

In addition to these rehabilitation activities, vector control was also conducted: stagnant water, common in the rainy season and in the aftermath of storms, can lead to higher-than-normal rates of mosquito-transmitted illnesses such as dengue fever. The vector control strategy consisted of three axes: fumigation, larvicide treatment (involving the treatment of the breeding sites and big water reservoirs), and health

promotion. An overview of WatSan activities is also presented in table 1.

Over the course of 2014, MSF will construct a new semi-permanent hospital in Guiuan, which will serve as an interim hospital facility for the community while the referral hospital is being rebuilt by the government.

2.2.2. Intervention in Syria/Lebanon/Turkey

After almost three years of unrest, the situation in Syria continues to deteriorate. Considering both the conflict's evolving dynamics on the ground and the persisting diplomatic deadlock, nothing suggests a quick end to the fighting. More than four million Syrians have been displaced, more than three million have fled the country and become refugees, and millions more were left in poor living conditions with shortages of food and drinking water. Access to people in need of assistance inside Syria remains restricted and extremely difficult – especially in war zones – which prevents proper assessments from being conducted.

As the conflict has ebbed and flowed and displacement has increased, the coping mechanisms of both the host and the displaced populations have increasingly been tested. Access of IDP's to health care in some areas close to the border was difficult because of lack of drugs and medical staff, while distribution of NFI was irregular and the WatSan needs sometimes remained unaddressed. The hospitals in the region focused almost exclusively on surgical care, and suffered from frequent medical stock ruptures.

Other unmet needs included mental health support for the population with posttraumatic stress and psychiatric diseases after

more than three years of war; follow-up of chronic diseases due to poor access to appropriate medication; and vaccination and outbreak management due to the collapse of the Syrian Expanded Programme of Immunisation (EPI).

The OCB intervention in Syria started in 2011, and the operations expanded over time with different strategies in different locations. At the time of writing, the setup included two coordinations (in Turkey and in Lebanon), each with their own projects: interventions inside Syria (Latakia and Idlib governorate) are followed by the Turkey team, while interventions on refugees and provision of inside support (in Homs, Hama, Aleppo, Latakya, Tartous, and Damascus governorate) are followed by the Lebanon team. Specific activities included:

- Turkey: direct provision of primary and secondary health care inside Syria (including Sexual and Reproductive Health activities and a mental health programme); referral of emergency cases to Turkey for advanced care (intensive care unit, neonatal care, etc.); support (provision of drugs and equipment) to field hospitals providing medical assistance to the population in their respective areas in Syria (Hama, Homs, Jabal-Akkrad, Jebel al Turkmen, Darkoush, etc.); limited distribution of food and NFI to displaced families inside Syria, close to the Turkish border. Details of the Fellini and Darkoush projects are provided in table 2 and figure 1.
- For 2014, alternative plans to continue activities in the same areas are being considered, after suspension of all direct provision of care following the security incident in early 2014. Support activities,

Table 1: OCB medical, logistic and WatSan activities in the Philippines post-typhoon intervention, by December 30th, 2013

Medical		Logistic		WatSan	
Activity	N	NFI distributed	N	Activity	N (beneficiaries)
Surgeries	27	Tents	2,956	Well cleaning	70 (8,000)
Inpatient admissions	369	Reconstruction kits	1,762	Water trucking	4,837 m ³ (21,000)
Maternity admissions	129	Plastic sheeting	3,848	Latrine construction	81 (1,620)
Outreach consultations	10,021	Hygiene kits	2,896	Dengue vector control	All schools (15,000)
Mental health consultations	3,259	Cooking kits	3,238	Water system repair	975 (NA)
Referrals	11	Blankets	3,760	Body recovery	27 (NA)
Laboratory tests	487	Jerry cans	1,215		
		Boat repair kits	16		
		Chainsaw kits	20		

NA: not applicable; NFI: non-food item; WatSan: Water & Sanitation

Table 2: OCB activities in selected projects in Syria, 2013

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Fellini hospital													
Total OPD	-	-	1,363	1,227	1,905	721	1,123	1,060	1,122	738	0	1,522	10,781
Total ER	879	2,037	1,378	1,440	1,926	1,739	1,773	404	1,397	1,511	39	1,047	15,570
Total Mobile clinic consults	-	795	1,192	589	687	588	401	0	0	0	0	0	4,252
IPD admissions	-	8	19	16	41	25	44	32	13	54	-	43	295
Maternity deliveries	8	46	33	49	48	50	68	27	0	53	-	15	397
Total Mental Health Individual patients	-	15	30	9	42	32	30	11	27	389	-	20	605
Darkoush													
OPD	-	-	-	-	-	303	958	1,012	442	1,264	450	1,262	4,427
Lebanon (refugees)													
OPD+SRH	-	192	263	461	301	900	1,234	814	1,156	1,990	3,032	4,907	15,250

ER: emergency room; IPD: inpatient department; OPD: outpatient department; SRH: sexual and reproductive health

through the provision of drugs and medical equipment, will continue and may become the core of the activities in Syria. Access to the hospitals being supported will remain the main challenge to be addressed.

- Lebanon: distribution of food and NFI to displaced people and refugees; training on war surgery, first aid and mental health to Syrian doctors and volunteers (organised in Beirut); provision of drugs and equipment to Syrian medical networks assisting wounded in conflict areas or to displaced people all over Syria; direct provision of primary health care, mental health and maternal health care to Syrian refugees in Lebanon. Details of the consultations among refugees in Lebanon are provided in table 2.

For 2014, consolidation of the activities is foreseen, and expansion of several new services, such as a maternity clinic in Cha-

tila refugee camp (including ambulance service) and intermittent primary health care in Arsel (on the Beeka Valley border with Syria) for the recent influx of refugees arriving from the Qalamoun area in Syria.

2.2.3. South Sudan: Conflict in Pibor county / displacement in Juba

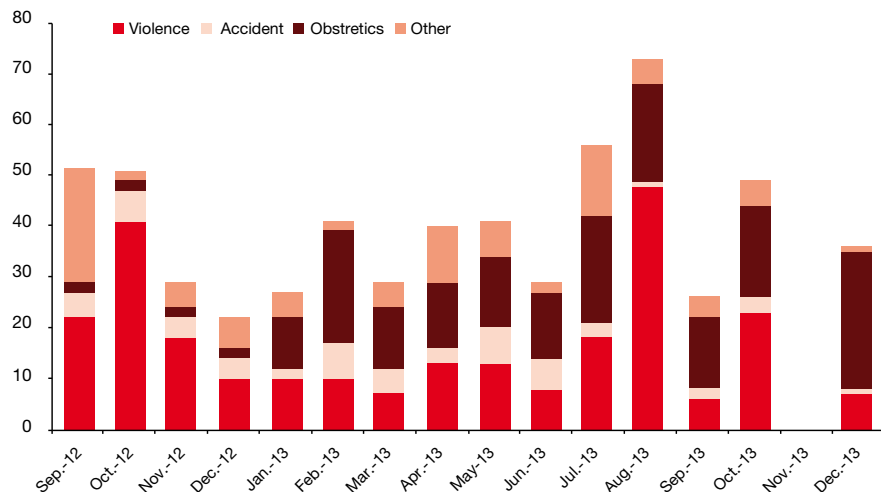
Since 2012, the long-term project of Pibor in South Sudan project has suffered from insecurity, including looting and destruction of the OCB hospital and compound, evacuation of the international staff and the complete suspension of activities between April and July 2013. The insecurity has also pushed most of the population to flee into the bush, rendering health provision by OCB, the only health care provider in the county, almost impossible. Due to this situation the management of the project was handed over to the E-Unit. While the medical activities of the project have been af-

ected by the insecurity, OCB managed to maintain a presence in Pibor county, and has conducted an intensive lobbying campaign directed to the major donor countries for South Sudan and the international community in order to secure access to the population and provide health care.

During the first semester of 2013, due to insecurity, only one of the three project sites (Gumuruk) stayed open constantly and provided access to health care. In mid-July OCB mounted an emergency operation in Dorein and increased support to its clinic in Gumuruk. A full operating theatre (OT) was set up in Gumuruk Primary Health Care Unit (PHCU) where, in July, 49 surgical interventions were carried out. Gumuruk changed medical direction in August, stopping the surgical intervention due to a reduction in needs, but adding an IPD to deal with patients requiring longer treatment, and cases of severe malaria and dehydration due to diarrhoeal diseases – 163 patients were admitted over the period. Mobile clinics were implemented by helicopter in the rebel-held areas of Lotilla River, Kongor and Labrab. A flying team based in Juba carried out mobile clinics in Pibor Town, but security restrictions meant they were unable to stay more than a week at a time in Pibor.

Between July and October 2013, in spite of the logistical and security constraints, OCB was able to implement a mass vaccination campaign for measles and polio (3,017 vaccinations) and a mental health service (463 individual sessions and 638 psycho-educational group sessions), and to conduct an average of 150 medical consultations per day in Gumuruk, illustrating the

Figure 1: Reasons for surgical intervention in Fellini hospital, 2012-2013 (n=576)



needs of the civilian population when unhindered and safe access to medical care was offered. A mass vaccination campaign for polio and measles (3017 vaccinations done) was also conducted. In Pibor, access could not be offered, and the civilian population remained displaced in the bush, unable to access medical care and unwilling to risk returning to Pibor town.

In addition to these medical activities, exploration missions were conducted in order to assess the humanitarian needs in the area. In October 2013, a retrospective mortality survey to evaluate the health status of the population was conducted in three locations of Pibor county: the mortality rates showed a dramatic peak during the period of the fighting and cattle raiding (July).

The 15th of December saw a major change in the context in South Sudan: an internal political conflict between members of the ruling political party led to gun battles in Juba, followed by the rapid spread of violence across Unity, Jonglei and Equatoria States. This violence, while initially politically motivated, took on an ethnic dimension which pitted the two largest ethnic groups, the Dinka and the Nuer, against each other. Pibor county was only affected for a few days, but it became isolated due to inability to fly freely in the country.

The mobile team in Juba immediately started a medical intervention in the IDP camps where more than 40,000 people were displaced. In the 10 days of intervention in December, the team performed consultations for more than 1,900 patients.

In 2014, medical activities will be implemented in the two IDP camps in Juba. In Pibor county, the mobile team will re-start medical activities in March in Gumuruk, Pibor and Lekuongole, and Dorain will remain open. Overall, the situation in Pibor county is improving: a peace agreement was settled between the Murle rebels and the government, and the IDP are coming back home. A post-emergency strategy is under discussion.

2.2.4. Mali intervention

Mali has been subject to major geopolitical changes since the beginning of 2012. The second half of 2012 witnessed the defeat of the MNLA by AQMI, MUJAO and Ansar al Din, and the consequent installation of an administration based on Koranic Law (Sharia) in most of the northern territories.

The Islamist groups continued to rule until the beginning of 2013, when attempts at international mediation with some of the rebel groups (notably MNLA and Ansar al Din only, as AQMI and MUJAO are considered terrorist groups) were interrupted by an attack at Konna, the last military advanced post of the Malian Army in the North.

The advance of these armed groups triggered France's military intervention on 11th January 2013. Known as Operation Serval, the French and African coalition (Malian national, Chadian, and other West African soldiers) gradually reclaimed and secured northern cities and territories.

In early 2012, the combination of conflict and a food security crisis led OCB to resume its operations in Mali: following exploratory missions carried out in February-April 2012, the decision was made to start an emergency intervention in Mali and in Mauritania for medical care of refugees (cf. Medical Activity Report 2012, Emergency Unit section, §2.2.2.). During and immediately after the conflict in 2013, there was a lack of access to quality primary and secondary healthcare services, mainly due to the unavailability of health staff, essential drugs and medical supplies in the affected areas. The main focus of the emergency response was therefore to mitigate the effects of the conflict on affected communities, and

Table 3: OCB activities in the Mopti region, Mali, 2012-2013

	Activities 2012 (week 26-52) N (%)	Activities 2013 (week 1-47) N (%)	Total 2012-2013 N (%)
Outpatient department			
Consultations	4,762	91,829	96,591
Consultations <5 years	1,333 (28%)	25,650 (28%)	26,983 (28%)
Referrals	122 (2.6%)	473 (0.5%)	595
RDT positive cases	2,049 (43%)	23,671 (26%)	25,720
SRH department			
ANC consultations (total)	434	7,691	8,125
ANC consultations (first)	230 (53%)	3,384 (44%)	3,614 (45%)
Maternal admissions	14	379	393
Maternal deaths	0 (0%)	13 (3.4%)	13 (3.3%)
Maternal referrals	1 (7.1%)	10 (2.6%)	11 (2.8%)
Deliveries	96	1,528	1,624
Inpatient department			
Admissions	111	855	966
Exits	99	837	936
Deaths	3 (3.0%)	88 (11.5%)	91 (9.7%)
Referrals	12 (12.1%)	46 (5.5%)	58 (6.2%)
Cases of severe malaria	51 (52%)	236 (28%)	287 (31%)
Surgery			
Surgical cases	11	104	115
Trauma surgery	0 (0%)	2 (1.9%)	2 (1.7%)
Intra-operative mortality	0 (0%)	0 (0%)	0 (0%)
Vaccination			
Pentavalent (3 doses)	0	2,086	2,086
Measles	0	1,818	1,818
Pneumococcal vaccine (2 doses)	0	1,372	1,372
Nutrition			
TFP admissions	NA	2,539	2,539
TFP exits	NA	1,930	1,930
Deaths	NA	137 (7.1%)	137 (7.1%)
Defaulters	NA	471 (24.4%)	471 (24.4%)

ANC: antenatal care; **RDT:** rapid diagnostic test; **SRH:** sexual and reproductive health; **TFP:** therapeutic feeding programme

to support the Ministry of Health (MoH) in the development of nutrition centres.

At the beginning of 2013, the E-Unit handed over the activities in the refugee camps in Mauritania to the operational cell, while maintaining the operations in Mali. Following stabilisation of the context, OCB closed the intervention in Mali in November 2013 and handed over the activities to the MoH.

Activities in Mali in 2013 included:

- Nutritional programme in Mopti: started in June 2012 with the hand-over to Save the Children the 1st of March 2013
- CSCOM ("Centre de Santé Communautaire") Konna: support to the public health facility from January 2013 to September 2013.
- CSCOM Douentza and CSREF ("Centre de Santé de Référence") Douentza: support from October 2012 to November 2013.
- CSCOM Hombori and Boni: supported since November 2012, but interrupted in December because of security concerns. Support by distance was restarted in week 17, with regular visits from July onwards. End of support November 2013.
- CSCOM Bore: supported from mid-April to end of November 2013.

In all these structures, in addition to the medical activities (table 3), MSF teams performed several rehabilitation and WatSan activities, such as ensuring water points and soap hand-wash points accessibility, spraying of the structures, shower and latrines rehabilitation/construction, set-up of electricity and support to the EPI cold-chain. A referral system was set up for complicated cases to the referral centre of Douentza or to the referral hospital in Mopti.

Data of the intervention are presented in table 3 (p.25).

Table 4: Supply costs OCB emergency interventions, 2012-2013

	2012	2013
Logistic	€ 1,033,104 (30%)	€ 803,833 (18%)
Medical	€ 1,700,028 (50%)	€ 2,737,544 (61%)
WatSan	€ 489,039 (14%)	€ 213,923 (5%)
Therapeutic food	€ 178,876 (6%)	€ 755,630 (17%)
Total	€ 3,401,317	€ 4,510,930

2.3. EMERGENCY PREPAREDNESS

In South Sudan, a specific Eprep was performed, focusing on preparedness for population movements, with medical, logistical and WatSan response capacity for a new influx of 10,000 people. War-wounded Eprep (scenarios and stock preparation) was performed in Lebanon and in Turkey. In Mali and Mauritania, a general Eprep had been set up by the E-unit in 2012, and in CAR a general basic Eprep was set up by the end of the year.

3. HUMAN RESOURCES AND TRAINING

The E-Unit continued to have three permanent emergency coordinators and three permanent support staff (HR, Logistic/Supply and Finance). Additionally, a task force for Syria, consisting of one dedicated emergency coordinator, one general support position and one medical position, has been embedded in the E-unit since 2012. The number of field emergency coordinators (medical and non-medical) remained at approximately 8-10 throughout the year. Up to November 2013, there were more than 260 departures under E-Unit interventions, with the highest peak in November-December with the interventions in CAR and the Philippines.

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 MedCo trainings and meetings.

4. LOGISTICS/SUPPLY

An overview of the logistic and supply support required for emergency interventions in 2012-2013 is provided in table 4: costs increased significantly in 2013, in particular for medical material and therapeutic food.

5. COMMUNICATION AND E-UNIT

The E-Unit contributed to specific communication initiatives to increase visibility and leverage. Focused interventions which were communicated included Mali (on access to the conflict), Mauritania (dire conditions of the refugees), South Sudan (displacement in Pibor), and Syria (visibility of medical aspects, chemical weapons, calls for humanitarian access).

6. NEW DEVELOPMENTS AND INNOVATIONS

Developments in 2013 included:

- Finalisation of the mobile surgery/anaesthesia kit (Risk kit).
- Revision of the contents of the emergency stock.
- Finalisation of the "Emergency Boat".

7. LOOKING BACK AND AHEAD

LESSONS LEARNED IN 2013

A number of specific lessons were drawn from field interventions:

- The Eprep training and implementation support continued to show its added value in the field for emergency interventions.
- Emergency responses continue to need to be adapted in “special contexts” with “out of the box” strategies.
- In order to continue to improve security, training and improvement of the tools of the emergency field coordinators is required.

PROSPECTS FOR 2014

- The training/support for Eprep will be continued, in particular in contexts where emergency scenarios may be anticipated.
- The collaboration with external specialists (Orthopaedist International Association, Renal Disaster Relief Task Force, Handicap International, Disaster Epidemiology Centre) will be continued and strengthened.
- The organisation of the different scenarios for the modular field hospital (priorities and simplification of delivery) will be finalised.
- The collaboration with the Pool d’Urgence Congo (PUC) will be continued.
- Further close interactions are foreseen with the Rio Office (Brazil) in terms of HR (two positions open for Emergency coordination in Rio) and support of the general overview on emergency assessment.
- The level of 10-15 mobile team members will be maintained throughout 2014.
- The preparation of the E-coordinators on security and risk analysis management will be continued.
- Better mapping possibilities will be evaluated and put in place in emergencies.
- The emergency stock items will continue to be revised/updated.
- The new reconstruction approach (DeltaWood) which was implemented in the Philippines intervention will be evaluated.
- The Extranet MSF Supply for the E-Unit will be developed further.

EPIDEMIOLOGY

EPICENTRE

1. OVERVIEW

Results of Epicentre epidemiological studies provide MSF with evidence to improve their interventions and medical care. Results may also 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. Two epidemiologists are integrated into the MSF-OCB Medical Department (Operational Research and Disease Control Units) in order to enhance communication and facilitate the emergence and implementation of new research projects.

2. ACTIVITIES

2.1. RESEARCH IN EMERGENCY SETTINGS

Epicentre epidemiologists supported three MSF-OCB field interventions in 2013 (Table 1).

2.2. SUMMARY OF OTHER RESEARCH CONDUCTED IN 2013

The key research areas for the Department of Epidemiology and Population Health (within Epicentre) are vaccine preventable diseases, diarrhoeal diseases, mental health, surgery, diagnostics, antibiotic resistance and nutrition. The Department of Clinical Research focuses specifically on HIV/AIDS, tuberculosis, malaria and neglected diseases. During 2013, MSF-OCB collaborated in a number of these research activities.

2.2.1. Vaccine preventable diseases

Between 2010 and 2012, a surveillance system was put in place in the Maradi region of Niger and in Niamey in order to assess the burden of rotavirus and to provide a profile of diarrhoeal disease in children less than five years of age. Results of the study provide an important baseline prior to the introduction of a rotavirus vaccine. The study has been accepted for publication (Emerging Infectious Diseases, April 2014) and a second article on the bacteriology results is in preparation. The surveillance continued (and has just been completed) in a subgroup of sentinel sites, with

Table: Epicentre/MSF-OCB field interventions in 2013

Country/project	Intervention	Topic
Syria	Technical support for data collection of all MSF sections	Complex emergency
South Sudan	Survey	Mortality
Eastern DRC	Surveillance and data compilation of MSF-OCB, OCP, OCG	Measles

DRC: Democratic Republic of Congo; **OCB:** Operational Centre Brussels; **OCG:** Operational Centre Geneva; **OCP:** Operational Centre Paris

a particular focus on the links between rotavirus and malnutrition. Once data analysis is complete, a report and publication of the findings are expected in 2014.

In 2013, a trial designed to investigate the impact of a mass pneumococcal conjugate vaccination using reduced dosages for infants was put on hold due to difficulties in obtaining the vaccines from the manufacturers. Instead, a survey was implemented in Sheema District (Uganda) to assess the prevalence of nasopharyngeal carriage of *S. pneumoniae* and the pattern of person-to-person contacts in relation to the spread of *S. pneumoniae* within the study population. These data will be used to monitor the effectiveness of the current introduction of PCV in this East-African region and using modelling, to estimate the potential impact of different vaccination strategies.

Epicentre and OCB, supported by the MSF Innovation Fund, are also beginning a study in 2014 to examine the heat stability of measles vaccine. If measles vaccine could be used effectively in a controlled temperature chain (i.e. at ambient temperatures, rather than the normal cold chain temperature), some of the current logistical constraints could be overcome and vulner-

able populations better reached. This study will be conducted in collaboration with several outside partners (Serum Institute of India and WHO).

The MSF Innovation Fund is also supporting Epicentre to examine the possibility of needle-free delivery of measles vaccine. Specific sites and details of this demonstration project have yet to be determined, but the project is expected to provide important results with respect to the delivery of vaccines in mass campaigns.

2.2.2. HIV

In 2013, Epicentre conducted multi-centric analyses on pre-ART care among adults patients treated in MSF HIV programs. The databases used for the study were gathered from various MSF African and Asian HIV/AIDS projects, including those from MSF-OCB.

Epicentre was invited to join the CIPHER² Paediatric HIV cohort collaboration, a major initiative devoted to accelerating research in paediatric HIV. Epicentre will contribute to the project by providing data from the MSF paediatric HIV cohorts (including data from MSF-OCB) and participating in the development of concept notes. The pri-

² Collaborative Initiative for Paediatric HIV Education and Research

ority research questions will focus on global epidemiology of adolescents with perinatal HIV infection and on the duration of effective first-line antiretroviral therapy in children.

In 2013, Epicentre finished collecting the data for a population based study designed to measure HIV prevalence, incidence and programme coverage in order to assess the scale-up efforts in MSF-OCB projects in Mbongolwane and Eshowe (Uthungulu District, Kwazulu Natal, South Africa). Data analysis, report writing and dissemination of findings are planned for 2014. This study will provide 'household-level' data and refined understandings about the HIV epidemic that will be used to help MSF orientate its operational strategies in this area.

Epicentre was also appointed to help develop a study protocol for a UNITAID project that will be conducted in collaboration with four MSF Operational Centres, and the Access Campaign (Campagne d'accès aux médicaments essentiels – CAME). The project will oversee the introduction of a new Hepatitis C treatment for HIV patients in six different countries. The OCB fields that are involved are located in Kenya (Kibera), India (Mumbai), and Ukraine. The proposal is due to be finalised and submitted for ethics approval in February 2014, and the study is likely to start at the end of 2014. Epicentre will support the development and management of the multicentric database. In addition, in Kibera, the project will include the validation of new point of care serologic and virologic Hepatitis C tests.

Supported by Epicentre, the MSF inter-sectional study that began in 2011 to evaluate the performance of new and currently used rapid diagnostic tests for HIV in five African countries, was completed in five of the six study sites (the last site being DRC). Final results are expected in 2014. One MSF-OCB site (Conakry, Guinea) was included in this multicentric study.

Finally, the yearly "FUCHIA bulletins" were released, providing a standardised descriptive analysis of HIV-infected patient outcomes for the five MSF-OCB HIV projects using FUCHIA.

2.2.3. Malaria

In 2013, a study of children under five in Uganda, evaluating the time taken for three malaria rapid diagnostic tests (RDT) to become negative after successful treatment, was completed. The report is currently being finalised.

In Maradi (Niger), the recruitment of 663 children aged 6 to 59 months in a study examining the field efficacy of ACTs³ for the treatment of uncomplicated malaria started in December 2013 and should be completed in 2014.

In Mali, a study evaluating the efficacy and bioavailability of Artemether-Lumefantrine fixed-dose combination for severely malnourished children compared to non-severely malnourished children began in collaboration with the Malaria Research and Training Centre (Bamako). In 2014, participant recruitment in a second site in Maradi (Niger) is expected to start.

In 2013, Epicentre began supporting MSF-OCB to evaluate seasonal malaria chemoprevention (SMC) in children in Niger. Two surveys were conducted in the area of Guidan Sori, during the first and last treatment distributions. Estimation of SMC coverage was excellent with 98.8% of the targeted children receiving the four treatment regimens. The use of mosquito nets in the area was also found to be high. An analysis of malaria surveillance data, collected between 2010 and 2013, is underway and will support the evaluation of the impact of SMC.

Finally, Epicentre provided support for the protocol development of a cross-sectional population-based malaria survey planned in Preah Vihear province, Cambodia.

2.2.4. Miscellaneous

The laboratory working group, with the support of Epicentre, finalised a protocol for a laboratory-based Phase 2 evaluation of a handheld creatinine analyser (Nova Stat-Sensor® Xpress™ Creatinine) that might be suitable for MSF settings. This evaluation was conducted in 2013 in collaboration with the University Medical Center, Utrecht, Netherlands. The handheld analyser was found to be reliable but with mod-

erate accuracy compared to the reference method. Discussions with relevant clinicians are thus still needed to define the possible use of the test. The report is currently being finalised and a manuscript is due to be written.

In 2013, Epicentre was invited to support OCB's Hepatitis C project in Egypt both in discussing the research agenda and developing collaboration with local and international institutions involved in Hepatitis C research in Egypt. A visit to Egypt was planned in 2013 but has had to be postponed because official authorization could not be obtained. This will hopefully be resolved in 2014.

2.3. NIGER RESEARCH CENTRE

During 2013, MSF-OCB continued to support the Epicentre research base in Niger. The studies in progress included an ambitious project on the use of a new heat-stable rotavirus vaccine. Other studies focused on i) the systematic use of amoxicillin in children with uncomplicated severe acute malnutrition (double-blind randomised trial) ii) surveillance of resistance in the context of SMC iii) ongoing support to epidemiologic and laboratory surveillance (including meningitis and influenza), as well as the ongoing studies listed above.

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.

3. TRAINING

During 2013, 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 2013, the content of the PSP was revised to take into account the recommendations of the global PSP evaluation of 2011.

³ Artesunate-amodiaquine, dihydroartemisinin-piperaquine and artemether-lumefantrine combination therapies

4. LOOKING BACK AND AHEAD

LESSONS LEARNED IN 2013

In 2013, Epicentre organised a structured reflection⁴ on its functioning, financial mechanisms, activities, impact, recognition of expertise and visibility. The objective was to identify innovative ways to improve Epicentre's work and communication in order to better respond to the medical priorities of MSF and its beneficiaries. Valuable suggestions for improvement resulted from this exercise and will contribute to the finalization and subsequent implementation of Epicentre's strategic plan.

PROSPECTS FOR 2014

The main prospect for 2014 will be to implement the recommendations from the reflective exercise in 2013 and to keep MSF updated on its progress. 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 OCB. In relation to the latter, a particular interest will be in the field of surgery with the hope that various related research projects can be implemented in 2014. Finally, Epicentre will continue to work on improving its interaction, communication and collaboration with MSF-OCB partners both in the field and at headquarters.

⁴ SWOT analysis: Strength, Weakness, Opportunities, Threats

EVALUATION UNIT

1. OVERVIEW

The Stockholm Evaluation Unit (SEU) has continued with its aim to manage credible evaluations and other lessons learned exercises on behalf of OCB and other operational centres. Over the course of the year, more than twelve evaluations and reviews were completed and were made available throughout the movement and beyond.

2. PROGRAMME ACTIVITIES

During 2013, the unit managed eight project evaluations as well as supporting a number of reviews and workshops on lessons learned. From the eight project evaluations, five were carried out under donor agreement, one as a specific donor request and two on the request of the operational directors. One evaluation was focused on a large scale emergency intervention (table 1, Annex).

3. INNOVATIONS AND COLLABORATIONS

The unit continued to work closely with other evaluation entities in the movement, and in 2013 again contributed to the Intersectoral Evaluation Day in Paris. The event acted as a showcase for evaluation work and as an opportunity to learn from and be accountable to each other.

4. HUMAN RESOURCES AND TRAINING

- The SEU continued to invest in strengthening MSF evaluation capacity through the international training held in Athens.

The training was attended by 24 staff from around the movement and was directed at people in both operational management and technical support departments.

- All eight evaluations carried out during 2013 were conducted by independent consultants with strong evaluation skills and competencies. Only two evaluations used evaluators with an MSF professional history.
- A second full-time equivalent (FTE) was added to the unit during the year in response to the increased number of requests for evaluations, and to support the work on quality and utilisation of evaluation.

5. LOOKING BACK AND AHEAD

LESSONS LEARNED IN 2013

- Ensuring field involvement in the evaluation process from start to finish remains a central challenge to the work of the unit. During the year there were no evaluations carried out at the direct request of the field and their involvement was consequently not optimal.
- The quality of evaluations is central to the utilisation and follow-up on findings and recommendations, and needs to be a central focus of the process. In response to this need, the unit has started working with a quality control template in order to monitor the quality of the evaluation process and outputs.
- The value of the external perspective has become increasingly apparent and is reflected in the quality of the outputs. The external perspective not only provides new insights into our projects but often comes with more robust methodology and approach.

PROSPECTS FOR 2014

- In an attempt to involve the field more directly, the unit will start working in a more direct way with the field management. A key part of this will be involving the field in the identification of purpose and scope of the evaluation and the development of the terms of reference.
- In order to ensure that operations have the capacity to follow up on the evaluation outcomes and recommendations, the number of full project evaluations in OCB will be limited to five in the future. This will also allow space to increase the number of evaluations managed on behalf of other operational centres.
- Following from the lessons in 2013, the unit will adopt a mixed team approach to evaluation that will capitalise on the strengths of both our internal evaluation capacity and the external expertise available.
- During the year the follow-up on recommendations will be firmly integrated into the monitoring meetings at the operational level and presented to the OCB board once per year. The number of recommendations will be controlled.

HEALTH INFORMATICS

1. OVERVIEW

Within OCB, there are two main data collection tools used for standardised monitoring and reporting of medical programme data: a) the Epicentre tools for outpatient and inpatient departments and gynaecology/obstetrics services (OPD/IPD/Gynobs tools) and b) the Medical Information Network for Operational support (MINOS). MINOS is an information system, designed and developed in-house, for the collection, storage, transmission, analysis, and reporting of medical service data.

In addition to the Epicentre tools and MINOS, customised databases tend to be used for the collection and reporting of data in vertical projects (e.g. vertical HIV projects), for more specialised activities (e.g. sexual violence, neonatology) and in emergency projects. However, the Epicentre tools were adopted in several of the emergency interventions in 2013 (such as the Philippines, Mauritania and Mali).

The Epicentre tools were used in 12 out of the 27 missions where OCB was working while MINOS was used in six.

2. OCB ROUTINE DATA TOOLS

At the end of 2013, nine OCB projects were using MINOS as their main data reporting tool (South Sudan - Gogrial, Doro, Pibor; Afghanistan – Ahmad Shah Baba, Kunduz, Khost; Pakistan - Timurgara, Karachi; Egypt - Abu Elian), and 12 were using the Epicentre tools. The projects using neither tended to be those projects that require individual level data, e.g. HIV/AIDS, TB, mental health, etc. The distribution of data tools in use throughout the year is provided in figure 1.

Among the 1,346,649 general OPD consultations (disregarding ante- and postnatal care and family planning consultations), 58% were reported through the Epicentre tools and 31% through MINOS (fig. 2); among the 61,471 general IPD admissions, disregarding admissions to inpatient thera-

peutic feeding centres (ITFC) and maternity admissions, 65% were reported through the Epicentre tools and 18% through MINOS (fig. 3). These figures reflect the relative expansion/roll-out of MINOS (cf. §2.2.): in 2012, 19% of the OPD consultations and 11% of the IPD admissions were reported through MINOS.

2.1. EPICENTRE TOOLS

During 2013, 12 out of the 15 missions that were supposed to have implemented the Epicentre tools were using them. Afghanistan shifted from the Epicentre tools to MINOS during the year. The sum-up tool that was generated in 2012 in order to aggregate data across different Epicentre tools was used in DRC, Mauritania, Niger and Sierra Leone.

2.2. MINOS

MINOS handles aggregated data of most standard MSF services. For these services, MINOS produces and displays the standard project monitoring and epidemiologic surveillance indicators. These indicators show the use of MSF medical services by the beneficiaries, the quality of those services, and the trends of the occurrence of diseases of operational interest.

2.2.1. Implementation

At the beginning of 2013, MINOS was being used in seven projects across four missions (Pakistan, South Sudan, Somaliland and Egypt). By the end of 2013 this had increased to nine projects across four missions (Afghanistan started, Somaliland closed). Additionally, MINOS was installed and configured in DRC in preparation for its use starting in 2014.

Figure 1: Main data tools per OCB project, 2013 (n=78)

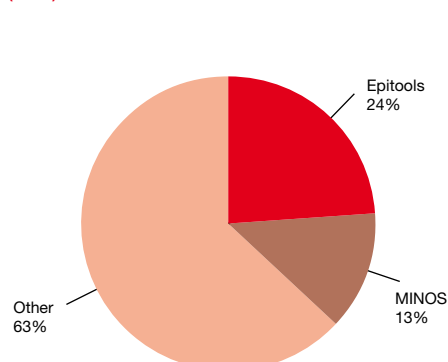


Figure 2: OCB data reporting tool for OPD consultations, 2013 (n=1,346,649)

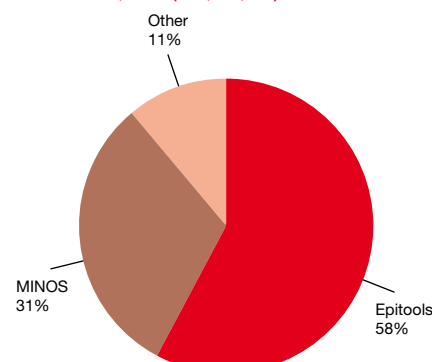
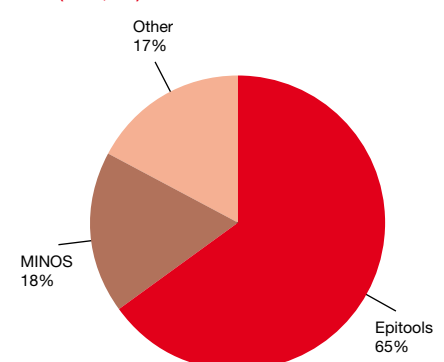


Figure 3: OCB data reporting tool for IPD admissions, 2013 (n=61,471)



2.2.2. New developments

During 2013 MINOS was being primed to replace the Epicentre tools as the standard tool for collecting, reporting and analysing aggregate data on OCB medical activities. To that end, work to enhance the reporting functionality of MINOS began in late 2013. Additionally, a number of usability enhancements were developed over the course of the year to improve the quality of data collected and the interpretation of the data visualisations that MINOS generates.

2.3. OTHER DATA TOOLS

Dedicated databases for the monitoring of vertical HIV/TB projects and specific activities such as mental health, nutrition, sexual violence, and surgery are discussed in the relevant sections. Of note, a new database for maternity/obstetrics collecting data at the individual level was implemented over the course of 2013: initially designed for the

maternity project in Khost (Afghanistan), it can be adapted to all projects providing maternal care, and was distributed to the projects in Timurgara (Pakistan) and the Gondama Referral Centre (Sierra Leone). Some individual electronic databases, specifically the new maternity database and the neonatal database, were updated to facilitate transfer of data from these individual registers to MINOS as aggregate data repository. This procedure answers the project needs for individual level data, pending the capacity of MINOS to also process individual data.

2.4. TYPOLOGY

All routine programme data not reported through the Epicentre tools, MINOS or a dedicated database were collected directly in the annual Typology data compilation. The Typology is an initiative by the MSF International Office, designed to collect a set

of intersectionally-agreed volume indicators, aggregated per year. In OCB, the typology data collection process is integrated into the annual collection of all programme indicators, in order to avoid burdening the field with multiple parallel requests.

Most missions, in particular those using the routine data tools, reported in a timely manner. Conversely, some emergency missions and HIV projects, which rely on Ministry of Health (MoH) data for some indicators, experienced difficulties in compiling all data. Questions continued to be raised on the relevance and applicability of a number of typology indicators: in particular HIV projects, which are increasingly implementing a "light approach" (where support is mainly given to MoH programmes), struggled to reconcile their indicators and data management systems with the typology requirements.

3. LOOKING BACK AND AHEAD

LESSONS LEARNED IN 2013

- While there is still scope to improve the quality of data collected in OCB projects and the timeliness of data reporting, the mind-set towards data collection at a field level is much more positive and pro-active than ever before.
- Aggregation of data collected using the Epicentre tools is now possible with the sumup tool and its implementation has received very positive feedback.
- MINOS is designed to be customised at the project level to meet the needs of field teams. As a result, successful mission deployment requires the physical presence of a mobile implementing officer to facilitate individualised configuration, training, and support. A "remote" implementation (attempted due to a security travel restriction) resulted in a failed deployment that required a subsequent visit by the team to remedy.
- Finally, the desire for more detailed analyses and reporting of MSF activities and the health of our beneficiaries is growing at all levels of the movement. Many of these analytical needs are not effectively met using the aggregate, summarised information that is regularly recorded electronically in many projects as opposed to detailed, patient-level data. The process of adapting individual electronic databases for "MINOS compatibility", as was done for the individual maternity and neonatology databases, may address this issue.
- Collecting data from projects which were closed over the course of 2013 was challenging, in particular following the redistribution of missions between the operational cells at the end of 2013. Ownership and availability of data should be taken into consideration during/following the handover process to avoid gaps in the annual overviews.

PROSPECTS FOR 2014

- We will continue to provide the necessary support to those missions where MINOS is not available or where the opportunity to implement MINOS might be limited (e.g. during an emergency intervention). In this vein, there will be a continued emphasis on ensuring that staff are adequately briefed on data management issues before going to the field, together with providing training in the field as required.
- Efforts to improve the quality of our data will continue to be a major focus in 2014. Fundamental to this is ensuring that good links are established and maintained between the medical department, the cell and staff in the field, and that there is a mutual appreciation of the importance of data collection and reporting.

HEALTH PROMOTION AND SOCIO-ANTHROPOLOGY

1. OVERVIEW

Health Promotion (HP) activities continued to be well integrated into both existing and new projects as well as emergency interventions. Although there were no significant changes to note since last year, 2013 saw an increase in the provision of anthropological support to projects. This possibly reflects an increased awareness of the added value of anthropology and an increased interest in community-based approaches. The latter is becoming an increasingly common component in our projects and requires deeper anthropological understanding. Collaboration with other MSF-sections continued and all sections are now part of a Contact group, with a designated person identified in 2013 to be the focal point for regular contact group meetings. These meetings provide a forum for the sharing of experiences and tools related to HP and anthropology.

2. PROGRAMME ACTIVITIES

2.1. HEALTH PROMOTION GENERAL OVERVIEW

In 2013 HP activities were conducted in 28 projects across 17 missions (not including vertical HIV/TB projects, which are reported elsewhere – cf. HIV/TB section). These projects included emergency interventions (four projects; table 1, annex) and regular projects (24 projects; table 2, annex).

2.2. HEALTH PROMOTION ACTIVITIES AT A PROJECT LEVEL - EXAMPLE

We present two examples of projects in which HP activities formed a core component in 2013.

Example 1: HP activities in Timurgara, Pakistan

During 2013, a total of 4728 HP sessions were undertaken, involving 56,448 participants in Timurgara hospital, Pakistan. HP sessions were undertaken in different departments and wards, covering the following topics: danger signs in the post-partum period, the importance of exclusive breastfeeding, danger signs in pregnancy, baby care, antenatal care (ANC), the importance

of birth spacing, immunisation, the responsibilities that men have for caring for pregnant women, personal hygiene, house hygiene, food and water hygiene, ward hygiene, blood Donation, diarrhoea, diabetes, measles, malaria, cholera.

Example 2: HP activities in Machar Colony, Karachi, Pakistan

HP activities took place in the health clinics and in the community for the purpose of service promotion, awareness raising and to better understand the social cultural context in Machar colony (Table 3).

3. TRAINING AND HUMAN RESOURCES

Trainings that included HP or socio-anthropology were as follows:

- Water and Sanitation (WatSan) week in emergencies: module “Health promotion in WatSan 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”

- Health Promotion level I training in Brussels: ten day training, open to all sections (the training curriculum for this course was revised to include additional HP modules. As such, the HP level II training session was not offered in 2013).
- Health Promotion Workshop in Kinshasa: 5 days regional training open to all sections and the neighbouring countries
- Population in precarious situation (PSP): HP training integrated into the WatSan module (new in 2013)
- Vacci-Nut training, MSFOCP: HP integrated into the case studies used to discuss social mobilisation (new in 2013)

4. RESEARCH AND DEVELOPMENTS

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 routinely conducted in 2013 as part of HP activities. These included the following:

- Burundi - Gitega & Kabezi: qualitative surveys on family planning in order to better understand the decision making process behind choosing a family planning method and community perceptions of family planning methods.
- Cambodia – Preah Vihear: anthropological part of the baseline survey “A cross-sectional population-based malaria survey Preah Vihear province”: health seeking behaviour of people when they are sick in general and when they have malaria in particular.

Table 3: Health Promotion activities in Machar Colony, Karachi, Pakistan 2013

HP sessions in the clinics	n	HP sessions in the community	n
Number of sessions	6,569	Number of sessions	711
Number of participants	78,090	Number of participants	16,112

HP: Health Promotion

- Afghanistan - Helmand: survey to measure antibiotic resistance survey – HP support for the collection of samples and acceptability of the survey
- Italy - Bergamo: “Chagas disease awareness-raising among Latin American (LA) migrants in Bergamo, Northern Italy: lessons learnt from an integrated service of hospital care (Center of Tropical Diseases of Sacro Cuore Hospital, CTD) and community tailored intercultural mediation and health promotion”.
- India - Andhra Pradesh, Chhattisgarh: a context analysis.
- Egypt - Abu Elian: survey on the quality of health service delivery
- Niger - Guidan Roumdji: Knowledge, Attitudes and Practices (KAP) on nutrition in the target population.

5. LOOKING BACK AND AHEAD

LESSONS LEARNED IN 2013

- The HIV/TB Patient and Community Support advisor is now fully integrated and operational in the Southern Africa Medical Unit (SAMU) and the HP-related activities are becoming increasingly more specialised within this domain. Nonetheless, good collaboration has been maintained between this advisor and the HP advisor in Brussels.
- In addition to the MSF-led trainings that we offer, it would be beneficial for MSF staff to attend external courses offered by other organisations in order to capitalise on the experiences of other actors outside of MSF.
- While recognising the importance of documenting and capitalising on lessons learnt from our experiences in the field, time constraints have unfortunately prevented us from doing this yet.

PROSPECTS FOR 2014

- Interest in community-based approaches is reflected in the MSF Prospects document 2014- 2017, and while HP is by no means the only programme component that needs consideration in relation to community-based approaches, it forms a core part of this type of strategy. Going forwards there will thus be a strong focus on building up expertise in this domain.
- Efforts will continue to be invested into increasing the visibility and quality of our qualitative data collection and surveys, in collaboration with the Operational Research unit.
- Finally, the MSF OCB Health Promotion Policy will be revised, and at the intersectional level, there are plans to standardise HP terminology and summarise these in a concept paper document.

HIV/AIDS AND TUBERCULOSIS

1. OVERVIEW

Mid-2013 saw the launch of the new World Health Organisation (WHO) guidelines, calling for countries to initiate patients on antiretroviral therapy (ART) at higher CD4 counts (up to 500 cells/ μ l), and expand eligibility criteria for initiation of ART regardless of CD4 count (i.e. all pregnant and lactating women, all children under five years, sero-discordant couples and those with TB or hepatitis B co-infection). Wide-scale implementation of these guidelines has the potential to turn the tide, but implementation remains the challenge. National policies in high burden countries are starting to adopt these guidelines, but the reality of implementation is often constrained by the uncertainties of international funding.

MSF-OCB has continued to invest in its large vertical programmes but has been progressively re-orientating its strategy to a “light approach”, supporting Ministries of Health (MoHs) to move towards the new WHO targets with the aim of impacting the HIV epidemic through demonstration of quality care throughout the different steps of HIV management.

Within OCB projects, there was an increase in new patients initiated on ART in decentralised primary health care sites in 2013, aided by implementation of the higher CD4 cell count initiation thresholds and implementation of a less toxic treatment regimen. However, the main focus was on improving retention in care through community based models of ART delivery and improving quality through the scale up of viral load monitoring. Another major focus in 2013 was reinforcing PMTCT in our programs, with a shift in many countries towards adoption of Option B or B+ (i.e. universal access to life-long ART for all pregnant women regardless of CD4 cell count) and improved identification of HIV in infants.

The other major change in the WHO guidelines has been to recommend routine HIV viral load testing as the monitoring strategy of choice. Thanks to funding from the UNITAID viral load initiative, one of the biggest achievements in 2013 has been the scaling up of routine viral load testing in the majority of OCB projects.

Finally, our 2012 ambition of integrating an HIV minimum care package in other OCB projects with an HIV prevalence of less than 1 % saw some progress in 2013. PMTCT activities were integrated into Maternal and Child Health (MCH) programmes in Burundi and the Democratic Republic of Congo (DRC) and there are plans to do the same in South Sudan in 2014. An ongoing review of operational priorities regarding the provision of HIV /TB treatment in non-vertical programme settings will remain a priority.

2. PROGRAMME ACTIVITIES

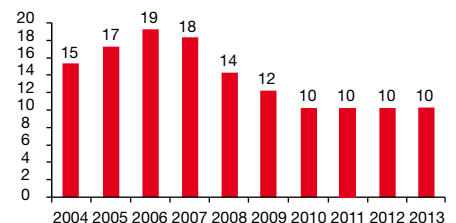
2.1. INTRODUCTION

2.1.1. HIV

At the end of 2013, OCB was supporting HIV care and treatment in 17 projects across 10 countries (fig. 1). Of these, 14 were vertical HIV/TB projects in the following eight countries: India (Mumbai), Guinea (Conakry), Democratic Republic of Congo (DRC -Kinshasa), Mozambique (Mavalane and Tete), Zimbabwe (Buhera, Gutu, Chikomba), Malawi (Thyolo and Nsanje), South Africa (Khayelitsha, KwaZulu-Natal and Musina), and Ukraine (Donetsk). In the

three 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), Lesotho (Roma) and DRC (Masisi). Most of the large projects have adopted a “light approach” (Thyolo, Mavalane, Buhera, Khayelitsha and Conakry) whereby MSF is not involved in supporting the spectrum of HIV/TB activities, but rather provides specific support just for ‘niche’ activities. This change in operational strategy is in response to the changing HIV environment where most first line adult care can now be provided by ministries of health supported by international funding.

Figure 1: Number of countries with HIV projects supported by OCB, 2004-2013



2.1.2. TB

In 2013 OCB continued TB-related activities in 13 TB or HIV/TB vertical projects in India, Guinea, Ukraine, Mozambique, South Africa, Lesotho, Malawi, Zimbabwe and Kenya. In five of these projects, where there is a

high burden of drug-resistant TB (DR-TB), the focus was on improving DR-TB case finding and diagnosis. This was supported by the further 'roll out' of rapid molecular testing for TB and drug resistance (Xpert MTB/RIF, also known as 'GeneXpert').

One new vertical TB project was implemented in the Jebel Awilia locality of Khar-toum in Sudan, with MSF supporting TB case finding, and TB diagnosis and treatment in several public health structures.

In non-vertical projects in settings with a high burden of TB, OCB was involved in delivering varying components of TB care depending on the needs of the setting.

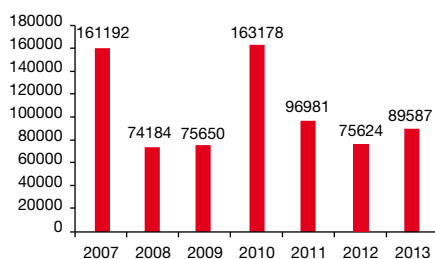
2.2. TESTING FOR HIV AND TB

2.2.1 HIV Testing

In 2013, HIV testing was supported by OCB in seven projects, and across these projects almost 90,000 HIV tests were performed (fig. 2). In most OCB projects, facility-based HIV testing is now being implemented by the respective Ministries of Health (except in Kenya and Guinea where MSF continues to support this activity). The overriding challenge, however, is access to testing for asymptomatic individuals. As such there was a sustained effort in 2013 to develop effective community based HIV testing strategies: in KwaZulu-Natal province and Lesotho, door-to-door and mobile testing strategies were ongoing; in Gutu, Zimbabwe, night-time testing strategies were implemented to target men and commercial sex workers; in Mozambique, HIV testing via members of community ART groups (CAGs) was rolled out; in Kinshasa a community-based HIV testing strategy was implemented and has been a major source of new HIV recruitments.

Self-testing using rapid oral testing devices is planned in a number of programmes in the coming year.

Figure 2: HIV testing supported in seven OCB projects, 2007-2013



2.2.2 TB case finding

In 2013, TB case-finding data were reported from 21 OCB projects; within these projects, a total of 6089 TB patients were registered during the year, about 6% of whom were retreatment cases (Table 1). Some projects reported a considerable increase in the number of registered TB patients: in Mon (India) 371 TB cases were registered in 2013, compared with 180 in 2012, with similar increases in KwaZulu-Natal, South Africa (905 in 2013 vs. 502 in 2012) and Mavalane, Mozambique (1237 in 2013 vs. 454 in 2012).. The largest TB cohorts were reported in South Africa, Zimbabwe, and Mozambique.

In 2013 OCB continued providing access to molecular diagnosis of TB, mainly through support for the implementation of Xpert MTB/RIF. Among new TB cases, the average proportion of confirmed pulmonary TB – by smear microscopy and/or by Xpert MTB/RIF – was 40%. The proportion of extra-pulmonary TB (EPTB) cases continues to be lower than expected in most projects, suggesting that these cases may be being missed. This implies the needs for more thorough clinical examination of patients with TB symptoms and improved interpretation of chest x-rays.

The proportion of children among newly registered TB cases declined even further: 6% in 2013, compared to 10% in 2012 and 14% in 2011. This is likely due to lack of

reporting from several nutritional projects in Niger and Sierra Leone, where most of the new paediatric TB cases have been diagnosed in previous years.

One hundred and twenty-one children - contacts of active TB cases - were reported to have been offered isoniazid preventive therapy (IPT) in 2013. Although higher than previous years (29 in 2012), this was still less than 2% of the total number of new TB patients registered during the year. This suggests that tracing and follow-up of child contacts needs to be more systematically addressed in all of our projects with TB activities.

2.3. PATIENT ENROLMENT

2.3.1. Pre-ART enrolments

In 2013, a total of 24,201 people were newly registered for HIV care and treatment in OCB-supported facilities (fig. 3). A package to prevent opportunistic infections, consisting of cotrimoxazole and isoniazid preventive therapy (IPT), continued to be implemented along with a new strategy that routinely screens for cryptococcal disease in those with advanced HIV disease (i.e. a CD4 count < 100 cells/μl). With WHO's expanded eligibility criteria for antiretroviral therapy (ART), the numbers of "pre-ART" patients are decreasing; the challenge now is to ensure greater access to HIV testing and successful linkage to care.

Figure 3: Number of newly registered HIV patients in OCB programmes by year of entry, 2005-2013

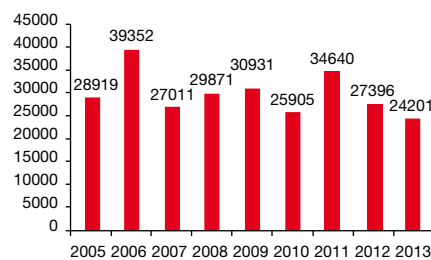


Table 1: Tuberculosis case detection in OCB projects, 2008-2013

	2008	2009*	2010	2011	2012*	2013*
Number of projects reporting data	23	14	21	22	17	21
Total number of TB cases registered	10,848	4,198	8,741	8255**	5960	6086
New cases	8,859	3,713	7,641	6869	5423	5729
- Confirmed pulmonary positive**	43	35	35	34	41	40
- Smear-negative pulmonary	36	40	43	45	35	46
- Extra-pulmonary	21	25	22	22	24	13
Retreatment cases (% of total)	2006 (18)	495 (12)	1100 (13)	884 (11)	560 (9)	357 (6)

* Data were not always available from all OCB projects with a TB component in 2009, 2012, and 2013

** Confirmed by smear microscopy or GeneXpert

*** One project was able to provide a total (n=502) but not a breakdown by new and retreatment cases

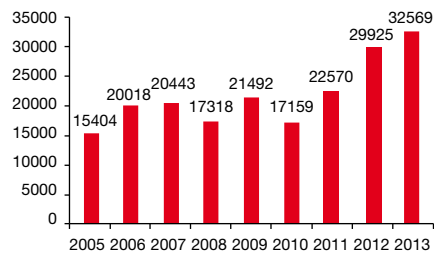
2.3.2. ART enrolments

A total of 32,569 adults and children were initiated on ART in 2013 in the 17 projects supported by OCB, which is a significant increase compared to 2012 (fig. 4). This is largely due to implementation of Option B+ for PMTCT (in which all pregnant women or lactating living with HIV are offered life-long ART, regardless of their CD4 count) in OCB programmes in Zimbabwe, Lesotho and South Africa at the end of 2012. The increased number of ART enrolments is also a reflection of MSF's light approach which has allowed a redirection of resources to facilitate the more rapid scale up of ART in a growing number of primary health care clinics.

2.3.2.1 Adult ART initiations

The largest number of adult ART enrolments in programmes supported by OCB continued to be in Malawi, Mozambique, Zimbabwe, and South Africa. In 2013, projects in Roma (Lesotho), Gutu (Zimbabwe) and KwaZulu-Natal (South Africa) joined Malawi in the implementation of Option B+ for PMTCT contributing to the increase in

Figure 4: ART initiations (adults and children) in OCB projects, 2005-2013

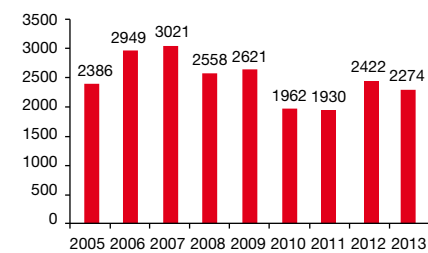


adult initiations (fig. 5). With the expansion of the eligibility criteria for ART up to CD4 500 cells/μl, and with more countries allowing ART for all pregnant and breastfeeding women, the initiation rate is likely to increase in the coming years.

2.3.2.2 Paediatric ART Initiations

In 2013, a total of 2274 children were initiated on ART in OCB-supported programs, a slight decrease from 2012 (fig. 6 & 7). All OCB supported projects have access to early infant diagnosis and along with South Africa by the end of 2013 most had moved to initiating ART in all HIV-infected children

Figure 6: Paediatric ART initiations in 13 OCB projects, 2005-2013



under the age of five, regardless of CD4 count.

The more toxic antiretroviral, stavudine (d4T), is no longer prescribed in first line paediatric ART regimens in any OCB projects, and all projects, apart from those in Malawi, are able to provide the more robust lopinavir/ritonavir (LPV/r) in first line regimens for PMTCT exposed HIV-positive children. South Africa, as an exception, provides a LPV/r-based first line regimen for all children under three years of age; despite this being a new WHO recommendation, use of LPV/r in children remains a challenge due to the lack of a paediatric formulation that is both heat-stable and palatable. OCB projects in Kenya, South Africa and Zimbabwe will participate in field evaluations of a new paediatric formulation of LPV/r in collaboration with the Drugs for Neglected Diseases initiative (DNDi) during 2014.

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 more than 85% of the cohort to be retained in care on ART at 12 months. For the 10 projects reporting cohort outcomes for patients initiated on ART during 2013, retention in care at 12 months ranged from 71% in the Kibera project (Kibera is an informal settlement, where there are high loss to follow-up rates linked to the mobility of the population), to 91% in the Gutu project in Zimbabwe (fig. 8). Most projects with rates of retention less than 85% are in urban settings or settings such as Musina and Lesotho where cross-border migration is very common. High rates of retention in Gutu are supported by the extensive decentralisation of services within the primary care network along with a strong civil society group that implements defaulter tracing.

Figure 5: Adult ART initiations by OCB in 14 projects, 2012 vs. 2013

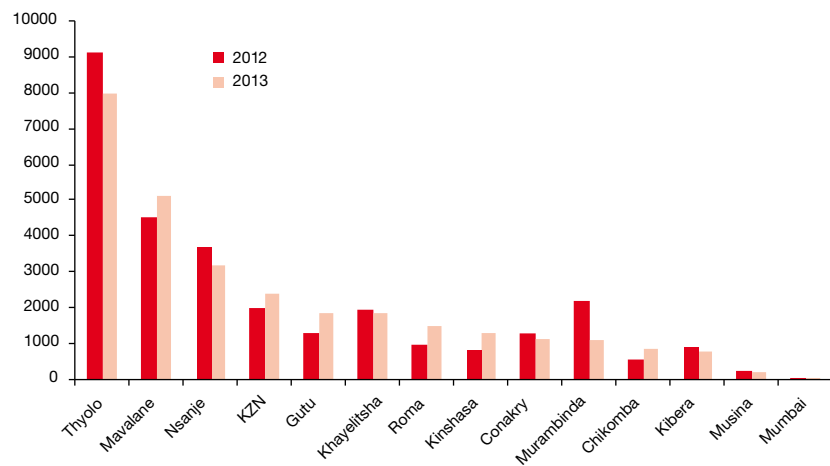
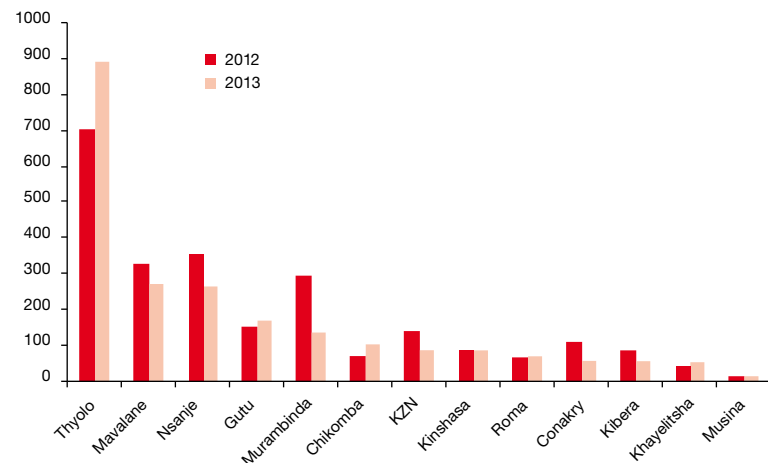


Figure 7: Paediatric ART initiations in OCB projects, 2012 vs. 2013



In many of the OCB-supported projects (South Africa, Lesotho, Mozambique, Malawi, Zimbabwe, Kenya, and DRC), community-based chronic care strategies (using CAGS and adherence clubs) are being implemented alongside clinic-based 'fast track' systems in order to decrease the burden on both the health facilities and patients; stable patients do not require clinical follow-up as often at health facilities which relieves the work burden for health care workers and the patients themselves are spared transport costs and time spent waiting at facilities. Improved access to routine HIV viral load testing means that, aside visits for drug refills, it is becoming feasible to schedule just one main clinical visit a year for patients. It is hoped that these 'out of clinic' strategies will continue to support improved retention in care despite the ever-growing size of the ART cohorts.

2.4.1.2 Paediatric ART outcomes

In 2013, paediatric RIC at 12 months on ART (fig. 9) was higher than that of adults, ranging from 68% in Kinshasa to 93% in Gutu. In most of the programmes, MSF paediatric ART has been decentralised to the primary care level and is being initiated by nurses. This means that children are able to access HIV care nearer to their homes, which in turn contributes to improved retention. While the paediatric cohorts have always had higher rates of retention than the adult cohorts, preliminary data from programmes scaling up viral load testing have highlighted that children tend to have higher rates of virological failure due to a combination of poor treatment adherence and use of a less potent treatment regimen. New formulations, additional investment in adherence support and efforts to ensure full disclosure of the child's HIV status by the age of 12 will need to be strengthened across programmes.

2.4.2. TB outcomes

TB treatment outcomes for patients with drug-sensitive tuberculosis were available for 3597 patients registered during 2012 from 10 projects. In most of the other projects, TB patients, once diagnosed, were referred to the respective National TB Programmes (NTP) for management without any further MSF support or involvement.

Among projects that had more than 20 new laboratory confirmed TB cases in 2012 the target treatment success rate of >85% was

Figure 8: Adult Retention In Care at 12 months, for patients initiated on ART in 2013 (10 OCB projects)

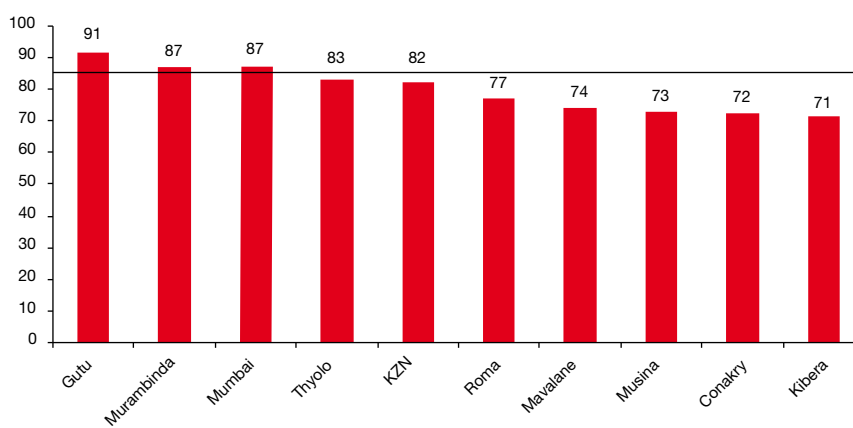


Figure 9: Paediatric Retention In Care at 12 months for patients initiated on ART in 2013 (nine OCB projects)

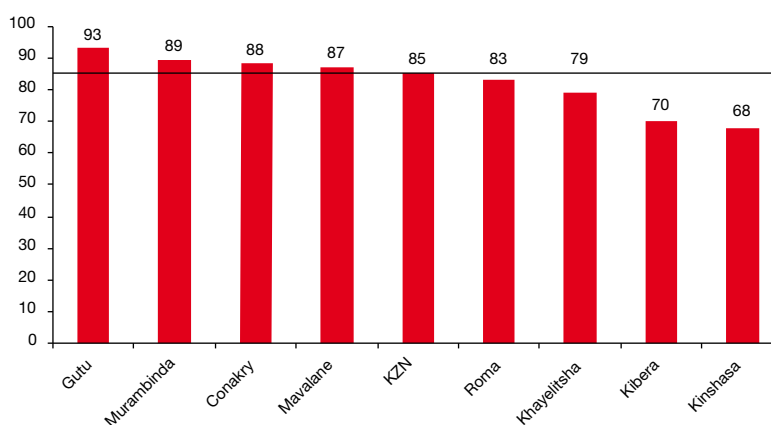
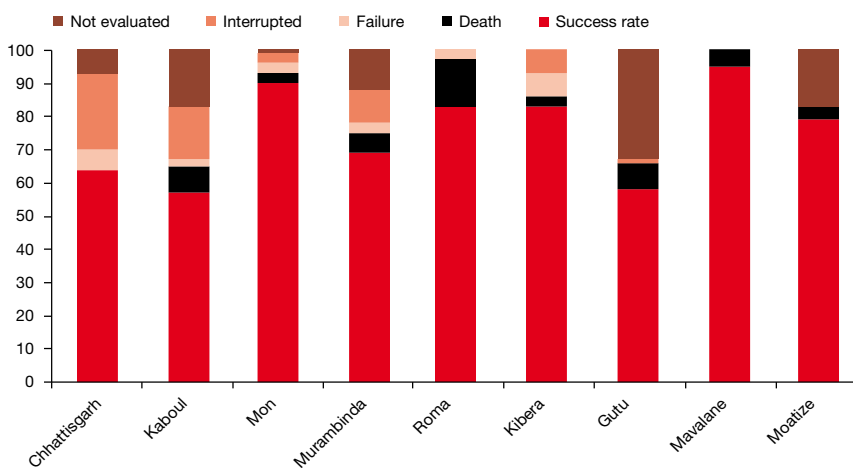


Figure 10: Treatment outcomes in OCB projects in 2012: sputum smear-positive TB



achieved in Mon, India (90%) and Mavalane, Mozambique (95%). Only one other project, Roma in Lesotho (83%), was close to achieving this target treatment success rate (fig. 10). Death rates exceeding the 10% target were observed in Roma (14%). High treatment interruption rates (i.e. 10% or more) were observed in Chhattisgarh, India (23%), Kabul, Afghanistan (16%), and Murambinda, Zimbabwe (10%).

Among projects that had more than 20 new cases of unconfirmed pulmonary TB (PTB) or EPTB (fig. 11 & 12) a combined success

rate \geq 85% was seen in Kibera (87%), Roma (89%), and Mon (90%).

Treatment interruption rates exceeding 10% were observed in Chhattisgarh, Murambinda and Kabul for EPTB and unconfirmed PTB. Mortality rates tended to be higher for patients with smear-negative and EPTB, due most likely to delays in diagnosis and initiation of TB treatment.

2.5. DRUG-RESISTANT TB

During 2013, 536 patients with multidrug-resistant tuberculosis (MDR-TB Multidrug-

Figure 11: Treatment outcomes in OCB projects in 2012: Unconfirmed PTB

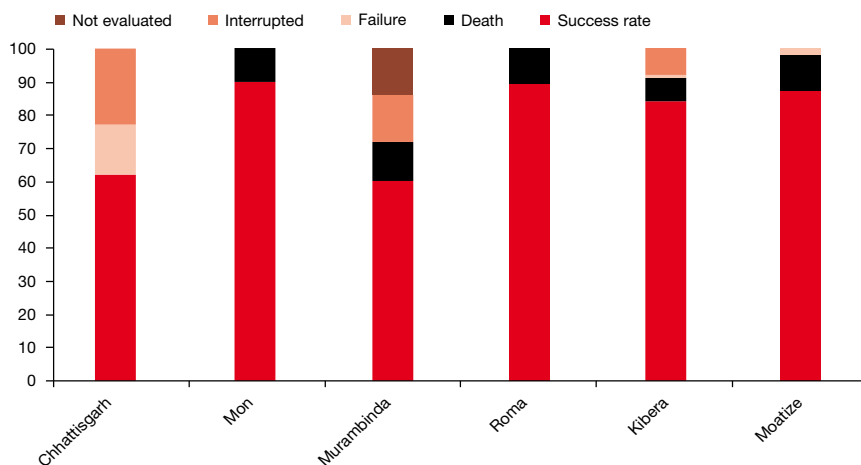


Figure 12: Treatment outcomes in OCB projects in 2012: EPTB

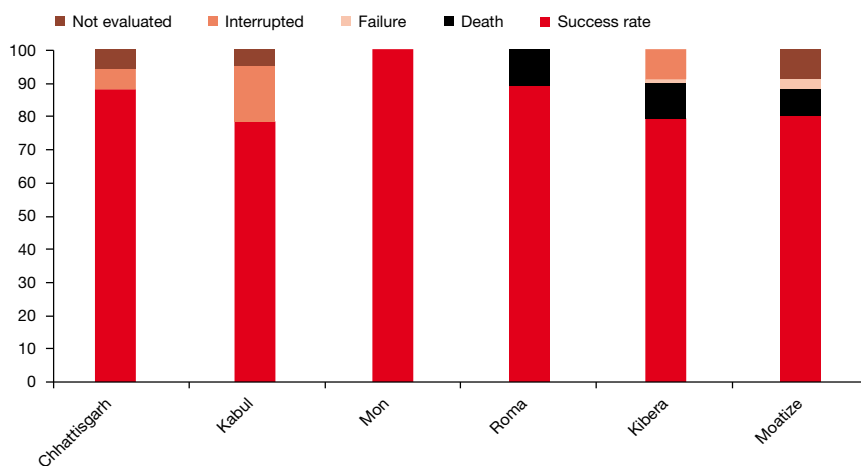
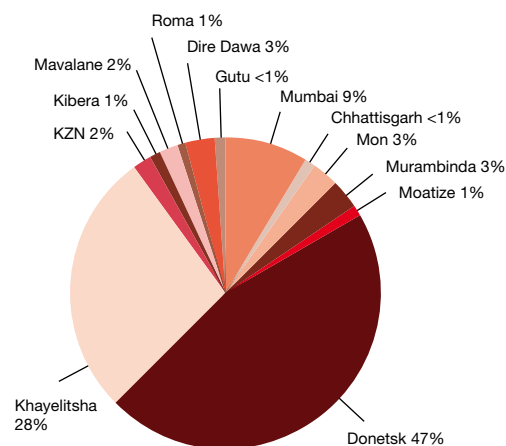


Figure 13: MDR-TB treatment initiations per OCB project, 2013



Among those tested, 63% were found to be HIV positive. The proportion of patients with known HIV status among registered TB patients was 67% in 2013 (vs. 64% in 2012).

Across all projects that reported data on TB patients co-infected with HIV, the overall coverage rate for cotrimoxazole preventive therapy (CTX) in these patients was 82% (vs. 77% in 2012).

The proportion of co-infected patients on ART was 58% overall: projects in Conakry, Donetsk, Gutu and Murambinda demonstrated lower rates of ART coverage, whereas rates were above 80% in Kibera, Mumbai, and KwaZulu-Natal.

Isoniazid preventive therapy (IPT) to prevent active TB disease in those co-infected with HIV was offered to 1619 adults (545 in 2012).

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. In summary, PMTCT is supported by OCB in seven countries (Guinea, Kenya, Lesotho, Malawi, Mozambique, South Africa, and Zimbabwe) and integrated in two Mother and Child Health (MCH) programmes (DRC and Burundi). Malawi, Lesotho and Zimbabwe implemented Option B+ in 2013 (i.e. life-long ART for all pregnant or breastfeeding women living with HIV, regardless of their CD4 count). However, PMTCT data reported by our vertical HIV programmes indicate that retaining pregnant women on ART is a challenge: for example, in the Thyolo B+ programme that was started at the end of 2011, there was just 78% retention

resistant TB - a form of TB which is resistant to at least isoniazid and rifampin, the two most potent TB drugs), and 79 patients with other forms of DR-TB, were initiated on treatment across 13 OCB projects (fig. 13). Considerable numbers of patients with MDR-TB were enrolled in Donetsk (n=249), Khayelitsha (n=150) and Mumbai (n=50).

Further roll out of DR-TB diagnostics in Donetsk (Xpert MTB/Rif and rapid culture and drug susceptibility testing (DST) methods, e.g. Mycobacteria Growth Indicator Tube - MGIT) as well as efforts to improve uptake of treatment among patients diagnosed with DR-TB, resulted in a significant increase in the number of MDR-TB treatment initiations in this project. However, high rates of discontinuation of second line TB treatment remain an issue in Donetsk.

In Mumbai, an increase in the number of registered DR-TB cases was in part due to a programmatic decision to include HIV-negative patients with extensively drug-resistant tuberculosis (XDR-TB, i.e. a type of MDR-TB which is resistant to isoniazid and rifampin, and any fluoroquinolone and at

least one of three injectable second-line drugs) who were unable to access appropriate treatment elsewhere. In 2013, among 50 DR-TB patients newly registered in this project, 34 had resistance to at least one second-line TB drug (e.g. fluoroquinolones or injectable anti-TB drugs).

2010 data on DR-TB outcomes in two MSF-supported programmes (Khayelitsha and Mumbai) were published in 2013. In Khayelitsha treatment outcomes were as follows: 52% treatment success rate, 31% loss to follow-up, 13% death and 4% treatment failure. In Mumbai, where treatment outcomes were available for 23 patients, 11 (48%) were successfully treated, 4 (17%) died, 6 (26%) defaulted, and 2 (9%) failed treatment. These outcomes reflect shortcomings in the current WHO-approved DR-TB treatment: lack of efficacy, poor safety profile and long treatment duration.

2.6. HIV/TB STATISTICS

HIV testing and counseling (HTC) for patients with suspected and confirmed TB was offered in 17 OCB projects in 2013.

at six months on ART. Overcoming this challenge will be a focus for programme implementation in 2014.

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

In 2013 PMTCT was integrated into MCH programmes in Burundi and DRC (Masisi) (cf. Sexual and Reproductive Health chapter). PMTCT will be integrated into the programme in Doro in South Sudan in 2014. Ongoing analysis of the current OCB portfolio is required to ensure opportunities for integration are not missed, including those projects that focus on a specific disease (e.g. malaria), and even those that involve an emergency response in countries with a low prevalence of HIV.

2.9. PATIENT AND COMMUNITY SUPPORT

With the further scale up of viral load testing, projects have further adapted and simplified the packages for enhanced adherence counselling with the aim to identify optimal interventions to be implemented in low resource settings. The implementation of PMTCT B+ has been supported through the development of tools for counselling and education allowing for same day initiation of pregnant women on ART. A number of projects (Lesotho, Malawi, Kenya and Zimbabwe) have begun implementing community-based strategies such as Community ART Groups (CAGs) and adherence clubs, capitalising on the lessons learned from the initial experiences in Mozambique and South Africa. The experience acquired from implementing these community based models has been documented and published in the Reaching Closer to Home report and has also been used to develop a toolkit for Community ART groups.

2.10. LABORATORY SUPPORT IN HIV/TB

By the end of 2013, a total of 17 four-module GeneXpert instruments (also known as 'Xpertâ MTB/RIF') had been deployed in 16 sites supported by OCB in nine countries. In most projects GeneXpert is used as the first diagnostic test as recommended by WHO, replacing smear microscopy; only a few sites use GeneXpert as an 'add-on' test after a negative smear microscopy result (Malawi and Mozambique).

The number of Alere Pima point-of-care (POC) CD4 analysers deployed in OCB sites remained stable in 2013 with 30 instruments in total. New POC CD4 technologies will be available in 2014 and some sites will "pilot" them as part of the UNITAID-funded project, with an objective being to create competition.

Two additional viral load machines were set up in the national laboratories in Harare, Zimbabwe and Maputo, Mozambique. Together with the viral load laboratory in Thyolo, Malawi, a total of 25,000 viral load tests were done altogether using the BioMérieux platform. As a result, this has allowed us to negotiate price reductions of approximately 23%; as volumes increase, further price discounts will take place. In 2014, there are plans to set up another viral load laboratory in Kinshasa, DRC, which will use the Abbott platform for this test, again in order to foster competition as part of the UNITAID-funded project.

In 2014, new point-of-care technologies for viral load testing and early infant diagnosis will also be available and OCB will evaluate a number of them in order to determine their feasibility and impact in decentralised settings.

3. MONITORING AND EVALUATION AND OPERATIONAL RESEARCH

The HIV data collection tool FUCHIA continued to be used exclusively in two projects. Mozambique, Guinea, DRC have moved to using the electronic register based on the Tier.net system, while Zimbabwe is employing a tiered approach using FUCHIA, e-register, and a paper-based system for their smaller clinics. Many national programmes are beginning to introduce their own electronic monitoring and evaluation systems (Zimbabwe, Malawi and Kenya) which will be integrated into MSF programmes during 2014.

Operational research (OR) is discussed fully in the operational research section of the report. The main OR topics in HIV/TB during 2013, contributing to conference presentations and peer reviewed articles, were PMTCT Option B+, field validation of viral load testing methods and strategies, implementation of viral load monitoring, community models of care, integrated HIV and TB management, drug-resistant TB, and HIV testing outreach evaluations. OCB's Southern Africa Medical Unit

(SAMU) took the lead on an analysis of Pima CD4 testing errors using records of more than 25,000 Pima CD4 test results from MSF-supported HIV projects in 9 countries. This was carried out in collaboration with MSF's Diagnostics Working Group, OCP, OCA, Epicentre and the Access Campaign. In addition, data from the OCB project based in Mumbai, India, continued to be used to contribute to the literature on the management of MDR TB in the region.

In 2013, OCB participated in a number of conferences, including the Conference on Retroviruses and Opportunistic Infections (CROI), International AIDS Society (IAS) Conference, the South African AIDS Conference, the International Union Against Tuberculosis and Lung Disease (Union) Conference, and the International Conference for AIDS and STIs in Africa (ICASA). An oral presentation featuring the results of the incidence survey and two posters on field validation of viral load testing were presented at CROI; preliminary findings from the Malawi PMTCT Option B+ evaluation were presented orally at the IAS Conference. The conference at which OCB had the greatest visibility was ICASA, where OCB hosted two satellite sessions (on viral load implementation and community models of care) and gave three oral and 14 poster presentations.

OCB was also involved in drawing-up a framework for research related to the intersectional UNITAID-funded project on new diagnostic technologies and approaches for viral load testing, point of care (POC) CD4 testing, and early infant diagnosis (EID) in resource-limited settings.

4. HIV /TB TRAINING

Four categories of training were carried out in 2013, the first three hosted in Cape Town by SAMU:

- The HIV/TB programmatic course, which was attended by 16 intersectional participants.
- Three advanced HIV/TB clinical courses, training a total of 24 intersectional participants. This course continues to receive enthusiastic feedback from the participants.
- Three groups of participants came to Cape Town to join the MSF basic level HIV/TB clinical training course, which was followed by a week of practical learning in the wards and clinics. This

centralised, Cape Town-based course was handed over to the Cape Town health authorities at the end of 2013 in favour of development of an e-learning course, which is currently expected to

be available by the end of 2014, and to reach a far wider learning audience.

- Four decentralised HIV/TB courses in Conakry, Guinea; Kinshasa, DRC; Thyo-

lo, Malawi; and one focusing on paediatric HIV in Buhera, Zimbabwe. These decentralised courses allow for a greater number of participants to benefit from the training including a greater proportion of MoH staff.

5. LOOKING BACK AND AHEAD

LESSONS LEARNED IN 2013

- There has been continued investment in attacking the leaks in the HIV cascade across all programmes. To do this operational strategies have moved more and more towards a 'light' approach to support effective and quality scale up of ministry of health programmes.
- Implementation of routine HIV viral load testing, as part of the UNITAID initiative, has been a major part of OCB's operations this year. Its success has required the co-ordination and training of all related health care workers, including laboratory staff, clinicians and counsellors.
- With the roll out of viral load testing higher rates of virological failure in children have been identified leading to more targeted strategies to improve treatment adherence in children including improved implementation of progressive disclosure strategies.
- More and more sites have begun to implement community-based strategies for ART delivery in conjunction with clinic-based 'fast track' systems. With the ever growing cohorts, assessment and sharing of lessons learned from these approaches with the HIV international community has been of huge value.
- The early implementation of option B+ for PMTCT has demonstrated the risk of early loss to follow up (LTFU) and the need for strengthened efforts to ensure effective counselling and LTFU tracing is performed for this at risk group.
- Greater numbers of DR-TB patients were diagnosed in existing projects, which required additional dedicated resources in terms of clinical staff, training and support, procurement of a quality-assured supply of second-line TB drugs, and implementation of appropriate patient support activities.
- More TB patients with advanced drug resistance (e.g. pre-XDR and XDR-TB) were diagnosed, and they have a much lower probability of being cured using the currently approved standard treatment regimens for DR-TB.
- Catching up with diagnosis and treatment of paediatric TB remains an enormous challenge, and is an area that urgently needs more dedicated resources. TB-related mortality in settings with a high HIV burden did not improve in 2013; in several HIV/TB projects, the rates of ART coverage among registered TB-HIV patients were insufficient. In these projects, the integration of HIV and TB services should be reinforced.

PROSPECTS FOR 2014

- Piloting of the new recommendations proposed in the 2013 WHO guidelines (PMTCT B+, serodiscordant couples, CD4 500 and all children under five) and innovating for changes that may be considered in the 2014 revision of the international guidelines (test and treat for key populations and stopping CD4 monitoring).
- Incorporation of HIV self-testing strategies to reach the large numbers of people infected with HIV but who remain undiagnosed.
- Assessing the feasibility of new point of care technologies for viral load and early infant diagnosis as part of the UNITAID funded viral load initiative.
- Improving OCB's programmatic response to key populations.
- Integration of the management of hepatitis B and C within our HIV programmes.
- With further 'roll out' of rapid diagnostics related to DR-TB (e.g. molecular techniques and liquid culture), OCB projects will continue to detect increasing numbers of DR-TB patients who would have gone undetected previously. More projects, vertical and non-vertical, involved in TB care, will be able to diagnose drug resistant TB.
- Implementation of novel TB drugs (e.g. Bedaquiline) through compassionate use and accelerated access mechanisms, as well as trials of shorter MDR-TB regimens (e.g. nine months) will need to be considered in order to accommodate them.
- In 2014 OCB will implement more decentralised TB (and DR-TB) management. Additional training and mentoring of clinical staff in DR-TB management will be required to meet the needs of field teams.
- More systematic efforts will need to be put into integrating basic components of TB care into non-vertical projects in 2014.

INFECTION CONTROL

1. OVERVIEW

Infection control (IC) measures continued to be implemented to higher standards over the course of 2013. This has been necessary due to the growing number of OCB projects that have intensive care units and more specialised surgical care (e.g. internal fixation for orthopaedic-trauma). The complexities of different work contexts (logistical, architectural or human resource-related) have also required that IC measures be carefully tailored to meet the contextual needs. Close collaboration between the cell and the field has helped to ensure that these needs are met.

The successes of the internal fixation interventions in Haiti and Afghanistan, which have very specific hygiene requirements, together with lessons learned from other projects in resource-poor countries, have demonstrated that it is possible to implement and maintain high levels of hygiene in such settings. Extensive IC implementation efforts in the field, together with IC training and briefings at headquarter level for staff going to the field have been instrumental in raising IC awareness in OCB projects. A growing number of projects are now following the basic IC recommendations including: use of hydro-alcoholic solution for hand hygiene improvement, provision of uniforms for all staff, better cleaning and disinfection procedures, and use of good quality sterilization and laundry services. IC management has also been given greater priority in the field, with the setting up of infection control committees and the recruitment and training of IC Officers.

2. PROGRAMME ACTIVITIES

Direct technical support and advice on IC related issues was provided to most OCB projects in 2013.

Field visits were conducted by two IC Mobile Implementation Officers (MIOs), the IC referent and an extra expatriate staff. These visits assessed and implemented IC measures in the following projects: Doro (South Sudan), Martissant and Tabarre (Haiti), Kabul and Kunduz (Afghanistan), Masisi and Kinshasa (Democratic Republic of Congo, DRC), Bo (Sierra Leone), Guidan Roundji (Niger) and Karachi and Timurgara (Pakistan). The health structures were assessed and compliance with IC protocols and standard IC precautions was undertaken both in the health facilities and auxiliary services (sterilization, laundry, lab and kitchen). Implementation of IC measures was carried out by: i) training and coaching staff, ii) defining the IC roles of the medical, logistics and WatSan staff, iii) establishing an Infection Control Committee, and iv) putting in place an IC action plan to improve on the current situation.

3. TRAINING & HUMAN RESOURCES

In 2013, two new MIOs were recruited. The MIOs play a pivotal role in providing on-the-job and field-based training and technical support.

In terms of training, IC sessions were provided at the following courses: Management of Health Services (MHS) courses in Brussels (x3), the Basic Logistics Operational Course (BLOC) in Brussels (x5), the Sexual and Reproductive Health course (x1), the WatSan operational support course in Uganda (x1) and the Biomed training course in Brussels (x2). Remote IC support was also provided during the Gynaecology, Anaesthesia and Surgery (GAS) training week.

4. DEVELOPMENTS AND INNOVATION

- Update of the IC briefing CD
- Development of a platform document for the new OCB briefing-debriefing process KITSCH (Keep It Simple, Transferable, Considerate and Human)
- Revisions to the protocol for the cleaning and disinfection of reusable medical devices

- Review of the sterilisation and laundry guideline
- Finalization of the guidelines on internal fixation, PrePex devices and Sputum induction
- Standardisation of alcohol hand gel, eye-wash and double gloving standards
- Development of a Wound Care guideline with introduction of new dressing materials
- Empowerment of the intersectional infection control platform with one infection control representative for each section.
- Development of an intersectional and multidisciplinary laundry platform
- Testing of new protective equipment for haemorrhagic fever personnel

5. LOOKING BACK AND AHEAD

LESSONS LEARNED IN 2013

- The importance of identifying an IC nurse in every project
- The importance of setting up a clear IC action plan with clear task divisions, periodical evaluations and flexibility for adjustments

PROSPECTS FOR 2014

- The new wound care protocol will be tested
- New antiseptics will be implemented
- There will be a stronger focus on assessing hand hygiene compliance
- Surveillance of surgical site infections will be considered more closely
- There will be a stronger focus on the quality of nursing care in projects
- Close collaboration with the Operations Department and the field will continue in order that the correct set up of hygiene measures and protocols are invested in and implemented
- The briefing tool for KITSCH will be finalised in French and English
- The contents of the Preparation for Departure (PPD) course will be reviewed in relation to IC issues

INTENSIVE CARE

1. OVERVIEW

The main objective for implementation of Intensive Care Units (ICUs) in MSF hospitals is to prevent avoidable deaths, by recognising the critically ill patient, and preventing and managing organ failure. Taking into account the different contexts and needs where MSF works, four levels of care have been defined for the ICUs of OCB. Each level of care is associated with specific requirements in terms of human resources (number, competencies and training), logistics (physical structure, equipment, drugs and medical devices) and ancillary services (radiology and laboratory). A Level 0 ICU is the most basic and Level 3 is the most complex level of ICU.

Basic standards of care have been achieved during 2013; this was reflected in the stable running of activities and increased confidence of our staff. This has allowed us to confront and overcome earlier challenges in intensive care (cf. Medical Activity Report 2012, Intensive Care section).

2. PROGRAMME ACTIVITIES

2.1. ACTIVITIES AT PROJECT AND MISSION LEVEL

During 2013, intensive care was provided in three OCB missions: Afghanistan, Haiti and Sierra Leone. Specific data on intensive care was collected in these projects (table 1 & 2); a total of 2,453 ICU admissions were reported during the year.

2.2. COUNTRY SPECIFIC ACTIVITIES

2.2.1. Afghanistan

OCB continued to provide intensive care in Kunduz project, a trauma centre in northern Afghanistan. This ICU has a capacity of four beds, which will double once the ICU moves to a new structure in 2014. Kunduz ICU is the most complex unit run by OCB, as it provides invasive mechanical ventilation, a major challenge for all staff and support personnel involved. During 2013, activities ran smoothly: basic levels of care were achieved and national staff is now able to run the unit almost independently. The high quality of care which has been reached in this unit is inspiring: while regular supervision is still needed, the achievements are impressive.

2.2.2. Haiti

OCB runs a hospital for acute trauma and orthopaedic surgery in a container-based structure in Tabarre. Its ICU has a capacity

Table 1: OCB ICU activities in 2013

ICU 2013	Kunduz	Tabarre	GRC-Bo
Admissions			
< 5 years	33	7	ND
≥ 5 years	378	279	ND
Total	411	286	1,756
Deaths			
< 5 years	5	1	ND
> 5 years	36	37	ND
Total	41	38	448

GRC: Gondama Referral Centre; ICU: intensive care unit; ND: no data available

of seven beds, for both acute surgery and trauma cases. The upgrading of this unit has been sequential, in an attempt to achieve basic standards and knowledge of staff working in it. The running of activities during 2013 has been smooth and the unit is now prepared to increase the level of care offered.

2.2.3. Sierra Leone

The Gondama Referral Centre (GRC) in Bo district provides paediatric and obstetric health care; the latter will soon be handed over to the Ministry of Health (MoH). The capacity of this ICU was 26 beds. This unit has offered a basic level of care since its inception, in line with the available resources. The main morbidities which were encountered in this ICU were malaria, diarrhoea, respiratory infections and malnutrition; a direct consequence of the

demographics of the patient population (the majority were children younger than five). The severity of the condition of these patients and their late presentation for care, often after having tried traditional medicine, was reflected in the high mortality rate of this unit (table 2, Annex). Upgrading this ICU is a much-needed challenge for 2014.

3. HUMAN RESOURCES AND TRAINING

The ICUs in OCB differ in terms of human resource skills and strategies. The unit in Kunduz is run by general practitioners who have been trained by international intensive care specialists since the opening of the project, and a medical doctor is present in this unit 24 hours per day/seven days per week. In Tabarre, the ICU is mainly run by anaesthetists, and a permanent

presence of a medical doctor is not assured as doctors are also on call for the emergency department (ED) and inpatient department (IPD) needs. The paediatric ICU in Sierra Leone is run by clinical officers under the supervision of expatriate paediatricians.

Nevertheless, all units face the same challenges, the main one being the constant need for training of national staff. Both doctors and nurses in charge of ICU patients should have specific knowledge, attitudes, and skills related to the physiology of the critically ill patient, the specific clinical

management strategies, and the life-saving procedures required. As the ICU is one of the most technically complex services offered in OCB hospitals and due to the lack of intensive care specialisation in most of the contexts where OCB works, daily bedside training is a core activity to achieve quality care standards.

The development of the Basic Assessment and Support of Seriously Ill Patients in Developing Healthcare Systems (BASIC DHS) training was an answer to this need, as it tackles the issue of non-specialised doctors in charge of critically ill patients. How-

ever, for the most complex ICUs, not all needs are covered by this training. Thus, bedside training and knowledge sharing between national and international staff are essential for the future of the OCB ICUs.

The use of peripherally inserted central catheters (PICCs) will be implemented in our level ≥ 1 units. For this, both theoretical and practical training needs to be organised in parallel with its implementation at field level, and close follow-up by trained international staff will be required.

4. LOOKING BACK AND AHEAD

LESSONS LEARNED IN 2013

- In line with the Hippocratic Oath to “do no harm”, equipment and supplies should match the knowledge and skills of the personnel available to use them; and conversely, even teams with the most limited resources should have protective clothing and equipment in order to implement standard precautions.
- To better understand and improve intensive care activities, data collection must be followed up and analysed at field level. The implementation of the ICU individual electronic register should facilitate this process.

PROSPECTS FOR 2014

- In 2014 the use of PICCs will be implemented in ICUs of a level ≥ 1 . For this, training courses need to be organised and staff need to receive bedside practice.
- Expatriate staff will continue to be followed up by the intensive care referent.
- The BASIC DHS training will be continued for national staff in charge of critically ill patients.

LABORATORY

1. OVERVIEW

2013 saw a reduction in some laboratory activities as a result of project closures, but in other projects new laboratory activities were implemented. Examples of the latter were the implementation of microbiology for the detection of antibiotic resistance in order to improve patient management, together with the installation of more automated HIV viral load equipment (through UNITAID funds). Ongoing was the roll-out of Dried Blood Spot (DBS) viral load testing in Malawi, Mozambique and Zimbabwe.

2. PROGRAMME ACTIVITIES

2.1. LABORATORY ACTIVITIES AT A COUNTRY AND PROJECT LEVEL

In 2013, laboratory activities were supported in 28 projects across 17 countries. New activities were implemented in Afghanistan, Mozambique, and Cambodia, while eight laboratories were closed in DRC, Niger, Somaliland, Somalia, India, South Africa, Guinea and Afghanistan (Table 1, Annex).

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.

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.

4. OPERATIONAL RESEARCH AND DEVELOPMENTS

- In Malawi, final results of a study on finger prick DBS viral load validation with the NucliSENS platform were published and have subsequently supported the roll-out of this diagnostic technique. In contrast, a study in Zimbabwe on finger DBS validation with the Roche Taqman

platform yielded very disappointing results (mainly a poor specificity implying a higher rate of false positives). As such, towards the end of 2013 the MoH in Zimbabwe opted for the HIV Viral load Nuclisens platform instead.

- The viral load pooling study in Malawi "Pooled HIV-1 Viral Load Testing Using Dried Blood Spots to Reduce the Costs of Monitoring Antiretroviral Treatment in a Resource-limited Setting" was published. The study demonstrated that when one viral load test is performed on up to five DBS samples from a patient, the accuracy of the test is maintained. This innovative strategy could reduce 30-50% of the viral load tests done in the laboratory resulting in significant cost savings.
- An operational research study on antibiotic resistance was started in Afghanistan at the Lashkar-Gah hospital in Helmand. Results of the study are still being analysed for eventual publication.
- Microbiology technology was implemented in the MSF trauma hospital in Kunduz (Afghanistan) to improve patient treatment.
- A total of 17 four-module GeneXpert instruments were deployed in 16 sites in nine countries. Although the increase in microbiological detection of Mycobacterium tuberculosis and rifampicin resistance varies across sites, it has remained constant per site at around 16%. In most projects GeneXpert is used as the first diagnostic test as recommended by WHO with only a few sites using GeneX-

pert as an add-on test to smear microscopy (Malawi and Mozambique).

- The number of Alere Pima Point-of-Care CD4 analysers deployed in OCB sites remained stable in 2013 (30 instruments in total). New POC CD4 technologies will be available in 2014 and some sites will "pilot" them in order to create competition as part of the UNITAID-funded project.
- Two additional HIV viral load laboratories were set up in Harare (Zimbabwe) and Maputo (Mozambique). Together with the viral load laboratory in Thyolo (Malawi), a total of 25,000 viral load tests were performed altogether using the BioMérieux platform. This has allowed us to negotiate a 23% reduction in the cost of the tests and further reductions should be negotiable as the volume of tests rises.
- A new and simpler test for the diagnosis of cryptococcal disease - the CRAG lateral flow assay - was introduced in several HIV projects, replacing the more complex and more expensive test - the CRAG Fomouze. This will facilitate the systematic screening of cryptococcosis in immunocompromised HIV-infected individuals.

5. TRAINING

During 2013, two expatriate and three national staff attended laboratory training organised by MSF Austria. Four expatriates also attended the Laboratory Management Course organised by MSF Holland.

6. LOOKING BACK AND AHEAD

LESSONS LEARNED IN 2013

- The deployment of point-of-care technologies and dried blood spots testing at a decentralised level remains a challenge because of the continuous monitoring that is required. Task-shifting of laboratory testing to lower-skilled staff (i.e. lay counsellors) has taken place, but nonetheless the role of laboratory staff is still crucial for supporting the widespread implementation of these POC technologies.
- The introduction of new diagnostics such as Xpert MTB/RIF and HIV Viral Load has also led to an increase in biomedical engineering support from Brussels as these machines often break down.
- The introduction of Xpert MTB/RIF has led to a significant increase in the detection of rifampicin-resistant tuberculosis (TB). However, Ministries of Health TB laboratories then have to be relied on for further confirmation of MDR-TB, and turnaround times are often very long. As such, the rapid confirmation of MDR-TB remains a challenge in most projects.

PROSPECTS FOR 2014

- Plans are underway to set up another viral load laboratory in Kinshasa (DRC) using the Abbott platform in order to foster competition (as part of the UNITAID-funded project).
- New point-of-care technologies for viral load and early infant diagnosis will be available, and OCB will evaluate some of these in order to determine their feasibility and impact in decentralised settings.
- Plans are underway to set up a microbiology unit (for blood cultures in the Gondama Referral Centre in Sierra Leone). This will help to better assess and identify sepsis in children seen at the MSF paediatric hospital.

MALARIA

1. OVERVIEW

Malaria continued to be a leading cause of morbidity and mortality in OCB projects and the malaria caseload in most projects remained quite stable in 2013 relative to 2012; no major outbreak interventions were undertaken.

2013 saw the launch of the malaria project in Burundi; in Cambodia, the malaria baseline survey confirmed the presence of artemisinin-resistance, although MSF had to postpone its intervention effort; in Niger Seasonal Malaria Chemoprevention (SMC) was successfully implemented for children between 3 and 59 months. Next year, the second phase of the Burundi project will be launched, a new baseline survey to measure malaria prevalence and resistance will be carried-out in Cambodia and SMC will be scaled-up in Niger.

Studies conducted in Sierra Leone and Burundi showed that adherence levels to artemisinin-combination therapy (ACT) are improving, although they remain sub-optimal.

In 2014, various initiatives are set to get underway: the efficacy of artemisinin will be monitored in Asian and African missions, new diagnostic tools such as the pLDH Rapid Diagnostic Test (RDT) will be implemented and the validity of a RDT for diagnosing congenital malaria will be evaluated. Finally, efforts will be made to try to better understand malaria transmission in South Sudan and the Democratic Republic of Congo (DRC).

2. PROGRAMME ACTIVITIES

2.1. MALARIA CASES

In 2013, the total reported number of confirmed malaria cases treated in OCB projects was 214,504 - slightly less than in 2012 (fig. 1). Several projects with a considerable malaria caseload - namely Niagara (DRC), Bo Outreach (Sierra Leone) and Dakoro (Niger) - were closed during the year. No major interventions for malaria outbreaks were undertaken.

More than 80% of all reported malaria cases were treated in the four missions of Niger, South Sudan, the Democratic Republic of Congo (DRC) and Sierra Leone (fig. 2)

Figure 2: Proportion of confirmed malaria cases by OCB mission, 2013

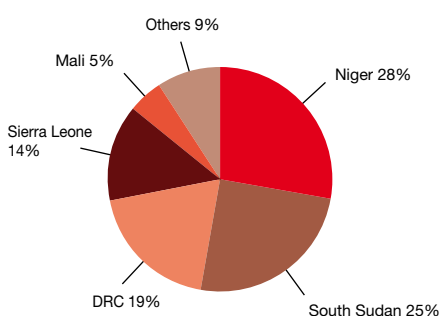


Figure 1: Total and confirmed malaria cases in OCB projects, 2004-2013

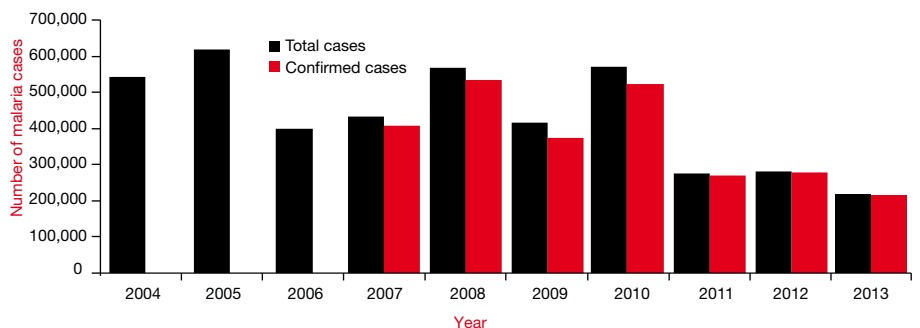
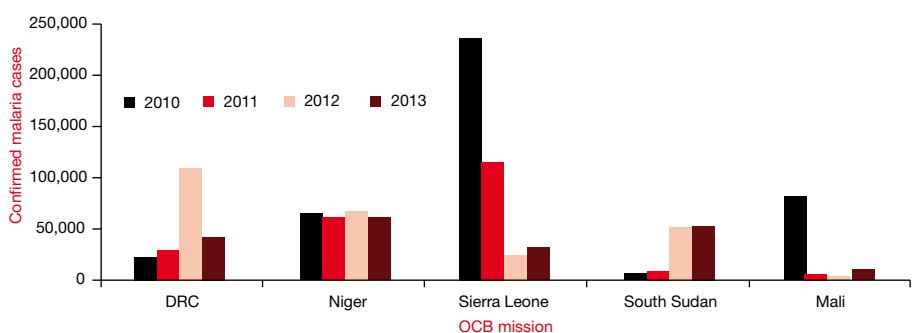


Figure 3: Malaria trends in OCB-missions 2010-2013



Half of all confirmed cases treated were children under-five years of age, 8% were severe malaria cases, and the highest burden of severe malaria was in the missions of Burundi, Sierra Leone and Niger.

In those projects with the highest malaria caseloads, the malaria caseload in 2013 remained quite similar to that in 2012, apart from in DRC where there was a much lower reported caseload due to the absence of any outbreak interventions in 2013 (in contrast to 2012),(fig. 3).

2.2. DIAGNOSTICS

During the course of 2013, a total of 391,823 RDTs were performed in OCB projects.

The proportion of positive RDTs was high in projects such as Gondama Referral Centre (72%), Niangara (60%), the emergency intervention of the Pool d'Urgence Congo (PUC) in DRC (68%) and Pibor (55%). This indicates high malaria endemicity in these settings.

Out of the total number of malaria cases reported in OCB projects, the proportion of confirmed malaria cases has continued to increase over the years, standing at 99.2% in 2013. This indicates that the MSF-policy of systematic parasitological confirmation of all malaria cases is now well implemented.

2.3. CASE MANAGEMENT – ARTEMISININ-COMBINATION THERAPY

2.3.1. Adherence

Studies done in Sierra Leone and Burundi showed that ACT adherence rates are improving, although they still remain sub-optimal. Three consecutive studies in Bo (Sierra Leone) demonstrated that adherence improved after the implementation of the Fixed Dose Combination (FDC) ASAQ, as compared to the co-blister presentation. However, adherence rates (probable adherence) only increased to 59%. Finding ways to ensure higher rates of adherence to first line antimalarials must remain a priority.

2.3.2. Efficacy

Resistance/tolerance to artemisinin has now been documented in five countries in the Mekong-region, along which Cambodia. A new project focusing on artemisinin resistance/tolerance in Preah Vihear province, Cambodia is planned. The objective of this project would be to contribute to the elimination of resistant/tolerant *Plasmodium falciparum* (Pf) malaria. This project would involve a Targeted Malaria Elimination component (i.e. the mass distribution of malaria treatment in villages with confirmed malaria) together with a screening (active and passive) and a treatment strategy using polymerase chain reaction (PCR) as the diagnostic tool and Dihydro-artemisinin/Piperaquine as a preventive treatment. The network of Village Malaria Workers, which are an essential component of the intervention, would be reinforced.

2.3.3. Pharmacovigilance

During the SMC project in Niger, a pharmacovigilance system was set-up to monitor and manage the adverse effects associated with SPAQ (sulfadoxine-pyrimethamine + amodiaquine), the preventive treatment used. There are also plans to include a pharmacovigilance component during the Targeted Malaria Elimination-programme in Cambodia, where Dihydro-artemisinin/Piperaquine is the preventive drug of choice.

2.4. CASE MANAGEMENT-SEVERE MALARIA

At the end of 2012, OCB launched a malaria project in Kirundo province (Burundi), the first phase of which was focused on correctly managing severe malaria at all levels of care (community through to hospital). After a difficult start, results at the end of 2013 were very promising: 3471 patients were treated for severe malaria at hospital and peripheral levels and overall, good treatment outcomes were achieved. This model of care will be used to guide the implementation of injectable artesunate throughout the rest of Burundi.

While rectal artesunate remains one of the most effective and safe pre-referral treatments for severe malaria at the peripheral healthcare level, results from an inter-sectional survey conducted in 2013 demonstrated that the drug is still underused in quite a few of our projects. This needs to be addressed.

2.5. COMMUNITY MANAGEMENT OF MALARIA

After the closure of the outreach project in Sierra Leone, OCB no longer has community projects for malaria. However, the new malaria project in Cambodia will have a strong community component, using a network of Village Malaria Workers and Mobile Migrant Workers for the detection and treatment of malaria cases.

Community activities are being considered in the Bangassou project in CAR and in the Kirundo project in Burundi.

2.6. OUTBREAKS

There were no major malaria outbreaks reported in 2013. The incidence of malaria in the Doro-project in South Sudan was very high, but due to insufficient data on malaria cases, it was not possible to confirm the true extent of a possible outbreak.

A small emergency intervention for malaria was undertaken in the DRC.

2.7. PREVENTION

In 2013, SMC was implemented in Guidan Roundji, Niger, for a target population of about 10,000 children between the age of 3 and 59 months. Using a door-to-door strategy, children received four doses of the preventive treatment - SP/AQ. A total of 43,169 doses were distributed. A mass distribution of long lasting insecticide treated nets (LLINs) was also undertaken. An evaluation of the programme was conducted (cf. §4).

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

In Doro, South Sudan, although a mass distribution of LLINs was undertaken in the refugee camp, the incidence of malaria was still reported to be very high. It is unclear whether this is related to the vector itself or the efficacy of the insecticide used to treat the bed nets, but this needs to be investigated further.

3. OPERATIONAL RESEARCH

- Adherence studies to ACT-FDC were carried out in Burundi and Sierra Leone (cf. Section 2.3).
- In Kirundo, Burundi, the baseline survey showed that mortality for the different age-groups was under emergency thresholds: crude mortality rate (CMR) of 0.3/10,000/day and an under-five mortality rate (U5MR) of 1.1/10,000/day. Malaria was found to be the main cause of death (25% of deaths). Less than 20% of the patients with fever received anti-malarial treatment within 24 hours. The coverage of LLINs was very low in target groups: 28% in children under five and 35% in pregnant women.
- The baseline survey in Preah Vihear, Cambodia, using real-time PCR showed a low Pf-prevalence of 2% in the district of Chey Saen 0.2% in the district of Chhaeb. The molecular marker for artemisinin resistance was detected in 7 out of 11 patients. PCR-detection rates increased with higher blood volumes.
- A qualitative study in Preah Vihear, Cambodia, was also undertaken to examine health seeking behaviour: "A cross-sec-

tional population-based malaria survey in Preah Vihear province: health seeking behaviour of people when they are sick in general and when they have malaria in particular”.

- In collaboration with Epicentre and the Evaluation Unit in Vienna, an intersectional evaluation of the SMC-programme in Niger took place, assessing quantitative

and qualitative indicators and comparing different delivery models. Programme coverage was excellent (>95%) and the number of adverse effects below 1%.

4. LOOKING BACK AND AHEAD

LESSONS LEARNED IN 2013

- Adherence to ACT (fixed-dose-combinations) is still below target in our projects.
- Injectable artesunate has been successfully implemented in our projects and is confirmed to be feasible, effective and safe.
- There is a need for better diagnostic tools, such as the pLDH-RDT.
- There is a knowledge and implementation gap at a project level in relation to the MSF-policy on malaria in pregnancy.
- 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) or mass drug administration (Cambodia) is essential. However the feasibility of implementing such a system is a real challenge.
- MSF-OCB successfully carried out a baseline survey on the prevalence of (resistant) malaria, using PCR and a molecular marker for resistance. Resistance has been confirmed and a containment project will be launched. There is a need to monitor efficacy of artemisinin outside of the Mekong-region, such as India and Africa. In order to contain resistance and prevent the spread to other regions, a project in Myanmar has the absolute priority.

PROSPECTS FOR 2014

- A pan pLDH RDT (which has a better specificity compared to the RDT currently used in OCB projects - HRP2 RDT) will be implemented, most probably in Sierra Leone. It will also be evaluated on a small scale during the study on congenital malaria in Burundi.
- Several evaluations in Kirundo, Burundi are planned in order to report on i) the prevalence of congenital malaria; ii) the validity of RDTs, microscopy and PCR for the diagnosis of malaria in neonates; iii) the follow-up of children admitted for severe malaria and severe anaemia after discharge (including an evaluation of indicators such as mortality, readmission and new episodes of malaria. A preventive strategy for this specific group is to be defined thereafter).
- The second phase of the malaria-project in Burundi will be launched in Mukenke-district as planned.
- Given the emerging resistance to artemisinin in the Mekong-region, and the possible spread to the rest of Asia and Africa, monitoring the efficacy of first line ACTs is a priority. In collaboration with external partners, we will evaluate the efficacy of artemisinin using molecular markers in a selected number of contexts.
- SMC will be scaled-up in Niger, and new contexts (and possibly new molecules) for SMC will be considered, such as South Sudan or Mauritania.
- A new baseline survey will be carried out in Cambodia, using a higher volume of blood which will thus be more sensitive than the 5 microliter used for the first baseline survey. Molecular markers, serology and genetic diversity will also be incorporated into this evaluation. The launch of the containment project on the elimination of resistance will probably be postponed to 2015.
- For the first time in MSF-OCB we will use Dihydroartemisinin (DHA)-Piperaquine DHA/PQ as preventive malaria treatment in Cambodia.
- In Bassangou, CAR, we are considering implementing a community malaria project. Decentralization malaria care is discussed as well in Kirundo, Burundi.
- A survey to evaluate the implementation of the MSF-policy on malaria in pregnancy in MSF-projects is planned, as well as specific monitoring of the use of injectable artesunate in pregnancy.
- No new studies are foreseen, but there will be a continued focus on the issue of adherence to ACT and measures to ensure correct 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 the insecticides etc.
- In collaboration with the pharmacists, we will try to develop/improve the pharmacovigilance during SMC, focusing on severe adverse effects.

MEDICAL STRUCTURES – INPATIENT DEPARTMENT

1. OVERVIEW

The total number of structures with an inpatient department (IPD) in OCB has decreased over time. This decrease has been associated with a shift in types of structures and models of management as compared to three years ago: the majority of medical structures are service- or disease-specific, and MSF often runs these as stand-alone structures rather than as facilities integrated with Ministry of Health (MoH) facilities. Over the course of 2012, 30 IPD structures were managed by OCB (including four emergency projects), and 16 structures were forecasted for 2013 (excluding emergencies). In reality, 18 IPD structures were being managed by OCB at the end of 2013, and 17 are projected for 2014. Of the structures managed by OCB at the end of 2013, 6 (33%) were MoH structures, and eight (45%) were located in “default” settings (locations chosen by the exigency of an acute crisis), similar to the previous year. Four types of structures were recognised:

- General Hospital - five: Ahmad Shah Baba (Afghanistan); Masisi and Niangara (Democratic Republic of Congo - DRC); Nagaland (India); and Burao (Somaliland)
- Service or Disease Specific Activities - ten: Khost and Kunduz (Afghanistan); Gitega, Kabezi and Kirundo (Burundi); AIDS Kinshasa (DRC); Tabarre (Haiti); Guidan Roumdji (Niger); Timurgara (Pakistan); and the Gondama Referral Centre (GRC - Sierra Leone)
- Hospital Based Activities - six : Martissant (Haiti); Doro, Gogrial and Pibor (South Sudan); Bassikounou (Mauritania); and Shaeria (Sudan)
- Emergencies - five: Central African Republic (CAR); Mali, the Philippines: South Sudan; and Syria.

2. PROGRAMME ACTIVITIES

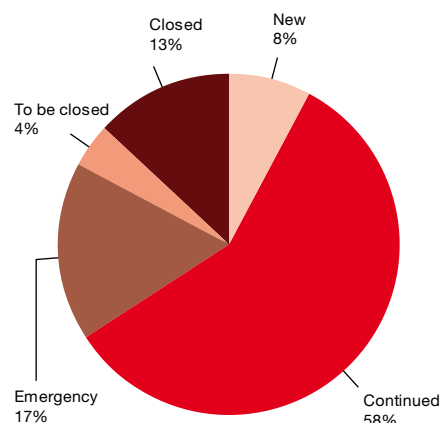
2.1. ACTIVITIES AT A COUNTRY AND PROJECT LEVEL

In 2013, OCB provided inpatient care in 25 health facilities, including during emergency interventions (fig. 1):

- Two structures were handed over from the emergency pool to the operational cells: Doro (Maban emergency, South Sudan) and Bassikounou (Mauritania).
- Three structures were closed/handed over during 2013: Niangara (DRC), Burao (Somaliland), and Kabezi (Burundi).
- After the Annual Review of Operations (ARO) in 2012, it was decided to hand over Mon (India) to the MoH – this will take place in 2014. At the same time, a decision was made to reduce the activities in the GRC (Bo, Sierra Leone) by handing over the obstetric care component to the MoH, and to look for a new location in Bo to build the more focused paediatric hospital.

- The emergency pool continued to manage hospital structures in Mali and Syria, took over the health facility in Pibor in South Sudan, opened a mission in CAR, and started construction of a semi-temporary 50 bed IPD structure in the Philippines with the plan to hand over to the MoH (cf. Emergency Unit section, §2.2.).

Figure 1: OCB medical structures offering IPD services, 2013



2.2. HOSPITAL SIZE (EXCLUDING EMERGENCIES)

The total number of beds in the OCB portfolio decreased from 1,883 in 2012 to 1,313 in 2013, and is projected to decrease further to 1,221 in 2014 – the IPD of Kirundo, Burundi, was excluded from this analysis due to missing data. In the five largest structures in terms of beds are presented in figure 2.

The average size in terms of staff remained stable compared to 2012, with the largest hospitals ranging from 250-400 staff (fig. 3). The projected HR needs foresee a 10% increase in 2014: a total of 3,944 staff for IPD structures existed in 2013, and 4,342 were budgeted for 2014. In terms of admissions, including maternity and inpatient therapeutic feeding centre (ITFC) admissions, two of the hospitals with the largest volume were based in Afghanistan (fig. 4). All factors combined (staff, volume of activities, beds), the Masisi and GRC projects were the largest hospitals in OCB - Kunduz (Afghanistan) and Tabarre (Haiti) have a

Figure 2: TOP five medical structures offering IPD services - number of beds, 2013

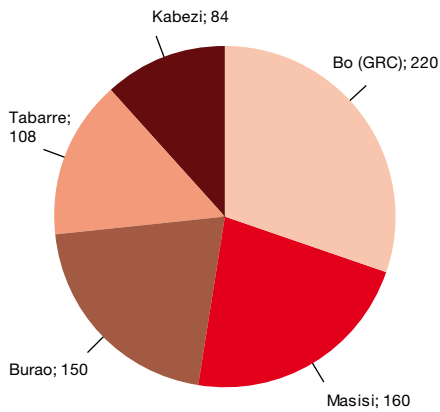


Figure 3: TOP five OCB medical structures offering IPD services - number of staff, 2013

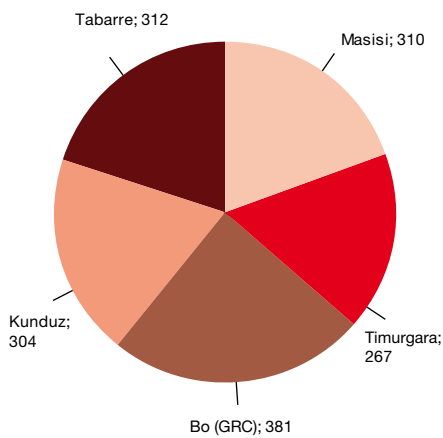
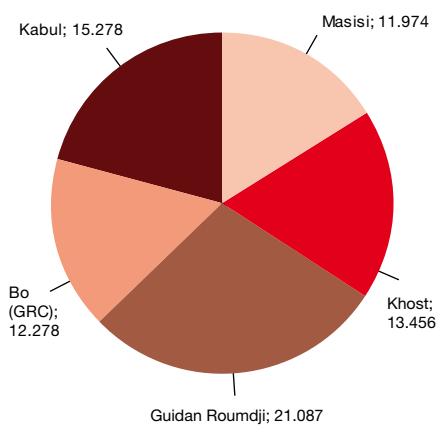


Figure 4: TOP five OCB medical structures offering IPD services - number of admissions, 2013



high number of staff compared to the other IPD structures, as these are specialised hospitals offering trauma care.

2.3. PAEDIATRICS, DELIVERIES AND SURGERY

A slight reduction (5%) of admissions was observed in 2013 compared to the previous year (table 1). Admissions in the clinical IPD were reduced much more marked-

Table 1: Admissions to OCB health structures, 2013

	N	%
Total IPD admissions	127,936	
Admissions (without deliveries and ITFC)	61,471	48
Paediatric < 5 admissions	34,005	27
Neonate admissions	3,503	3
Maternity admissions	60,340	47
Paediatric < 5 mortality	2,001	5.9
Neonatal mortality	582	16.6

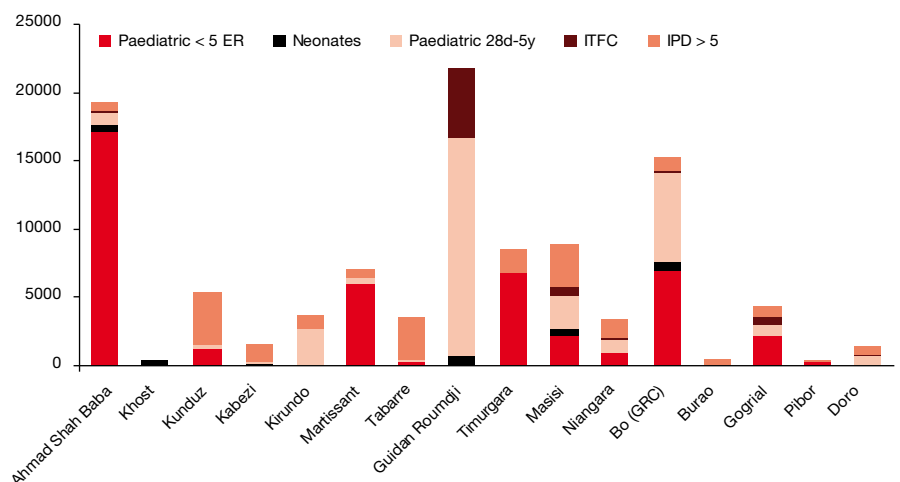
IPD: inpatient department;
ITFC: inpatient feeding centre

ly, but this was compensated by an increase in maternity admissions, mainly in the Khost and Ahmad Shah Baba hospitals in Afghanistan. There were also about 1,000 more neonatal admissions as compared to the previous year.

2.3.1 Paediatrics

Similar to 2012, Guidan Roundji (Niger) and GRC (Sierra Leone) were the two remaining structures with a high volume of paediatric patients, including ITFC admissions and neonates. Admission often occurred after consultation in the Emergency Department (ED): ED consultations for children younger than five were most often conducted in Ahmad Shah Baba (Afghanistan - 17,154), GRC (Sierra Leone - 7,017), Timurgara (Pakistan - 6,892) and Martissant (Haiti - 6,066). Several structures did not admit general paediatric cases: Gitega (Burundi) as a project focused only on fistula care, and Khost (Afghanistan) and Kabezi (Burundi) as projects admitting only neonates.

Figure 5: Paediatric admissions to OCB medical structures offering inpatient services, 2013



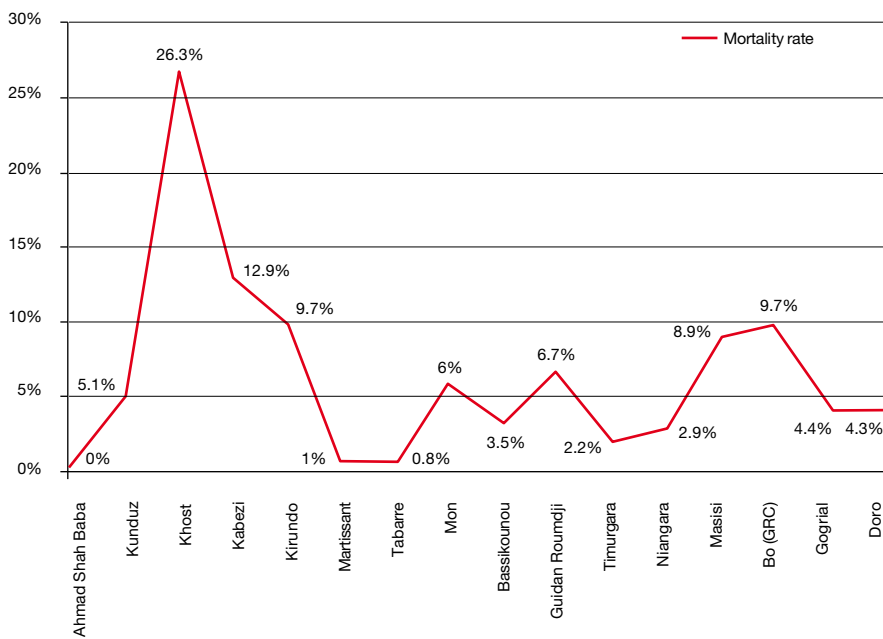
As documented previously and elsewhere in this report (cf. Paediatric Care section, §2.1.2.), data for malnourished children remain challenging: numbers reported here reflect children who were admitted to a therapeutic feeding centre. However, malnourished children who are admitted to a paediatric ward for another pathology will not be registered as suffering from malnutrition, and likewise, children admitted to a therapeutic feeding centre with another pathology will not be counted for that pathology. Data systems clearly need to be adapted to address this issue.

2.3.2 Under-five mortality (including neonates)

The highest under-five mortality rates were observed in Khost (Afghanistan) and Kabezi (Burundi), as both of these facilities admit only (sick) neonates, who have a higher mortality rate in general. The mortality threshold for such populations is thus set higher. Other projects providing care for sick neonates (Masisi, GRC) also had mortality rates at the higher end of the spectrum. Kirundo (Burundi), as a project providing specific care for malaria, also registered a relatively high mortality. An in-depth analysis of paediatric mortality is presented elsewhere in this report (cf. Paediatric Care section, §2.1.2. & 2.2.1.).

2.3.3 Deliveries

The two major projects in Afghanistan, Kabul and Khost, each performed more than 1,000 deliveries per month, while maintaining a relatively low Caesarean section rate (cf. Sexual and Reproductive Care section, §2.2.). Excluding the emergency projects,

Figure 6: Mortality rates for children under five admitted to OCB medical structures, 2013

seven projects out of the 2013 IPD structure portfolio did not offer maternal care. One such project, Martissant (Haiti), did offer maternal care in 2012, but reoriented its objectives in 2012. Kabezi (Burundi), was one of the most important obstetric projects over the previous years, but was handed over to the MoH in 2013. Conversely, the Gogrial project in South Sudan is set to increase its focus on maternal care in 2014.

2.3.4. Surgery

Out of the 21 non-emergency IPD projects of 2013, 14 (67%) offered surgical activities. Of these projects, three were closed over the year (Kabezi, Niangara, and

Burao), while in 2014 surgery will no longer be offered in Mon (handover of the project) and in the GRC (handover of the obstetric component of the project, which included surgery). Details of surgical activities are provided elsewhere in this report (cf. Surgical Care section).

3. DEVELOPMENTS AND INNOVATION

- The Pre-Feasibility Health Facility Assessment (PASS) tool was developed: this is an Excel-based decision-making support system for the preliminary design of health facilities in humanitarian settings. Responsibility for this tool has been transferred to the Mobile Imple-

mentation Officer (MIO) for Hospital Logistics Management and to the Health Information Systems specialist.

- Following an evaluation by the Stockholm Evaluation Unit (SEU - cf. Evaluation Unit section), the concept of the hospital support committees evolved into the PATIO (Plateforme d'Appui Technique aux Intentions des Opérations) process. This platform is no longer limited to hospital structures and is now under the responsibility of the Operations Support Manager.
- The Hospital Organisational Chart and Staff Ratio Workload Guideline were finalised and are available through the HR Department.
- The Hospital Management Team Training (HMTT) was developed as an operational inter-professional two week residential training for hospital management teams. It will be organised for the first time in 2014, followed by an evaluation, and falls under the responsibility of the Medical Training Officer.

4. TRAINING AND HUMAN RESOURCES

The position of Hospital Management Coordinator ended and the function will not be prolonged, while the technical hospital referents in the Logistic and Medical Departments will remain. The transversal dossiers will be managed by the operational cells with support of the PATIO focal point.

5. LOOKING BACK AND AHEAD

LESSONS LEARNED IN 2013

- A motion to limit the number of hospitals in the OCB portfolio was approved by the OCB General Assembly in 2012: this motion was respected and the number of hospitals was reduced progressively.
- An evaluation was done by the SEU on the functioning of the hospital support committees. The work approach will continue through the PATIO system.

PROSPECTS FOR 2014

- Specific indicators (e.g. number of beds/population) will be developed, allowing comparisons across projects and better informing decision taking.
- A detailed mapping of the IPD structures will be performed, and monitoring will be strengthened to provide adapted support for all IPD structures.

MENTAL HEALTH

1. OVERVIEW

During 2013 Mental Health (MH) activities were much better integrated into emergency interventions than in the previous year, especially during emergencies linked to acute conflicts (notably in the Central African Republic (CAR), Jonglei in South Sudan and two projects in Syria). Despite the challenges related to insecurity, MH activities were able to commence very soon after MSF intervened. This resulted in a much more coherent integration of MH care with other medical activities, and also played an important role in preventing early psychological presentations from progressing into more serious disorders. Efforts to commence MH activities early on in emergency interventions were evident following the typhoon in the Philippines, when a team of psychologists was deployed in the first few days post disaster to implement the MH component of the MSF intervention.

MH care also covered victims of conflict and displaced populations, notably those held in detention centres in Sicily, Greece and Egypt, and for Syrian refugees in Bulgaria and Lebanon.

The integration of psychiatric care into medical activities continued in 2013, with the intention of developing this further for emergencies (Philippines, Syria). In times of crisis, severe psychiatric disorders requiring psychiatric treatment (major depression and acute and chronic psychosis) can rise from 2-3% to 4-5% in the population. Lack of access to psychiatric care as a result of an emergency has an impact on those who suffer psychiatric disorders as a direct result of the crisis, and on individuals who have pre-existing disorders. Provision of psychiatric care during emergencies is thus of key importance.

Finally, 2013 saw MH activities being deployed in several new fields, namely specific care for victims of torture/ill treatment in Cairo (Egypt), and care for epileptic patients in Kibera (Kenya).

2. PROGRAMME ACTIVITIES

Excluding HIV/TB programs, MSF-OCB provided non-emergency MH activities in 25 projects across 17 missions – eight more projects than the previous year (Table 1, annex). Of particular note, a new vertical MH programme was opened in Libya and vertical MH activities continued in an existing programme in Egypt focusing on migrants. In these vertical projects MH is the primary intervention. 2013 saw MH activities included in eight emergency interventions (Table 2, annex).

MH activities continued to cover three main levels of care: activities within the community (for example psycho-education, awareness raising, community mobilisation) psychological care and support, and psychiatric care. The training of medical staff also formed a core MH activity, whereby staff were trained to detect MH needs and refer individuals for appropriate care, and to provide basic emotional support to individuals.

Two examples of OCB contexts where MH activities were closely integrated into the medical activities of the project are presented below.

2.1 KIBERA (KENYA)

In the informal urban settlement of Kibera, the OCB project is focused on providing an integrated package of primary health care and maternity services, including care for HIV, TB, chronic diseases and sexual and gender based violence (SGBV). The people in Kibera are exposed to very poor living conditions (widespread violence, poverty, poor quality and overcrowded housing, and limited access to free education and health care). When a person in these circumstances also has to contend with living with HIV or a chronic disease, they are at higher risk of developing psychological problems or mental disorders. Aside from the psychological support provided by our team of counsellors, a system of external referrals to psychiatric ambula-

tory care was put in place several years ago. However, as a result of the various challenges related to this referral system, such as the cost of consultations and drugs, administrative complexity, lack of skilled psychiatrists, and distance, the out-patient department (OPD) in Kibera started to manage patients with MH needs directly. Clinicians in the OPD have been trained to identify patients with MH needs and to provide psychotropic medication. If needed, they can refer complicated cases to a psychologist or a psychiatric nurse in the project who will assess the patient, and advise on the necessary treatment prescription.

Within the OPD an observation room is used to stabilise patients with acute MH problems, such as psychotic decompensation, agitated/aggressive behaviour, or at high risk of suicide. Thereafter, to avoid having to admit patients to psychiatric facilities as far as possible, a patient is closely followed-up until she/he is stable, and psycho-education is undertaken with the

family. A psychiatrist from the district hospital can be contacted for complex cases in order to advise on diagnosis and/or a treatment plan.

The MSF experience in Kibera provides a good example of how MH support and psychiatric care can be decentralised and managed by non-specialised health care providers.

2.2 SYRIA (AKKRAD AREA)

Mental health activities began to be provided in the Akkrad area region in February 2013 and were integrated into MSF medical activities at the Fellini hospital where surgical care was being provided for war victims and emergency cases, as well as in primary health care (PHC) facilities, maternal health services and mobile clinics. The opportunity to work in the community was limited due to insecurity.

The prevalence of MH problems among the population was high. A large number of people have endured extremely traumatic experiences over the last two years including loss of children and family members, bombings, torture, and displacement. The area has also seen a massive influx of refugees and many communities live in relocation houses or in refugee camps where the living conditions are very poor due to overcrowding, poor sanitation, no electricity, no hot water, poor ventilation, and lack of privacy.

Trained staff identified individuals in need of MH care either at the health facilities or directly in the community, and referred them to MH services. A significant number of these individuals had severe MH conditions, with post-traumatic stress reactions commonly being associated with other disorders such as depressive disorders, anxiety, behavioural disorders, substance

abuse or psychosomatic troubles. The prevalence of acute psychosis (notably amongst young fighters) was much higher than usually observed in MSF contexts. Children also presented with significant psychological distress such as enuresis, anxiety, repetitive war games, and violent behaviour towards other children or animals.

MH care was provided by two national trained counsellors and one expatriate psychologist through support groups, and individual and family consultations. To address the high severity of MH conditions observed, psychotropic treatment was introduced in May. By October, 41 patients had been placed on medication (particularly for major depression, severe post-traumatic stress disorder (PTSD) and acute psychosis).

3. TECHNICAL GUIDANCE

Over the course of 2013, a number of activities were undertaken to develop or revise MH tools and guidelines, including:

- Translation into French of the “Manual of training in MH for primary health care professionals” (intersectional)
- Continued development of the guideline on specific approaches and techniques for working with children (Intersectional)
- Review of the WHO MH Gap guideline-Assessment and management of conditions specifically related to stress (intersectional)
- Development of the intersectional MH policy
- Development of a chapter for the Nutrition Guideline on the psychosocial aspects of malnutrition
- Development of an MH protocol for the MH vertical programs in Egypt and Libya

- Development of a short document to capitalise on the MSF experience of managing post-partum MH disorders
- Involvement in the development of a document on support for patients with Hepatitis C

4. TRAINING AND HUMAN RESOURCES

In 2013, the following MSF trainings included an MH component:

- The 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
- PSP (populations en situation précaire) – co-facilitation of the emergency module, and an evening session on MH

OCB, in collaboration with four other MSF-sections, ran and organised the annual two week MH training courses in Holland for field psychologists and counsellors (national and international staff). Seven OCB candidates participated.

In terms of human resources (HR), 36 psychologists/psychiatrists were deployed to the field in 2013 (11 more than the previous year). Many were deployed for short term emergency missions and only six were on their first missions. The latter has implications in terms of the HR pool for MH activities. Most expatriate psychologists/psychiatrists only do a few missions before leaving MSF, thus without a sufficient number of first-time mission positions being filled, we run the risk of the HR pool for MH activities running empty.

5. LOOKING BACK AND AHEAD

LESSONS LEARNED IN 2013

At least half of all MSF beneficiaries who present at the OPD are less than five years of age and a significant proportion are less than 10 years of age. These children often live in very difficult circumstances complicated by natural or manmade disasters, and they have often experienced violence, displacement, food insecurity, as well as all the problems associated with poverty. The psychological manifestations of these experiences are extensive (for example, nightmares, irritability, aggression, sadness and developmental delays). The counsellors and psychologists working in the field often do not have the experience or training required to appropriately diagnose and treat these children. As such, efforts need to be invested into developing and providing appropriate tools to help health care providers identify children with MH needs and to provide the appropriate interventions for them and their families.

PROSPECTS FOR 2014

While OCB has come a long way in its efforts to integrate psychiatric care into MSF medical activities, this effort needs to be maintained, especially in the areas of emergency and primary health care. This will continue to be an area of focus next year. In addition, data capture and collection for psychiatric care and its outcomes, need careful thought and better integration into the MH database. The list of validated psychotropic drugs will be reviewed at an intersectional level next year.

An MH intersectional policy is currently being developed and should be finalised next year. This will hopefully provide direction and guidance on how to further strengthen MH care among other medical activities.

NUTRITION

1. OVERVIEW

2013 was an exceptionally quiet year in the field of nutrition. No nutritional emergency occurred, though activities continued in countries where emergency interventions had already been mounted (the Sahel region and South Sudan).

For regular programmes, the total number of beneficiaries treated for Severe Acute Malnutrition (SAM) was much lower in comparison with 2012 and preceding years. This can be explained by the closure or handover of some major nutrition programmes in 2012 and by the lack of new projects in 2013. Additionally, OCB stopped treating Moderate Acute Malnutrition (MAM), and Supplementary Feeding Programmes (SFP) and Target Nutritional Support were rarely implemented, leading to further reduced activities.

2. PROGRAMME ACTIVITIES

2.1. PROGRAMME ACTIVITIES AT PROJECT AND MISSION LEVEL

During 2013, OCB managed 18 nutritional projects in 12 countries: most of these were integrated nutritional activities in medical programmes (table 1). Except for the nutritional programmes associated with the measles vaccination campaigns in the Democratic Republic of Congo (DRC), only one new nutritional activity was opened in 2013, in El Serif (Sudan).

Seven programmes were closed:

- Two were successfully handed over to the Ministry of Health (MoH): Kibera (Kenya), where MSF continues to support the MoH by paying staff salaries, and Niangara (DRC),
- Two were handed over to Save The Children: Mopti and Douentza (Mali),
- Kamrangirchar (Bangladesh) was handed over to MSF-OCA,
- Two were closed without a handover: Imey (Ethiopia) and Galgaduud (Somalia).

Additionally, two programmes had to be interrupted for security reasons, and are currently in standby: Pibor (South Sudan) and Shaeria (North Sudan).

Table 1: OCB Nutritional Projects in 2013

Type of Programme	Countries and Projects
Vertical Programmes / Emergencies Nutrition main activity / Emergencies	DRC (measles vaccination campaigns); Mali (Mopti, Douentza); Mauritania (Hodh El Chargui); South Sudan (Maban)
Integrated Programmes Nutrition integrated into medical activities	Afghanistan (Kabul); Bangladesh (Kamrangirchar); DRC (Masisi, Niangara); India (Chhattisgarh); Kenya (Nairobi); Niger (Guidan Roudji); Sierra Leone (Bo); North Sudan (Darfur); South Sudan (Gogrial, Jonglei)
Target Nutrition Programmes Nutrition integrated into HIV or fistula programmes for selected beneficiaries	Burundi (Gitega); DRC (Kinshasa); Kenya (Nairobi); South Sudan (Gogrial)

DRC: Democratic Republic of Congo

Table 2: Malnutrition in OCB Measles Vaccination Programmes, DRC, 2013

Locations	Activities	Admissions	SAM	GAM
Yahuma	Vaccination sites		1.2%	3.8%
	ATFC	148		
	ITFC	43		
Djolu	Vaccination sites		2%	7.6%
	ATFC	707		
	ITFC	154		
Wamba	Vaccination sites		3.6%	9.8%
	ATFC	67		
	ITFC	19		
Kamonia	Vaccination sites		2.3%	7.3%
Mutena	Vaccination sites		3.7%	11.5%
Measles Projects TFP		1,138		

ATFC: ambulatory therapeutic feeding centre; **GAM:** global acute malnutrition; **ITFC:** inpatient therapeutic feeding centre; **SAM:** severe acute malnutrition; **TFP:** therapeutic feeding programme

2.2. NUTRITIONAL EMERGENCIES

2.2.1. Measles Vaccination Campaigns (DRC)

Since mid-2010, DRC has faced a country-wide measles epidemic, and both MSF and

the MoH (supported by the WHO and UNICEF) conducted a number of vaccination campaigns. These vaccination campaigns were systematically linked with nutritional activities, either ambulatory as outpatient department (OPD)/mobile clinic/

ambulatory therapeutic feeding centres (ATFC), or as inpatient department (IPD)/ inpatient therapeutic feeding centres (ITFC).

Rapid nutritional evaluation (screening) was organised during the vaccination campaigns by checking for oedema and measuring the mid-upper arm circumference (MUAC) for all children between six months and five years of age (table 2). Children with SAM were given a ration of ready-to-use therapeutic food (RUTF) and were then referred to the nearest ATFC or mobile clinic to complete their treatment, or were referred to an ITFC in case of complications. In some locations, malnutrition was high. For example Mutena had 3.7% SAM and 11.5% global acute malnutrition (GAM), which may have been due to poor quality and quantity of food for children. The poor quality may reflect local cultural practices or may have been associated with measles.

2.2.2. Mali

In 2012, in Mali (Douentza and Mopti), OCB intervened in the conflict area with support to primary health care, including the treatment of SAM. As the security situation remained calm and no crisis was observed, OCB activities were stopped and handed over to another NGO - Save The Children.

2.2.3. Mauritania and South Sudan

In Mauritania (Hodh El Chargui – Mberra refugee camp) and South Sudan (Maban refugee camp), which saw major MSF activities in 2012 (cf. Medical Activity Report 2012; Emergency Unit & Nutrition sections), the situation stabilised and improved. Nutritional activities were transformed into regular nutrition programmes. Nutritional surveys conducted in Mberra camp in January and October 2013 revealed improvement in GAM and SAM in comparison with 2012 (table 3).

2.3. NUTRITION PROGRAMMES

The typical setup of OCB nutritional activities consists of one ITFC for complicated cases of SAM, several satellite ATFC's for uncomplicated cases of SAM and sometimes several Supplementary Feeding Centres (SFC) for cases of MAM. In addition, specific Targeted Nutritional Support is provided for patients in vertical projects, such as HIV/tuberculosis or fistula programmes, and Selective Nutritional Sup-

Table 3: Nutritional Survey in Mberra Camp – Mauritania, 2012-2013

	July 2012	November 2012	January 2013	October 2013
GAM	20%	17%	13.2%	11.8%
SAM	5.9%	4.6%	3.2%	1.4%

GAM: global acute malnutrition; **SAM:** severe acute malnutrition

Table 4: Number of OCB Nutritional Programmes in 2013

Type of Programme	Number of Centres	Number of Patients Admitted
ITFC	16 in total 13 integrated 2 independent 1 DayCare	7,366
ATFC	53 in total 49 integrated 3 independent 1 CMAM	27,575
SFC	1	470
Targeted Nutritional Support/Selective Nutritional Support	4	2,438
Total		37,849

ATFC: ambulatory therapeutic feeding centre; **CMAM:** community management of severe acute malnutrition; **ITFC:** inpatient therapeutic feeding centre; **SFC:** supplementary feeding centre

Table 5: Annual numbers of patients treated for malnutrition by OCB; 2008-2013

Year	SAM	MAM	Target and Selective Patients	Total
2008	51,349	54,774	734	106,857
2009	42,947	21,677	7,442	72,066
2010	55,324	4,127	65,500	124,951
2011	59,874	2,553	33,766	96,193
2012	55,354	298	4,443	60,095
2013	34,941	470	2,438	37,849

MAM: moderate acute malnutrition; **SAM:** severe acute malnutrition

port is provided to vulnerable groups such as children younger than two years of age or pregnant and lactating women (PLW).

Overall, OCB treated 37,849 patients in 2013, a strong decrease since 2012 (60,095), and the lowest since 2008 (table 5). This decrease was the consequence of the closure of major nutrition projects between 2012 and 2013, the absence of nutritional emergencies in 2013 and the discontinuation of treatment of MAM (with the exception of a few cases in Kenya) two years ago.

2.3.1. Therapeutic Feeding Programmes

In 2013, the proportion of beneficiaries in Therapeutic Feeding Programmes (TFP) – including ITFC and ATFC – requiring hospitalisation ranged from 3.9% (Douentza, Mali) to 48.2% (Masisi, DRC) (table 6, Annex). The overall admission rate for infants under six months of age was 2.5% (891 beneficiaries), compared to 3.4% in 2012.

It is important to note that age distributions were missing for a few projects, leading to a slightly underestimated rate. The top two projects were Kabul (Afghanistan) at 9.0% and Niangara (DRC) at 8.8% - much lower than the top projects of 2012, where Bangladesh reported 35.7% of admissions of infants under six months, and Sierra Leone, 26%.

In all OCB TFPs, the target cure rate is 80%. In 2013, cure rates in TFPs ranged from 16.9% in Chhattisgarh (India) to 97.8% in Mopti (Mali). Only three projects out of the 14 programmes concerned (21.4%) achieved this target (excluding North Sudan, which only started mid-December 2013 and did not have sufficient exits for analysis). This is a better result than in 2012, when only 13.3% of all projects achieved this target.

Similarly to previous years, low cure rates were caused principally by a high defaulter rate. A defaulter rate above 15% was ob-

served in seven projects (50%), and for six projects it was even above 20%. The reasons for these high defaulter rates were similar to those of previous years: security problems in Mali (mainly in Douentza) and in South Sudan (in Pibor, where populations and MSF teams had to evacuate for most of the year, leading to repercussions for the supervision of activities and for the follow-up of patients); challenging access during the rainy season in South Sudan (Gogrial); and mobility of the population in Bangladesh. In India, the extraordinary high defaulter rate (81.4%) is a consequence both of the insecurity of the area (leading to difficulties for patients to come for follow-up), and the chronic nature of the malnutrition, which is not considered as a significant issue by the population. In the refugee camp settings (Maban in South Sudan and Mberra in Mauritania), where the follow up of the patients was difficult in 2012 (24.5% of defaulters), the defaulter rate decreased in 2013 due to amelioration of the health promotion and is now below 15%. Data for the nutritional activities in the measles emergencies in DRC and in the HIV projects were insufficient, and were thus not included in this analysis.

Mortality rates remained below 5% in all programmes except in Masisi, where it was 5.2%. Here also data were insufficient for the nutritional activities in the measles emergencies in DRC and in the HIV projects, and these were thus excluded.

2.3.2. Supplementary Feeding Programmes

The only Supplementary Feeding Programme in 2013 was in Kibera (Nairobi), Kenya. A slight increase of admissions was observed compared to 2012 (470, compared to 298 in 2012 – table 7).

2.3.3. Targeted and Selective Nutritional Support

Targeted Nutritional Support was implemented in Gitega (Burundi) for women with fistulas, and in Kinshasa (DRC) and Kibera (Kenya) for HIV patients. Selective Nutritional Support was implemented in Gogrial (South Sudan) for pregnant and lactating women (PLW) and in Guidan Roumdji (Niger) for children under-five with tuberculosis (table 7).

2.4. OPERATIONAL ACTIVITIES

- **South Sudan:** in Pibor, the situation was volatile, compromising regular nutritional activities. To follow the situation, nutritional screening (MUAC) was organised during the food distribution and in some villages, showing a SAM and GAM rate of respectively 0.13% and 4.49% at the World Food Programme (WFP) food distribution points, and 0.03% and 0.61% in the different villages of the Gumuruk area.
- **Mauritania:** refugees in Mberra camp depended almost completely on the food distribution by WFP. An interruption in the food distribution occurred in September 2013; however, no significant augmentation of the admissions in the MSF TFP was observed following this event.
- **Niger:** the ITFC of Guidan Roumdji continued to receive more patients (which have been increasing since 2011): 5070 children younger than 5 were admitted (versus 4240 in 2012). The malnutrition peak occurred as usual from August to November and the mortality rate increased during that time to 7%. However, this mortality rate remained below the levels of the previous years (up to 9.9% in October 2012), due to a more gradual increase in cases and a better preparation for the malnutrition peak.
- No nutritional surveys were performed in 2013.
- **Vaccination in nutritional programmes:** access to the Expanded Programmes of Immunisation (EPI) was improved in some nutritional programmes (e.g. in Niger), and the full EPI was introduced in Maban (South Sudan). However, data on the coverage of tetanus vaccine for mothers in nutrition programmes is still not available.

- **Field visits:** two visits were performed: one to Mauritania for an evaluation of the Mberra project (Malian refugees) and for support to the field, and one to Niger to support the preparation of the pilot project on Community Management of Severe Acute Malnutrition (CMAM), to evaluate the ongoing project and to recommend adaptations to manage the malnutrition peak.

3. TRAINING

- **Nutrition E-learning:** the French translation of the E-learning nutrition tutorial was implemented: the first session was organised in October at the same time as the first field test of the “plug and learn” offline version. Unfortunately, the offline course failed because of a technical problem, and is still not available. Two sessions in English were organised under supervision of other MSF Operational Centres.
- **Participation in MSF trainings:** Nutrition input was provided for the courses on Populations in Precarious Situations (PSP), Management of Health Services (MHS), and Sexual and Reproductive Health (SRH).
- **Teaching Video Project:** the project launched in collaboration with the “Global Health Media Project” for the development of training videos on nutrition is still ongoing. Further developments are expected next year.

4. OPERATIONAL RESEARCH AND DEVELOPMENTS

4.1. PUBLICATIONS

Three papers on the nutrition programme in Bangladesh, one on admission criteria and two on the use of RUTF in this setting, were published over the course of 2013 (cf. Op-

Table 7: OCB Supplementary Feeding Programmes and Targeted & Selective Nutritional Support in 2013

Country	Project	Number of patients		
		SFP	TNS	SNS
Burundi	Gitega - Fistulas		46	
DRC	Kinshasa - HIV		449	
Kenya	Nairobi (Kibera) - HIV	470	1,655	
Niger	Guidan Roumdji - Children <5			61
South Sudan	Gogrial - PLW			227
Total		470	2,150	288

DRC: Democratic Republic of Congo; PLW: pregnant and lactating women; SFP: supplementary feeding programme; SNS: selective nutritional support; TNS: targeted nutritional support

erational Research and Documentation section, §2.2.). The results of these studies, in particular the finding that in Asia it might be safe to use only MUAC and oedema screening as admission criteria to nutritional programmes, were disseminated through the programme.

4.2. ONGOING STUDIES

Due to the handover of the Bangladesh mission, where most operational research on nutrition was conducted in OCB, and to the security issues in many projects (South Sudan, Niger, Mauritania), the capacity for implementing operational research for nutrition was jeopardised.

One pilot project, on CMAM, was launched in Niger. A preparatory workshop was successfully organised, but the project itself was postponed, as authorisation was so far not obtained.

Capitalisation on the use of simplified MUAC-for-height as an admission criterion for children older than five in Maban (South Sudan) was envisaged through retrospective data collection from patient files, but could not be performed due to missing data.

4.3. TOOLS AND GUIDELINES

The revision of a number of tools and guidelines continued during 2013:

- The Nutrition International Guideline was finalised and was sent for editing. It is expected for 2014.
- The Nutrition Pocket Guideline (OCB) was delayed due to shifts in human resources.
- A standard protocol to improve the prevention, detection and treatment of malnutrition in PLW was developed from a South Sudan emergency protocol, in collaboration with the SRH department, and was presented in SRH international training

5. LOOKING BACK AND AHEAD

LESSONS LEARNED IN 2013

- In 2013, the nutrition department was confronted with human resources gaps, causing delays in studies and projects as priority was given to support to the field.
- The decrease in the volume of nutrition activities created difficulties to find settings for innovation, pilot projects (e.g. opportunities for the dissemination of the new PLW nutrition protocol) and even to maintain experienced expatriates.

PROSPECTS FOR 2014

- The admission criteria (especially MUAC) for Targeted Nutritional Programmes in African contexts and the influence of body shape on the weight-for-height index will continue to be explored.
- Access to vaccination in nutrition programmes (as detailed in the EPI) will be improved.
- The management of infants younger than six months (including neonates) will be improved, and in collaboration with the Paediatrics and Sexual and Reproductive Health (SRH) referents, support to breastfeeding in nutrition programmes (at the ITFC and ATFC level) will be further developed. The breastfeeding protocol will be revised and breastfeeding support strategies will be discussed.
- Special attention will be given to the reinforcement of specific aspects in the nutrition activities: quality of integrated nutrition care in health projects, prevention, detection, and treatment of malnutrition in PLW, early detection and treatment of children with VIH/TB in nutrition program.
- Standard protocols for hospitalised sick patients (surgery, burns, coma, etc.) and enteral nutrition will be developed and disseminated
- At the level of training, the content of the nutrition trainings will be revised to be in line with the international nutrition guidelines when the latter are published. Training videos will be developed on nursing, hygiene and medical procedures in nutrition programmes.

OPERATIONAL RESEARCH AND DOCUMENTATION

1. OVERVIEW

There are two units responsible for Operational Research (OR) in the OCB: the South African Medical Unit (SAMU) which is responsible for research related to HIV and tuberculosis (TB), and the Luxembourg OR unit (LuxOR) which is the main hub for diversifying the OR portfolio to other operational areas and capacity building in OR .

2013 had a number of key achievements. Data collection and the OR portfolio was widened to include new areas such as antibiotic resistance, neonatology, migrant health, and surgery. Both publication outputs and their diversity increased with over 100 scientific publications in 2013. Efforts to establish a national MSF Ethics Review Board in India reached an advanced stage and this is the first ever MSF-National ethics review board that has been constituted according to Indian national guidelines. This will be a pioneering experience in trying to facilitate ethics for MSF led research at country level. The MSF operational research courses were formally recognised by the World Health Organisation and are now part of a global partnership under what is termed SORT-IT (Structured Operational Research Training- Initiative). This high level recognition has helped to raise course credibility and improves opportunities for advocacy, funding and global networking. This recognition also offers participants the possibility to benefit from the Trop-Ed network for education in International Health. Participants can also receive European Credit Transfers and Accumulation System (ECTS) credits which can lead on to obtaining a MPH or PhD. Importantly, OR courses serve to rapidly increase OR capacity in operational areas where there gaps in medical data collection, OR and documentation.

Dissemination of published research through the MSF Field research website increased exponentially with nearly 10,000 publication downloads per month. E-newsletters and the operational research day also are served to further disseminate research to various audiences.

The fruitful activities of 2013 were capped with leadership in writing part of the World Health Report 2013 entitled "Research for Universal Health coverage". This allowed us an opportunity to enhance the profile and relevance of OR at the global level, promote the MSF perspective that more research needs to be focused on implementation and helped highlight the importance of assessing if conducted research has a beneficial effect on populations. Two of the ten case studies included in this report were from the MSF-OCB, which also highlights the global relevance of the research we conduct. Finally, the scientific advisory group to the European Parliament granted us the opportunity to address the European Union (EU) Parliamentarians on the importance of OR in bridging the large gap that exists between research knowledge and its translation into practice. Through this forum, we intend to highlight the role and relevance of OR (an area that remains neglected both in terms of its recognition and funding) and bring it into the core of political decisions in Europe.

2. PROGRAMME ACTIVITIES

2.1. ADVOCACY AND INTERNATIONAL RECOGNITION OF OR

An advocacy related editorial written by MSF and partners called for the end-point of research to go beyond publication outputs to assessing what happens in terms of policy and practice on the ground " (Trop

Med Int Health. 2012 Aug 16.). WHO subsequently invited a number of co-authors of the group to be among the lead authors in writing the 2013 World Health Report entitled "Research for Universal Health coverage". The report was published in 2013 and is available on <http://www.who.int/whr/en>. This involvement allowed us an opportunity to enhance the profile and relevance of OR at the global level, promote the MSF

perspective that more research needs to be focused on implementation priorities and highlight the importance of assessing if conducted research has a beneficial effect for populations. Two of the ten case studies included in the report (as leading examples of research leading to Universal Access) were MSF-OCB led studies, highlighting the importance of the kind of research being done.

Despite the relevance of OR in bridging the gaps between what we know from research and what we do with that knowledge, the so called 'know-do' or 'implementation gap', there is currently no mechanism within the EU to either fund OR or to support capacity building. Academic institutions continue to monopolise funding opportunities and OR continues to be considered the poor cousin of clinical trials and other forms of upstream research. As a consequence, it is almost impossible to obtain dedicated funding for OR.

For the first time ever, the scientific advisory group to the European Parliament granted MSF and its partners the opportunity to address European Union (EU) Parliamentarians on the importance of OR in bridging the large gap that exists between research knowledge and its translation into practice. Through this forum, we intend to highlight the role and relevance of OR and bring it into the core of political decisions in Europe. Being a catalyst here would imply,

more relevant OR being conducted in low and middle income countries, better implementation of health interventions and in consequence, more lives saved. In particular, we want the EU to ensure that major initiatives like the EU Framework funding, the European and Developing Countries Clinical Trials Partnerships' (EDCTP) and the Global Fund place more emphasis on providing more funding for OR.

A general assembly motion was written and approved by the Luxembourg and OCB general assemblies to include operational research in conflict settings and to increase the needed resources. This initiative should bring OR into this core area of MSF Operations.

Meetings have been held with the surgery, emergency pool and the data collection units and a phased plan of data collection has been agreed upon. The conflict in Syria will be used as a "pilot study" to explore the feasibility and outputs of this new initiative.

In terms of involving other MSF sections in OR, collaboration has been established with MSF-Geneva and MSF OCBA. It is planned to support the Haiti mission to develop and implement operational research related to maternal health and support nutrition related OR in Niger

2.2. SCIENTIFIC PUBLICATIONS

The number of peer-reviewed OCB publications continued to increase, from 81 in 2012 to 101 in 2013 (fig. 1). Eighty percent (n=81) of these publications reflected original research, while 20 were view-points, review pieces and state-of-the-art pieces. The latter challenges the status-quo of medical practice in different domains, and involves the use of publications as a tool for public debate and advocacy. (cf. §4.).

OCB publications covered 12 broad topics, representative of most medical activities conducted by OCB (fig. 2). Domains which remained underrepresented included migrant health, mental health, health promotion and infection control.

As was done in previous years, booklets (hard copy and CD) of publications were distributed to missions, partner sections, donors and collaborating institutes.

A full list of OCB publications for 2013 is provided in the Annex.

2.3. RESEARCH DISSEMINATION

During 2013, dissemination was achieved through a number of channels including: peer reviewed publications, the Operational Research Day conducted in Brussels, participation in conferences, the MSF Field Research website, the Operational Research Newsletter and support for a journal dedicated to operational research – Public Health Action. Some of these are described in brief below.

OCB hosted its second OR Day in 2013, which now forms part of OCB's general assembly. It was attended by MSF field and HQ staff, external scientists, academic institutions and partners, and served as an excellent forum to promote and disseminate operational research and to enhance the credibility and perceived value of OR in MSF. A total of 16 presentations were made, many by MSF-operational research course students. The four main oral presentation slots were: i) Neglected diseases and Nutrition, ii) Improving HIV outcomes:

Figure 1: OCB-related publications by year up until 2013

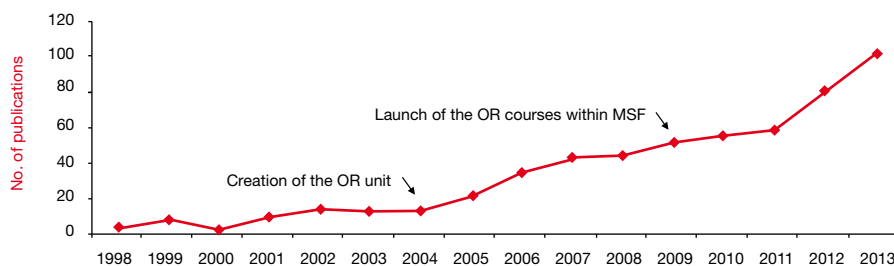
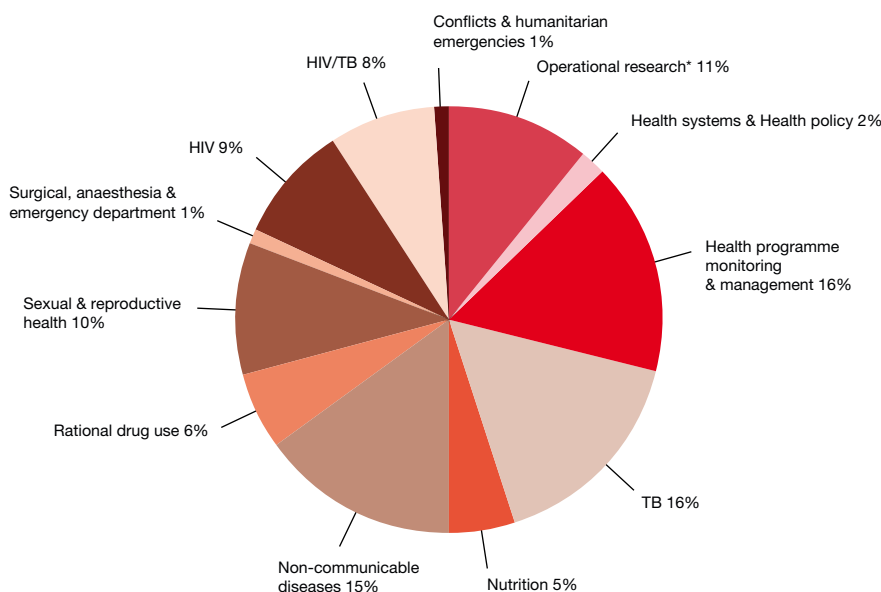


Figure 2: OCB-related publication themes in 2013 (n=101)



* Most of the OR-related publications are viewpoints which essentially serve to improve the visibility of OR and facilitate the process of OR in resource-poor settings.

OR towards policy change, iii) Entry to and retention in care in different circumstances, and iv) Health care in conflict and emergencies. The presentations are available on line at <http://www.msf.lu/research/archives/dossier-msf-operational-research-day-2013.html> and through the MSF Field Research website.

A conference was organised by the Ministry of Cooperation of Luxembourg and the United Nations (UN) - this was attended by top UN officials, including a Special Representative of the Secretary-General on Sexual Violence in Conflict, during which the MSF experience in OR related to sexual violence was presented. A conference was also organised in Luxembourg in collaboration with several national health institutions at the Central Hospital in Luxembourg on antibiotic resistance and how OR can be applied to identify local solutions. The conference coincided with the Global Antibiotic Awareness Campaign and involved various scientists and presenters from different parts of the world.

The MSF Field Research website (www.fielddresearch.msf.org) continued to archive MSF-authored publications from over 100 journals and 35 publishing houses and make them available free-of-charge. More than 100,000 MSF publications were downloaded from this website over the course of 2013 (fig. 3) There are three associated messages: 1) there is a high global demand for MSF publications and the related operational research work 2) the efforts by OCB to advocate and promote open access publications bears fruits in terms of dissemination and 3) high numbers of publication downloads enhances our professional credibility and opportunities for advocacy.

The Public Health Action journal is an open access journal that provides a home for operational research from low- and middle-

income countries. It was set up by the Union, MSF and partners to provide a home for OR from low and middle income countries – one which other scientific journals do not, or seldom provide. The journal is now used by operational researchers world-wide and in 2013 PHA ranked among the top 10 journals with the highest downloads on Ingenta (which hosts several thousands of journals)

2.4. RESEARCH IMPACT

Two initiatives were launched to enhance monitoring and reporting of the impact of OR on policy and practice. This is the core reason why MSF does OR as research should help improve health interventions and eventually translate into benefits for vulnerable populations.

The first initiative was a collaboration with MSF-UK on use of “ResearchFish” – a specific monitoring and analysis tool that can help to standardise the follow up and reporting of impact on policy and practice. The second is an intranet share-point site allowing monitoring of impact of all studies emerging from OR courses on policy and practice. A first evaluation shows that 93% of 96 papers submitted to journals by MSF OR course participants were published and 74% had some effect on policy and practice (TMIH – In press). This is encouraging and a pioneering first step. More efforts in this line need to continue.

2.5. MSF-INDIA ETHICS REVIEW BOARD

A new pioneering initiative to create an MSF India Institutional Ethics Review Board was completed in 2013. The Standard Operating Procedures were approved by the MSF-ERB, the Union ERB and the Indian Council of Medical Research in February 2013, and the committee is to start functioning in 2014. The committee will review

all study protocols involving MSF to provide in-country ethics clearance.

2.6. THE OPERATIONAL RESEARCH POLICY

The Operational Research Policy document, which is the “Road Map” for conducting and publishing operational research in OCB, was updated and published in early 2013. This new version replaced the 2010 version.

3. MEDICAL ACTIVITY REPORT

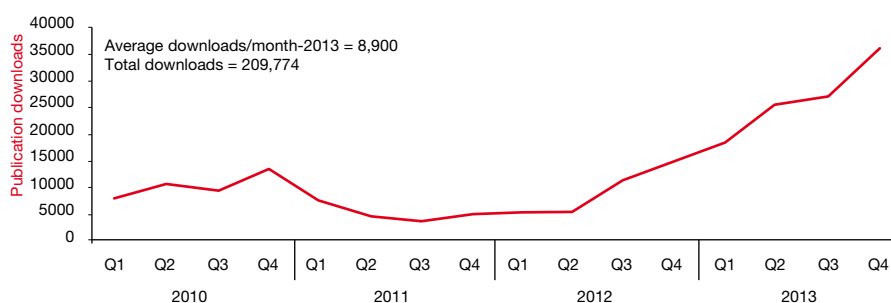
The fifth edition of the annual OCB Medical Activity Report for 2013, covering the 20 technical domains of the Medical Department, was supported by the OR unit and published and made available for the medical coordinator days and General Assembly.

4. TRAINING/CAPACITY BUILDING

The MSF operational research courses (launched in 2009 in partnership with the Union and partners) were formally recognised by the World Health Organisation and are now part of a global partnership under what is termed SORT-IT (Structured Operational Research Training- Initiative). This high level recognition has helped to raise course credibility and improves opportunities for advocacy, funding and global networking. This is the first time an MSF course has been recognised by the WHO and it offers the possibility for participants to benefit from the Trop-Ed network for education in International Health. Participants can also receive ECTS credits which can lead on to obtaining an MPH or PhD. Importantly, OR courses serve to rapidly increase OR capacity in operational areas where there are gaps in medical data collection, OR and documentation. Global recognition also helps open doors to additional funding, improve global networking and foster opportunities for advocacy. Various courses are conducted in Europe, Asia and Africa and this network is being expanded to a global level through a WHO partnership. MSF's role here is to be a catalyst in this expansion with the primary aim of bridging gaps in health care delivery for poor populations in low and middle income countries.

Cumulatively, 236 participants from 61 countries have been enrolled in 20 courses of which 15 have been completed. Of the

Figure 3: MSF Publication downloads from the MSF Field research website, 2010-2013



15 completed courses, these were attended by 177 participants, of whom 158 (89%) completed all milestones. A total of 189 papers were submitted to peer-reviewed journals of which 143 (76%) were in Press or published.

5. OPERATIONAL RESEARCH FELLOWSHIPS

A fellowship programme exists since 2011 and the current pool of MSF fellows includes six individuals at headquarters and field sites. A fellow's role is to strongly support "innovation" within routine operations and contribute to critical reflection on data, programme orientation and the impact of MSF interventions over time. The longer-term vision of this fellowship includes ca-

capacity building, retention of human resources and the development of sustainable leadership of OR. The fellowship programme is a pioneering initiative in MSF which provides rationale for longer term contracts and opportunities including the possibility of pursuing a PhD in the field of OR. Over the course of 2013, the fellows were involved in co-authoring 55 publications, demonstrating their value in driving research in MSF.

6. LOOKING BACK AND AHEAD

LESSONS LEARNED IN 2013

- Due to the turnover of LuxOR staff and the absence of a Programme Officer during most of the year, there was an added management load on existing senior staff which reduced time for meetings, interaction and visibility in Brussels. A Programme Officer was recruited at the end of the year which should help to fill this gap.
- High turnover of staff in the Operations Department continued to affect the sustainability of some research studies, due to lack of understanding of existing and proposed OR studies.
- Under the umbrella of SORT-IT, the modular OR course continued to be very successful, with large numbers of candidates applying for each individual course and high rates of success for participants completing the course. These courses have also been key to diversifying the OR agenda beyond one that was primarily focused on HIV and TB. However, it is important to i) ensure that the courses continue to be organised and coordinated in a way that does not compromise the current quality, and ii) recruit new facilitators in order to spread out the rather heavy work load. Although there are several operational research fellows now working in headquarters and in certain missions, this cadre is yet to be formally recognised in the human resources salary grille. Incentives need to be thought about to sustain motivation for the additional workload.
- There was a shortage of funds for OR activities and courses during the year and this will have to be addressed in 2014.

PROSPECTS FOR 2014

- Following the recruitment of a new Programme Officer at the end of 2013, there will be renewed focus on close liaison with the Operations Department, to ensure that existing and new projects are capitalised and gaps, linked to rapid turnover in Operations, are bridged.
- Further project visits by the OR team will be undertaken to understand project objectives and constraints and to generate relevant OR questions.
- Closer links and technical guidance will be provided to serve as a catalyst for enhancing the use of OR to influence policy and practice change and improve health care delivery.
- Greater efforts will be made to expand the existing network of OR course facilitators to include former students and OR fellows.
- The possible career opportunities for MSF OR fellows will be discussed further and explored through links to universities.
- Specific funding for OR-related activities and course will be sought.
- Finally, efforts are underway to use the pre-existing MSF-Luxembourg foundation to embed the capacity building activities. This initiative has several possible advantages. First, the activities of capacity building in OR could be embedded in a more sustainable framework. Second, it allows the possibility of research scholarships, grants etc. Third, it promotes new scholarly activity with increased chances of funding and collaborative opportunities.

PAEDIATRIC CARE

1. OVERVIEW

Although paediatric care concerns children from birth through adolescence, children under five years of age (referred to as under five's in this report) are most at risk of disease and death, and remain the primary target for intervention. As in previous years, OCB data confirm that malaria, lower respiratory tract infections (LRTI), diarrhoea and neonatal pathologies are the main causes of disease and death in children under five.

Neonates (children 0-28 days) are a particularly vulnerable population, accounting for 39% of under-five inpatient mortality in OCB projects in 2013. Over the past years, the link between maternal and neonatal care has been gradually strengthened (cf. the revised operational prospects). Useful lessons were learnt from the comprehensive emergency obstetrical and neonatal care programme in Kabezi, Burundi, which was handed over in September 2013.

In 2013, the Sierra Leone hospital, the Gondama Referral Centre (GRC), redefined its 5-year vision, with a primary focus on paediatric infectious diseases and Lassa Fever. Additionally, further reflection took place on possible options for community-based paediatric activities in Gogrial, South Sudan.

2. PROGRAMME ACTIVITIES

2.1. UNDER-FIVE CARE

2.1.1. Under-five outpatient care

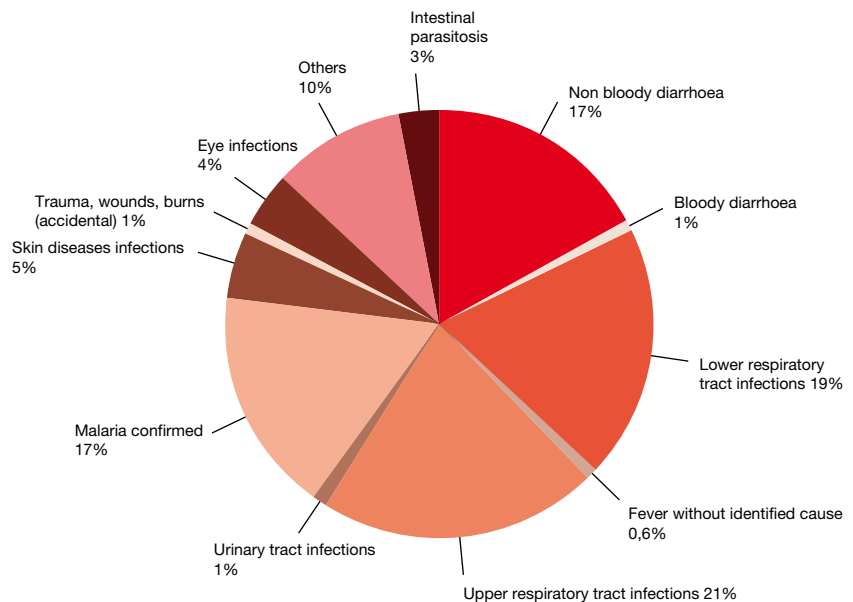
In 2013, 502,378 under-five outpatient consultations were conducted in OCB projects across 19 countries, representing roughly 37% of all outpatient department (OPD) consultations, a proportion which has remained stable since 2012.

Among the projects for which standardised data were available through the Epitools, MINOS, and/or other systematic databases (cf. Health Informatics section), there were 480,192 under-five outpatient consultations. Standardised data were not received for the projects in Bangladesh, Syria, Bulgaria and Italy. Almost one third (29%) of all under five outpatient consultations occurred in Guidan Roumdji, Niger. Other important contributions to the overall under five outpatient consultations were the outreach activities and emergency interventions in South Sudan (17%), the health centres and mobile clinics in Masisi, Democratic Republic of Congo (DRC) (12%), the OPD of Ahmad Shah Baba hospital in Kabul, Afghanistan (9%), the outpatient interventions in Mauritania (7%), and the health centres in Kibera, Kenya (6%).

The Gondama Health Centre in Sierra Leone contributed another 6% of all under-five consultations; however, this is a Ministry of Health (MoH)-run clinic, receiving minimal support from OCB. The Abu Elian project (Egypt), which focused exclusively on under five outpatient care, contributed 2% of the overall volume of OPD activities; it closed in July 2013 only one year after opening.

The morbidity pattern for children under five was similar to that of previous years: respiratory tract infections represented 40% of the reported morbidity (almost half of which were LRTI), followed by non-bloody diarrhoea (17%), malaria (17%), infectious skin diseases (5%) and eye infections (4%) (fig. 1). Three missions contributed to more than three quarters of cases of malaria diagnosed at OPD level:

Figure 1: Disease profile in children < 5 in OCB OPD, 2013



Niger (49%), Sierra Leone (17%) and South Sudan (16%). No specific data were collected for neonates at OPD level.

As in previous years, there has been no measurable improvement in diagnosis and/or reporting of tuberculosis (TB) cases at health centre level. In total only 159 cases of TB were reported (< 0.1% of all morbidity) compared to 334 cases in 2012. Some cases of fever without identified cause (0.6% of all morbidity) may in fact represent undiagnosed TB. Implementation of a symptom-based TB screening questionnaire needs to be routinely implemented at health centre level to increase vigilance for TB. Inclusion of cases with a positive TB symptom screen in the data collection tools should be considered.

Only two projects implemented isoniazid preventive therapy (IPT) in non-HIV infected children under the age of five, despite the proven effectiveness of this intervention to help prevent active TB following exposure to a case of active TB. Sixty-one children under the age of five were started on IPT in Ahmad Shah Baba (Kabul, Afghanistan) and 51 children in Kibera (Kenya) (as reported through the TB SPOT tool, 2013; cf. HIV/Tuberculosis section), setting good examples for other OCB projects.

Non-communicable diseases (NCDs), including asthma, represented 0.1% of all outpatient consultations. The Kibera project (Kenya), which is piloting a project on outpatient management of NCDs, including a paediatric component, contributed 35% of all under five NCD cases, which included primarily asthma, sickle cell disease (SCD) and epilepsy. This project will improve its reporting on paediatric NCDs in 2014 and will continue to develop context-specific management protocols. The available literature suggests that approximately 50% of all children under five diagnosed with pneumonia according to Integrated Management of Childhood Illnesses could be re-diagnosed with asthma or wheezing when using re-defined diagnostic criteria and treatment (Ostergaard et al. *Prim Care Respir J* 2012). This suggests that the diagnosis of asthma might need further attention in OCB projects.

2.1.2. Under-five inpatient care

In 2013, 34,005 children under five were admitted to the inpatient services in 22 OCB projects in 15 countries, representing

Figure 2: Main pathologies in children < 5 in OCB IPD, 2013

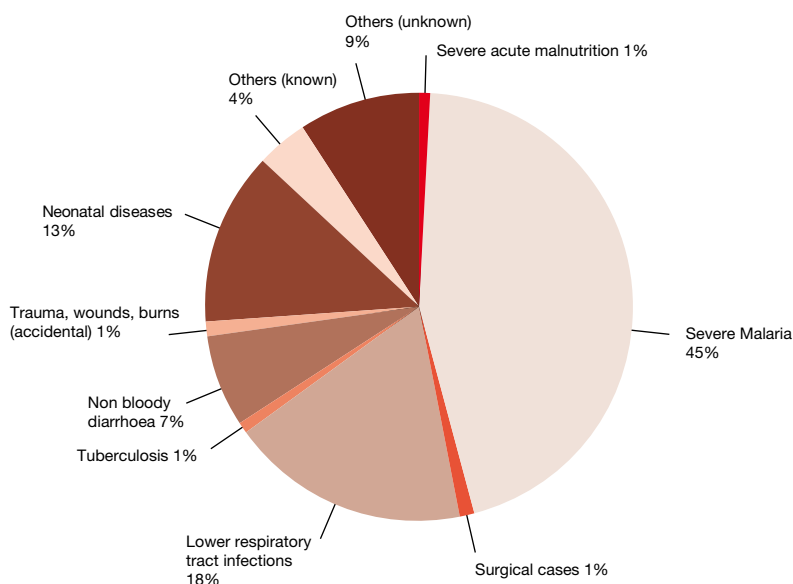
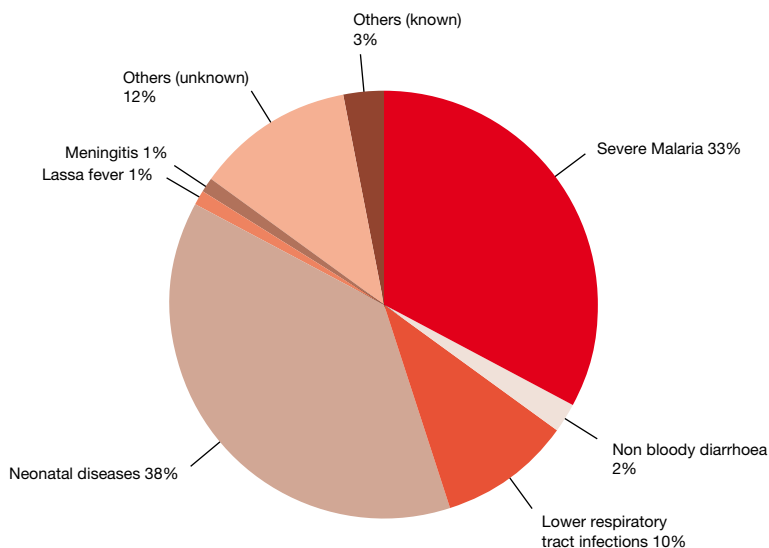


Figure 3: Main causes of mortality in children < 5 in OCB IPD, 2013



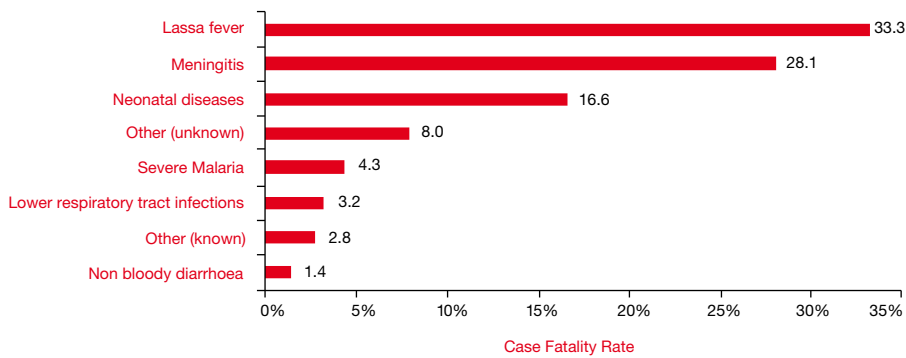
slightly more than half of all admissions to the inpatient department (IPD), a proportion which has remained relatively stable since 2012.

Detailed data for the paediatric inpatient wards, excluding inpatient therapeutic feeding centres (ITFC), were aggregated for 19 projects using the Epitools or MINOS (cf. Health Informatics section). A total of 28,818 children under five were discharged from these projects. Two projects, the GRC in Sierra Leone and Guidan Roudji in Niger, represented half of all under five discharges. Data for severely malnourished children admitted to ITFC are reported elsewhere (cf. Nutrition section, §2.). Severe malaria (45%), LRTI (18%), neonatal diseases (13%), and non-bloody diarrhoea

(7%) were the leading under five exit diagnoses from OCB hospitals (fig. 2).

The inpatient mortality rate for under-five children discharged from paediatric wards was 5.8% (4.1% if neonates were excluded), the lost to follow-up rate 1.7%, and the transfer rate 3.0%. Excluding projects with only neonates as the under five population (the maternity projects of Khost, Afghanistan and Kabezi, Burundi), the highest inpatient mortalities were observed in Masisi-DRC (9.8%), GRC-Sierra Leone (8.8%) and Burao-Somaliland (8.2%). The target for under-five inpatient mortality in OCB projects is set at < 5% or < 10%, depending on the context. Under-five inpatient mortality rates < 10% compare favourably with published reports for secondary level hos-

Figure 4: Case fatality rates in children < 5 in OCB IPD, 2013



pitals in Africa (Couto, Einstein 2013). Comparing mortality rates across projects is not straightforward, as the clinical severity of children presenting to the inpatient services varies considerably. Excluding neonates, GRC-Sierra Leone has the highest inpatient mortality rate (7.7%). However, many children present to this hospital at a very late stage of their illness (cf. Intensive Care section, §2.2.3.).

The most important causes of under-five hospital mortality were neonatal diseases (38%), severe malaria (33%), LRTI (10%), and non-bloody diarrhoea (2%) (fig. 3). Meningitis and Lassa Fever each accounted for 1% of hospital mortality. Others (unknown), for which no specific diagnosis was reported, accounted for 12% of inpatient deaths, suggesting that data collection on causes of inpatient deaths still needs to be improved if the objective is to decrease under-five inpatient mortality. Case Fatality Rates (CFR) for the top contributors to hospital mortality are reported in figure 4.

For the first time, neonatal diseases were the leading cause of inpatient mortality in OCB projects. In terms of individual projects, neonatal diseases were the leading cause of under-five inpatient mortality in Burao (Somaliland), Nagaland (India), Masisi (DRC), Guidan Roundji (Niger), and Gogrial (South Sudan), accounting for 37 to 81% of under-five inpatient deaths in those projects. Neonatal care is discussed in more detail below (cf. §2.2.).

Severe malaria represented 45% of under five morbidity in 2013 and 33% of the under-five mortality, compared to 33 and 27% respectively in 2012. The increased contribution of severe malaria cases to under-five inpatient morbidity and mortality was mainly due to the opening of the vertical malaria project in Kirundo, Burundi, in late 2012. More than nine out of ten severe ma-

laria cases were treated in just three missions: Niger, Sierra Leone and Burundi. Overall, the CFR for severe malaria was 4.3% (a decrease from 5.3% in 2012), with CFRs for individual projects ranging from 2.2% in Niger to 7.1% in Burundi. Severely ill children presenting with fever and a positive malaria test can be misclassified as severe malaria cases. In Sierra Leone, the HRP2 malaria Rapid Diagnostic Test (RDT) will be replaced by the more specific pLDH based RDT, which should help to reduce this misclassification. Although injectable artesunate, now widely implemented in OCB projects, is a well proven measure to decrease CFRs from severe malaria, other important case management measures (fluid management and prevention of hypoglycaemia, seizure management and treatment of co-morbidities) need to be strengthened.

In Niger, inpatient admissions increased sharply during the malaria season, with a peak of 2500 under five admissions in October. Community-based malaria activities will be expanded in 2014 and the malaria peak will be better prepared for, to avoid unacceptably high bed occupancy rates during this period.

LRTI were the third most frequent cause of under-five inpatient mortality. Although the CFR for LRTI was 3% overall, it ranged from 1% to 11% (in the GRC, Sierra Leone). The comparatively high CFR observed for pneumonia in Sierra Leone (as in 2012) may be due to the late arrival of children to the hospital, although alternative reasons should be investigated.

Clinically based diagnostic algorithms to detect TB in children were disseminated to the various field sites. However, in most OCB hospital projects, TB treatment is provided by the National TB Programmes. Shortcomings in these programmes (drug ruptures and lack of reporting on out-

comes) may discourage projects from placing more emphasis on TB diagnosis.

Sepsis, which was the fourth leading cause of under-five inpatient mortality in 2012, was not part of the standard diagnoses in the 2013 IPD Epitool and MINOS. Therefore, the contribution of sepsis to under-five inpatient mortality could not be assessed, even though it is likely to be responsible for a significant proportion of infection-related deaths. The revised MSF shock management algorithms (following the 2011 Fluid Expansion as Supportive Therapy (FEAST) trial) were disseminated in the field in 2013. Their implementation has not been evaluated. More emphasis should be placed on sepsis and septic shock in 2014, including improved data collection. Sepsis/shock protocols may also need to be adapted for contexts such as Sierra Leone, where Lassa Fever is endemic.

Since data collection tools allow only a single diagnosis, it is difficult to reliably interpret the contribution of acute malnutrition to morbidity and mortality in integrated paediatric programmes. Malnourished children are at higher risk of suffering and dying from common childhood diseases. It is essential to reinforce systematic screening and management of malnutrition for all children on paediatric wards.

Lassa Fever represented 1% of all overall mortality in OCB projects, with a CFR of 33%. All deaths (and cases) occurred in a single project: GRC-Sierra Leone.

Suspected SCD continued to be reported in specific projects, in particular Guidan Roundji and GRC, although data were not routinely collected. Inpatient management protocols were implemented in these projects in 2013. Among children who exited the Guidan Roundji hospital during the first trimester of 2013, 14% had suspected SCD (clinical suspicion of SCD and a positive screening test). The prevalence of SCD, its interaction with other diseases and contribution to inpatient childhood mortality can only be analysed if specific data is collected in these hospital projects.

2.1.3. Paediatric care at GRC hospital, Sierra Leone

Continued efforts were made to improve hospital management, infection control, nursing care and surveillance of children, and clinical management. Project 'FRESH' was implemented to give more responsibil-

ity to the national staff. Paediatric Early Warning Scores were put in place - starting in 2012 - to improve early recognition of clinical deterioration and early intervention. Although an operational research study to assess their impact was proposed by the operational research team, it could not be carried out due to field constraints. Favourable feedback from the field was, however, received on both initiatives above.

The five-year vision for this hospital was re-defined, to focus primarily on paediatric infectious diseases and Lassa Fever. The project will also focus on improving its emergency and intensive care, and the quality of paediatric inpatient care. The experience gained from this project should be shared to benefit other hospitals in Sierra Leone and other MSF programmes. The implementation of a more adapted data collection tool should therefore be strongly considered in this project.

2.1.4. Community based care

Options for paediatric outreach activities were explored for Gogrial (South Sudan) in November 2013, with the idea to pilot a context-adapted and feasible package of preventive and curative care in the community (village and/or health centre level). Due to changes in the security context in December 2013, the possibility of outreach activities in this context will not be pursued for the time being.

2.2. NEONATAL CARE

2.2.1. Neonatal inpatient care

Neonatal pathologies accounted for 13% of under-five morbidities and 38% of under-five mortality in the IPD, compared to 10% and 26% respectively in 2012, and 5% and 10% respectively in 2011. These proportions have increased over the past two years due to improved reporting and focus on neonates. This year, neonatal data were collected in fourteen OCB structures.

Data were analysed for the projects using the Epitools, MINOS, or the individual neonatal database (cf. Health Informatics section). Neonatal data were not received for the Timurgara structure in Pakistan. Six OCB structures used the individual neonatal database (Guidan Roudmji, Khost and Ahmad Shah Baba, Masisi, Kabezi, and GRC). Based on data from these projects, 66% of inpatient neonates were admitted

from MSF health structures, 19% from home, and 15% from other health structures.

A total of 3,874 neonates were discharged from OCB inpatient structures. 21% of all inpatient neonatal activities took place in vertical obstetric programmes (Khost, Kabezi), 14% in programmes without MSF obstetric activities and 64% in integrated programmes (including obstetrical and other activities).

Overall, the mortality rate for neonates in OCB programmes was 16.6%, relatively unchanged compared to 2012. This rate increases to 21% if Ahmad Shah Baba hospital is excluded, a rate more representative of the reality in OCB structures, since ASB refers most critically ill neonates to the MoH tertiary level hospital. Neonatal mortality rates per structure (for the top 10 projects in terms of volume of neonatal inpatient activities) are presented in figure 5. The lower mortality rates reported in Gogrial (South Sudan) and Niangara (DRC) are likely due to underreporting.

Thirty percent of neonatal deaths were in vertical obstetric programmes, 22% in programmes without obstetrical activities, and 48% in integrated programmes. Severe neonatal infections (32%), conditions linked to preterm birth/low birth weight (31%), and perinatal asphyxia (30%) were the main causes of death in inpatient neonates (table 1). Although neonatal tetanus

had the highest case fatality rate (45%), it contributed only 2% to overall neonatal inpatient mortality.

Stratification of mortality data by birth weight was possible by aggregating data from projects that implemented an individualised neonatal database (fig. 6). Although extremely low birth weight (ELBW < 1,000 g) and very low birth weight (VLBW 1,000 - 1,499 g) babies had very high inpatient mortality rates, 74% and 52% respectively, these categories represented only 1% (n= 34) and 8% (n=259) of neonatal inpatient discharges (data not shown). Data from Burundi show lower hospital discharge mortality rates for the ELBW and VLBW babies, and these categories represented 4% (n =8) and 15% (n=31) of neonatal inpatient discharges. Although outcomes in Burundi were achieved without sophisticated technology, trained human resources were essential. In OCB projects, sometimes difficult choices must be made in terms of admission criteria to make the most of limited resources and maintain the focus on the project's primary objectives. It would be interesting to compare the results obtained in Burundi to those obtained by other MSF sections that have implemented e.g. continuous positive airway pressure (CPAP) in specific projects, including an analysis of the costs (human resources and other).

Neonates with an unknown birth weight represented < 1% of all inpatient neonates

Figure 5: Neonatal inpatient mortality rates in OCB IPD structures, 2013

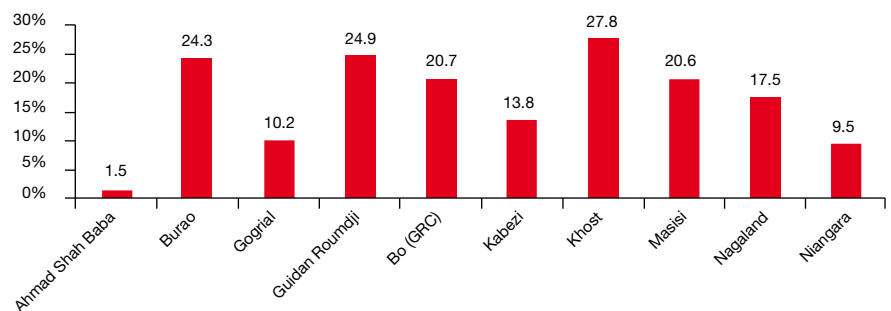


Table 1: Neonatal causes of mortality and case fatality rates in OCB IPD, 2013

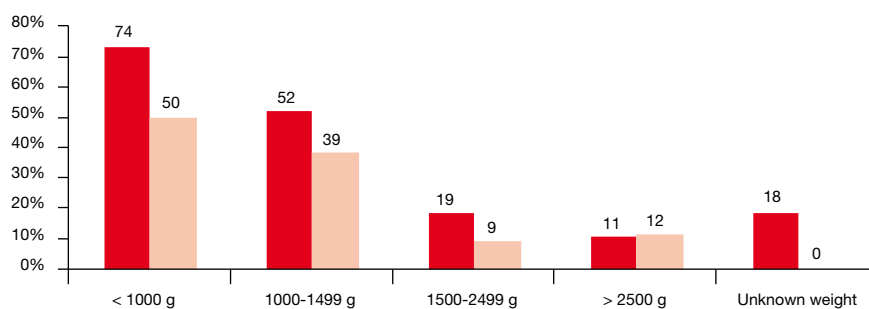
	N° deaths	Proportional mortality	Case fatality rate
Severe neonatal infections	170	32%	11%
Conditions linked to preterm birth/low birth weight	162	31%	23%
Perinatal asphyxia	157	30%	20%
Neonatal tetanus	10	2%	45%
Congenital malformations	15	3%	21%
Other neonatal diseases	16	3%	3%

2.2.2. Neonatal care in Kabezi, Burundi

The emergency obstetrical programme in Kabezi, Burundi was handed over to the MoH in 2013. In the process, the model of care was adapted from a comprehensive care unit to a stabilization unit model. The experience in Burundi has helped shape the model of care that is being implemented in Khost, Afghanistan.

The capitalisation process for the project in Kabezi is ongoing. A descriptive study on the characteristics and hospital discharge outcomes of neonates in this programme in Burundi was published (cf. Operational Research and Documentation section, §2.2.). Another descriptive study focusing on hospital discharge outcomes for preterm neonates was submitted for publication.

Figure 6: Neonatal inpatient mortality stratified by birth weight in OCB IPD, 2013 (for all projects and for Kabezi)



3. LOOKING BACK AND AHEAD

LESSONS LEARNED IN 2013

- For neonatal care, a 'one size fits all' model is not possible. Different models of care need to be further explored in OCB programmes. Trained human resources in sufficient quantity continue to be the most significant constraint.
- While OCB prioritises neonatal care linked to maternal care, neonatal care cannot be neglected in under-five inpatient programmes if the objective is to reduce under five inpatient mortality in these settings.
- The definition of a vision and roadmap for long-term paediatric hospital projects was needed to guide the implementation of activities and maintain focus on the projects' primary objectives.

PROSPECTS FOR 2014

- The priorities in 2014 for paediatrics will be to:
 - Provide support to operations, focusing on several key projects with a strong neonatal/paediatrics component (PATIO for Sierra Leone, etc.)
 - Write an OCB paediatrics policy paper
 - Implement paediatric activities in the field with the support of a mobile implementation officer
- The capitalisation of neonatal care for Kabezi, Burundi (internal report) will be completed and the OCB neonatal guidelines updated.
- The long-term outcomes of neonates discharged from the neonatal facility in Kabezi, Burundi will be examined in collaboration with the Operational Research Unit (feasibility to be assessed).
- Context-specific paediatric inpatient protocols for the GRC in Sierra Leone (as a pilot project) will be developed.
- In collaboration with the nutrition advisors, strategies to improve care for children with severe acute malnutrition in integrated programs will be reflected upon (cf. Nutrition section, §5.2.).
- Assistance will be provided in the planning for the implementation of bacteriology in the GRC in Sierra Leone and for a possible antibiotic resistance study.
- Reflection is foreseen on ways to reinforce the focus on children in vertical projects (including HIV, TB, and hepatitis C projects) and to improve the qualitative focus on children in OCB projects.

PHARMACY

1. OVERVIEW

The emergencies in Syria, Central African Republic (CAR), Mali and Philippines, and increased MSF activity in countries with constraints for importing drugs and material such as Ukraine, Afghanistan, 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 2013.

At a logistics level, annual medical forecasts and order chronograms were pooled for all missions, allowing anticipation of global needs and facilitating the medical procurement flow. Standardisation of the essential medicines lists and matching overall needs with procurement forecasts at the central level by MSF Supply (one of the three European procurement centres) was done with the help of the online web tool, "the Portal". This tool has been implemented in all of the current missions except for the emergency pool, which use a separate order tool called 'Online'. Appropriate selection, procurement and distribution are necessary precursors to rational use of medicines.

Within the framework of the end-to-end supply chain objective, the main focus in 2013 was on the development and consolidation of the new OCB Supply Unit. Key performance indicators were collected for almost all OCB medical stocks. Training on supply and pharmacy management was included in the preparation for departure course for first-time mission pharmacists.

Finally, the Hazardous Waste Management Manual and Waste Management of Pharmaceuticals list were finalised in 2013 (to be shared with MSF sections and missions in 2014), and a field guide on The Compounding of Medicines was also finalised.

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 standardised protocols of the Clinical Guideline, is updated according to new protocols, specific field needs, and the World Health Organisation (WHO) Essential Medicines List (EML) (Table 1). Some key new inclusions and replacements in 2013 were:

- Antimalarial agents: Artesunate 25 mg/ Mefloquine HCl eq 50 mg base, blister 3 tab (DORAASMW1T-) and other dosages
- For fixed dose combination (FDC) amoxicillin/clavulanic acid, the 7:1 and 8:1 ratios replaced the old ratio of 4:1
- Cefalexin, 250 mg tab (DORACEFA2T-)
- Anti-retro-virals: Atazanavir sulphate (ATV) 200 mg, caps (DORAATAZ2C-), Darunavir ethanolate (DRV) 600 MG, tab (DORADARU6T-), Doxorubicin HCl, 2mg/ml, 10 ml and 25 ml vial (DINJDO-PL2V- and DINJDOPL5V-)

2.2. IDENTIFICATION AND VALIDATION OF DRUG SOURCES

Eleven products were validated by MSF pharmacists in 2013 (Table 2). In addition, four exceptional validations were approved by the Medical Directors – snake anti-venom, pegylated doxorubicin liposomal, dexamethasone injection and SP + AQ 250/12.5 + 75 mg tabs coblister. 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.

Table 1: Number of new codes created for medical articles in the MSF list of essential medicines (2007-2013)

Type of articles	New codes created							Number of active medical codes in 2013	Number of codes de-activated in 2013
	2007	2008	2009	2010	2011	2012	2013		
Drugs	115	137	106	41	75	52	49	616	95
Medical Supplies & Equipment	185	404	224	236	141	215	133	1,791	143
Total	300	541	330	277	305	267	182		

Table 2: Number of drug dossiers approved (2008 - 2013)

Validation route	Drug dossiers approved					
	2008	2009	2010	2011	2012	2013
MSF full product assessment	28	15	25	20	15	11
WHO pre-qualification	61	28	35	35	48	62
Medical Director Waiver*	1	1	0	6	2	4

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

Table 3: Number of quality related communications (2010-2013)

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

Table 4: Evaluation of local pharmaceutical market (2010 - 2013)

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

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

In 2013 three batch recalls and three quality alerts of medical items were issued by the MSF-European procurement centres concerning OCB projects (Table 3).

Evidence of problems was reported for products marketed in highly regulated countries and also in countries where products were purchased locally (mainly Pakistan, India and Kenya). There continued to be little noise from the field, although with an increasing presence of mission pharmacists in OCB missions, the reporting of quality problems for internationally and locally procured medical items has increased slightly. In 2013, 19 quality-related problems were reported and investigated, of which nine items were procured locally.

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. This could be improved with a wider presence of pharmacists in MSF missions.

3. MEDICAL PROCUREMENT

3.1. ENFORCEMENT OF LEGISLATION INCREASES PROCUREMENT WORKLOADS

During 2013, evaluations of the local pharmaceutical markets were conducted in eight countries. In five (Mexico, Kenya, Jordan, Turkey and Colombia), 31 manufacturers were approved, and in all eight of the countries (including the aforementioned countries, and Colombia, Nigeria and Egypt) 66 wholesalers were approved (Table 4). 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.

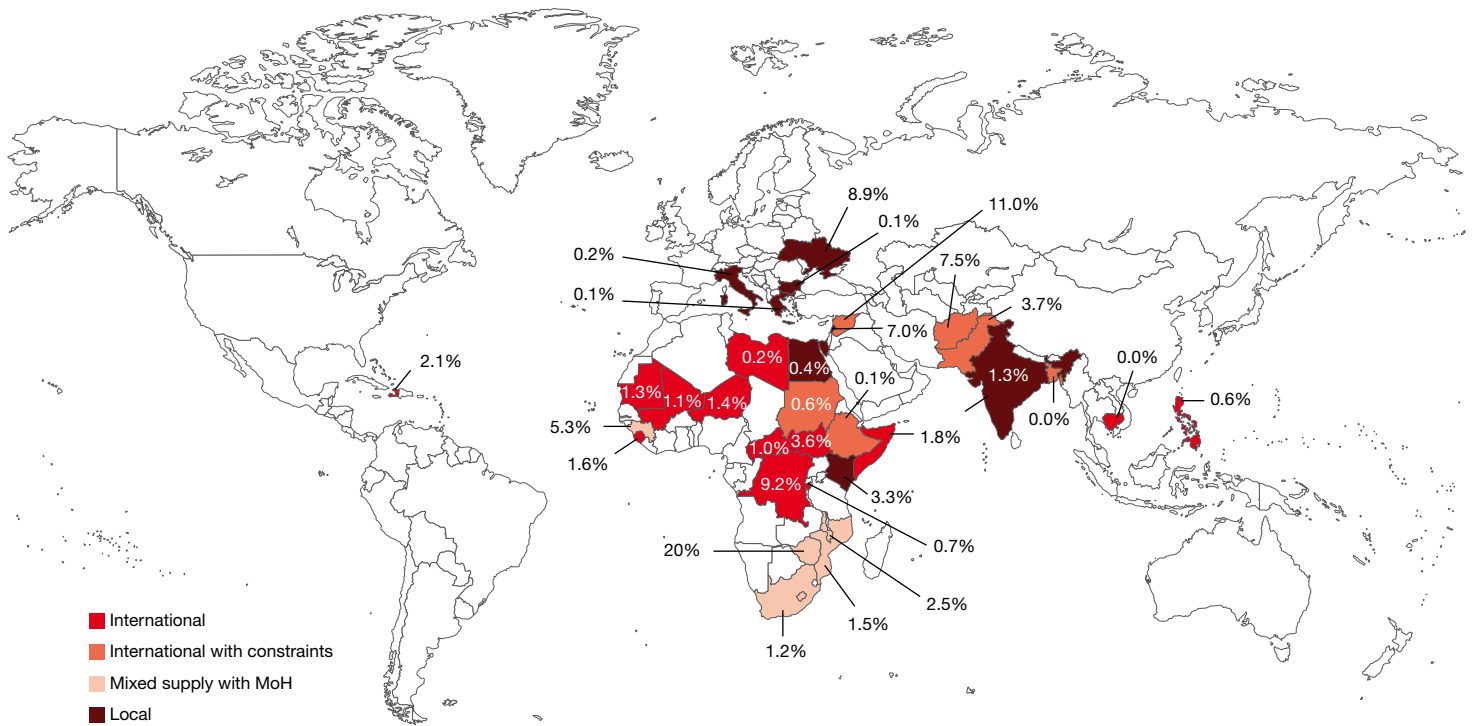
In 2013, 21 out of 34 missions dealt with challenging medical procurement systems: nine of these missions relied on the local market for their medical procurement, six received part of their medicines from the public distribution flow and the remaining six faced difficult importation regulations, leading to sporadic local purchases (Fig. 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:

- Improved centralisation of information on local purchases
- Enhanced intersectoral collaboration on local procurement through mutual procurement activities and an increased number of intersectoral pharmacy positions (e.g. Pakistan)
- 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 2013, 23 missions purchased medicines locally: four missions were in highly regulated countries (Bulgaria, European migrations, Greece and Italy), seven missions (Lebanon, Bangladesh, Egypt, India, Kenya, Pakistan and Ukraine) had a database implemented (listing the medicines that have recommended manufacturers and from which a mission can make a purchase without needing to request HQ approval), eight missions submitted validation forms to approve the local purchases (Afghanistan, Burundi, DRC, Haiti, Mali, North Sudan, Somalia and Zimbabwe) and four missions purchased locally without any recommendation regarding quality (Libya, Mozambique, South Africa - including Lesotho and Syria from Turkey). The validation forms to approve local purchases and donations are available at mission level and

Figure 1: Medicines procurement typologies in OCB missions

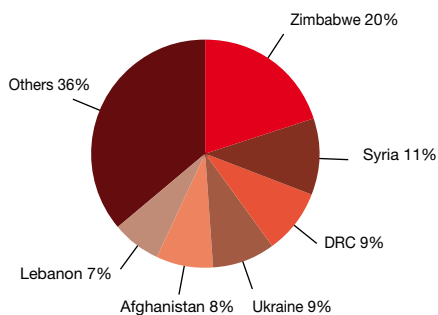


% indicates the amount spent per country on medicines procurement as a proportion of the total OCB expenditure in medicines
 Europe migrations: 0.01%

Table 5: OCB Total Medical Expenditures 2011- 2013

Medical items	OCB Total Medical Expenditure (M€)		
	2011	2012	2013
Medicines	14.0	12.4	15.5
Vaccines	0.9	0.6	1.0
Small medical supplies	6.3	4.0	4.9
Medical equipment	2.3	2.7	2.3
Medical kits	1.9	2.4	1.8
Total	25.4	22.1	25.5

Figure 2: Top six missions in terms of medicine procurement expenditures in 2013



were used by most missions. Linked to this, an intersectional checklist for reception control should be finalised in 2014 together with a Standard Operation Procedure (SOP) – Local Purchase and Donation. In 2014, a pharmacovigilance scheme will also hopefully be implemented in MSF projects.

3.2. MSF EXPENDITURE

The total expenditure for OCB medical procurement (medicines, vaccines, small medical supplies, medical equipment and medical kits) in 2013 was 25.5 M€, of which 21.4 M€ were procured through MSF Supply. This amount represents approximately 3.4 M€ more than in 2012 (Table 5). An additional 1.0 M€ was spent on therapeutic food, mainly in South Sudan, DRC, Niger and Mauritania.

Approximately two thirds (64%) of the total expenditure on medicines lay with just six out of 34 missions (fig. 2): Zimbabwe for programme ARV's and gap filling of the public distribution system, Syria and Lebanon to support the mission in Syria, DRC as the third largest OCB operation, Ukraine for

the DR-TB programme and Afghanistan for the hospital projects.

The top six items of the medical procurement list were responsible for almost 20 % of the total expenditure of MSF Supply turnover comprising of drugs, equipment and medical supplies (€5,059,585), (Table 6).

3.3. COLLABORATION WITH THE NDRA

The development of pharmaceutical regulations in developing countries, while in principle 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 capacities and budget for quality control activities and a lot of time and resources are therefore devoted by MSF to counter-analyses while batches of medication are quarantined. This results in shortages at field level.

The negotiation space at country level is usually limited. While collaboration with

Table 6: TOP six items responsible for almost 20 % of the MSF Supply turnover (comprising drugs, equipment and medical supplies)

Item	Expenditure €	Percentage
Tenofovir 300 Mg/ Lamivudine 300 Mg/ Efavirenz 600 Mg, comp (Bm) Nuclisens Easyq Hiv-1 V2.0 (1 Test)	2,847,500	11.1%
Aliment therap. Pret à l'emploi, pâte, 500 Kcal, 92 G sachet	760,859	3.0%
Test, Malaria Hrp-2, rapide (Sd Bioline), 1 test	430,333	1.7%
Test, Malaria Hrp-2, rapide (Sd Bioline), 1 test	407,822	1.6%
Lamiv (3Tc) 150Mg / Zidov (Azt) 300Mg / Nevir (Nvp) 200Mg Cp	315,619	1.2%
Vaccin rougeole, 1 dose, Fl. multidoses (serum I)	297,452	1.2%

some NDRAAs over the past few years proved to be effective in facilitating the inflow of quality medicines (thus assuring uninterrupted treatments for OCB patients), procurement of medicines was excessively time-consuming in 2013 for countries such as Afghanistan, Pakistan, Ukraine, India, North Sudan, Kenya and Egypt. Pharmacists from HQ had 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. Intersectional pharmacist positions have played an important role in supporting the operations to identify possible solutions for difficult countries, such as India, North Sudan, Kenya, Ukraine and Ethiopia. In 2013, an Intersectional Pharmacist position was created in Pakistan and this has played a vital role for clarifying the importation requirements and negotiating with the NDRA to secure the importation of medical items from MSF Procurement Centres.

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

4. RATIONAL USE OF PHARMACEUTICALS

A Standard List is a list of items essential for the effective functioning of a project, and is defined by the nature of the product (irrespective of quantity). A Standard List is specific for every project and is based on the type of activities and operational objectives of the project. This list consolidates the discussion between projects, coordination, and the cell on needs. It also encourages consistency in the use of authorised clinical protocols and provides a comprehensive inventory of pharmaceuticals required for the best practice management of

most acute and chronic diseases encountered in a project. For the second following year, all OCB missions/projects were asked to work on their Standard Lists, in preparation of the Annual Review of Operations. All OCB mission/projects' Standard Lists, as well as their annual forecasts (the quantification of the needs) are included in a tailored tool, called 'the Portal'.

In collaboration with external experts from the University of Leuven and the Institute of Tropical Medicine in Antwerp, trainings and workshops for MSF pharmacists, focused on rational use of medicines, in particular for antimicrobials and more specific antibiotics, are planned for 2014.

5. PHARMACY MANAGEMENT

In 2013, the Supply Unit tested the relevancy of its approach through a number of pilot runs in the following missions: Mozambique, Democratic Republic of Congo (DRC), Sierra Leone, Somaliland, South Sudan and Ukraine. Based on these pilot-phase outcomes, and in line with the global timeline established at the beginning of the project, OCB handed over full responsibility to the Supply Unit for managing the supply chain in its field of operations. Consequently, the Supply Chain End-to-End project could enter its deployment phase in 2014-2016.

Five new medical stocks were integrated this year (Donetsk, Eshowe, Juba, Kabul, and Roma) which means that a total of 14 stocks have now been integrated in 10 different countries (Afghanistan, Burundi, DRC, Lesotho, Mozambique, Sierra Leone, South Africa, South Sudan, Ukraine and Zimbabwe). This represents a coverage of 32% across all OCB missions. The HQ reaffirmed its will to actively implement the integration policy, and with that the goal to integrate 50% of the medical stocks in 2014 and 100% in 2015. An assessment of the impact of medical stock integration on ad-

ministrative and structural stock management was carried out in DRC, revealing rather serious issues related to poor communication and conflicts of responsibilities.

A Good Distribution Practice (GDP) assessment was undertaken in various medical warehouses in Kinshasa, for Pool d'Urgence Congo (PUC), COORDO and AIDS projects, and Juba. CAPA (Corrective Actions, Proactive Actions) were elaborated accordingly.

The number of missions using standard stock management tools reached 96% in 2013 compared to 89% in 2012 and 75% in 2011. Isystock was utilised by 55% of the missions; Logistix by 32% and both tools by 13%. The development of Unifield, the new intersection supply software, was ongoing in 2013. This tool was piloted in two countries (Burundi and Malawi) and highlighted the need for further improvements. In 2014, a second pilot phase is planned in Malawi followed by a deployment phase in three countries (Kenya, Guinea and Malawi).

Key performance indicators (KPIs) were collected in all OCB medical stocks at the coordination, project and hospital level with the purpose of providing a global view on the total stock value and total value of expired items by the end of 2013 (Table 7).

During 2013, 58% of all reported cold chain breakdowns in the field (reported to Dr. Cold Chain) occurred in just three out of 17 reporting missions: DRC, South Sudan and Syria. And out of the total value of the involved items (approximately 618 000 Euros), there was a total loss of items worth 80,266 Euros (13% of the total value).

For the cold chain breakdowns that occurred during international transport (claims sent to MSF Supply), 55% of these claims were reported by three missions (Afghanistan, Malawi and South Sudan) out of a total of 17 reporting missions. And out of the total value of the involved items (1,108,538 Euros), there was a total loss of items worth 18 330 Euro (1.7% of the total value).

In this vein, integration of the medical stock management into the supply department, and further analysis, collaboration and reinforcement in relation to cold chain management at all levels, need to stay a priority for 2014.

Table 7: An overview of the value of OCB medical stock and expired stock by the end of 2013

Number of Missions	Number of Medical Stocks	Total Stock Value (Euros)	Expiries*			Estimated Rotation Rate per Year***
			Total value of Expiries (Euros)	Proportion of Expiries compared to all Entries**	Incoming Value from central stocks and decentralised project stocks (Euros)	
21	52	21,897,348	1,194,978	3.8%	31,463,106	1.4

NB. Reported values came from Logistix and Isystock software for which we cannot not ensure 100% price accuracy

* Expiries data missing for Tete project in Mozambique and for the Syria mission

** The proportion of expiries was compared to the value of the entries in the stocks for the same period (for projects using a decentralised strategy, the sum of the value of the entries was used; for projects using a centralised strategy only the value of the entries for the central stock was used)

*** The estimated rotation rate per year was calculated by dividing the Incoming value by the stock value

6. HUMAN RESOURCES

6.1. PHARMACY MANAGEMENT POSITIONS

In 2013, across all OCB missions, there were a total of 64 staff in full time pharmacy positions, 59 of whom were qualified pharmacists. This is not dissimilar to the previous year except for a small increase in the number of qualified pharmacists (55 in 2012). This followed the opening of four new positions in 2013 (country pharmacist positions in Egypt and Libya, and project pharmacist positions in Niger and Sierra Leone). There was thus 100% coverage of pharmacist positions across all OCB missions in 2013. Table 8 shows the distribution of qualifications by position.

Table 8: MSF-OCB full time pharmacy management positions in the field in 2013

	Expatriate Staff		National Staff	
	Qualified Pharmacists	Nurses	Qualified Pharmacists	Nurses/Doctors
Mission level	16	0	8	2
Project level	8	1	18	1
Other positions (coaching/support), supply, stock manager / regional)	4	0	5	1
Total	28	1	31	4

6.2. TRAINING ON PHARMACY MANAGEMENT

The annual drugs management courses continued to be provided in 2013 (Intersectional Advanced Pharma week hosted by OCBA, Supply Manager course, Intersectional Supply and Order Management course). The orientation and target audience of the latter will need be reconsidered in 2014.

With the new OCB briefing-debriefing process KITSCH (Keep It Simple, Transferable, Considerate and Human) the face to face briefings and trainings that were previously given to first-time mission pharmacists were stopped. Instead, in July 2013, a three-day session on pharmacy and supply management was added to the two-day Preparation for Departure (PPD) course.

7. LOOKING BACK AND AHEAD

LESSONS LEARNED IN 2013

- 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 NDRAs.
- Collection of data on local purchases and donations continued to improve in 2013, but still needs to be strengthened and implemented by all OCB missions.
- The presence of supply chain officers (SCOs) and mobile implementation officers (MIOs) in the Supply Unit largely contributed towards efforts to implement the Integration policy. However, their knowledge of medical stock management still needs to improve. A more standardised approach on the different implementation steps with standard tools needs to be developed as well as harmonisation of procedures with elaboration of SOP's (standard operation procedure).
- There is an important and rewarding professional role for pharmacists beyond pharmaceutical product supply and management. The pharmaceutical product should be seen not as an end in itself- but rather as a means to an end. When medicines are used for the greatest possible benefit of each individual patient and the society as a whole, improvements in health as well as cost savings will result. The HQ and field pharmacists can play an important role in reinforcing the rational use of medicines at project and mission level.

PROSPECTS FOR 2014

- The lobbying for paediatric drug formulations better adapted to the needs of children in MSF settings should continue to be addressed in 2014. Medicines with only one approved source should continue to be addressed as well.
- Various documents will be worked on or finalised in 2014: the Pharmacovigilance and Bioequivalence policies are expected to be finalised and implemented; the Transport Policy is expected to be fully implemented at field level over the course of 2014; in order to standardise and increase adherence by missions to the Medical Procurement policy, the Local Purchase SOP (Standard Operating Procedure) and Donation SOP are expected to be finalised and implemented; and finally, elaboration of the End User Unit Pharmacy Manual will be continued.
- In dialogue with the field, the Pharma Unit wants to reinforce the execution of the Country Pharmacy Profiles (CPP) by mission/country. A CPP summarises the pharmaceutical aspects and particularities of a mission. It is intended to facilitate briefings, transmission and documentation of information and the systems in place. While providing a framework, it also identifies the areas of improvement in case of non-compliance with MSF standards. Ideally, it is updated on a yearly basis.
- There will be a continued focus on a pharmacist's role in ensuring that the drug therapies that are being prescribed for patients in our projects are appropriately indicated, the most effective available, the safest possible, and convenient for the patient. By preventing, detecting and resolving drug-related problems that can lead to drug-related morbidity and mortality and by promoting and contributing to the rational use of drugs, pharmaceutical services can make a unique contribution to the outcome of drug therapy and the quality of care. Pharmaceutical care cannot exist in isolation from other health care services. It must be provided in collaboration with patients, physicians, nurses and other health care providers. Changing 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.
- Implementation of the integration policy will be managed in a "project mode" directed by a steering committee, allowing a more interactive and efficient execution. It will allow better interaction between all actors involved with better approach and follow-up. Standardisation of implementation steps linked to harmonisation of procedures and tools will be a priority alongside the collection of more complete KPI's on medical stock management.

SEXUAL AND REPRODUCTIVE HEALTH

1. OVERVIEW

Over the course of 2013, the epicentre of Sexual and Reproductive Health (SRH) activities became Afghanistan, where two major projects (Khost and Ahmad Shah Baba (ASB) hospital) covered almost half of all deliveries in OCB. This shift away from the “traditional” SRH missions in, for example, Burundi, the Democratic Republic of Congo (DRC) and Sierra Leone has created some difficulties in maintaining a pool of trained SRH staff. Conversely, the systematic roll-out of the intersectional Advanced Life Support in Obstetrics (ALSO) training managed to meet the training needs in the field.

As a result of the overall reduction in number of programmes (through closures/handovers), the number of projects offering SRH activities also saw a general decrease. However, the volume of SRH activities stayed relatively stable: decreases were observed in antenatal care (ANC), sexual violence (SV) care, fistula repairs, termination of pregnancy on request (TPR) and prevention of mother-to-child transmission of HIV (PMTCT), while volumes of deliveries, postnatal care (PNC), family planning (FP) and management of sexually transmitted infections (STI) increased.

2. PROGRAMME ACTIVITIES

2.1. ANTENATAL CARE

The number of projects offering ANC increased in 2013, while the overall number of ANC consultations decreased from 169,672 in 2012 to 149,692 in 2013 (table 1). Similar to the previous year, the decrease was mainly due to closures/handovers of projects and underreporting. The two largest contributors to the overall ANC volume of 2012, Dakoro in Niger and Bo outreach in Sierra Leone, were respectively handed over and downsized from six health centres to one (which continued with only remote MSF support). Other recent closures/handovers of projects with a sizeable ANC component included Helmand (Afghanistan) and Malakand (Pakistan) in 2012, and Kamrangirchar (Bangladesh), East Imey (Ethiopia), and Galgaduud (Somalia) in 2013, while the Gueckedou project in Guinea specifically handed over its SRH activities in 2012. Additionally, the

Guiuan project in the Philippines offered ANC, but did not report any data.

Offering adequate ANC coverage (four focused visits during pregnancy) remained challenging: women tended to present for ANC late in pregnancy, and mainly attended only one or two ANC consultations (reflected by the high ratio of first consultation/total consultation, table 1). In seven (28%) of the projects offering ANC, >50% of the overall total ANC were first visits – while still high, this represents an improvement compared to 2012, when 44% of the projects had a ratio first ANC/total ANC >50%. Sizeable differences were observed between projects: emergency missions, where ongoing violence and tension render it difficult for women to attend all recommended visits, have high ratios (e.g. 73% for the Central African Republic [CAR]), while missions which have become more stable tend to have lower ratios (e.g. Maban in South Sudan reduced to 38% in 2013). Some projects reported only first consultations –

mainly the Prevention of Mother-To-Child Transmission (PMTCT) projects, which perform testing on first visit and may thus focus less on (reporting of) follow-up visits.

In keeping with the trend of the previous years, the core package of ANC activities was more and more implemented at the start of projects. Additionally, new activities such as human papillomavirus (HPV) screening for HIV positive women at ANC were implemented. However, some activities, such as systematic “test and treat” for malaria, were not implemented in all countries – this specific activity remained challenging in non-endemic countries.

2.2. OBSTETRICS

A total of 29 projects conducted deliveries in 2013, all of which offered emergency obstetric care. Of these, 13 projects provided Caesarean sections and blood transfusion, according them the designation of Comprehensive Emergency Obstetric and Neonatal Care projects (CEmONC), while 15

Table 1: OCB Antenatal Care Activities, 2007-2013

	2007	2008	2009	2010	2011	2012	2013
Number of projects offering ANC:	31	41	33	29	27	24	27
Number of consultations (total):	175,585	243,131	318,242	247,068	258,132	169,672	149,692
Number of consultations (first visit):	71,212	105,981	99,457	117,489	113,149	79,889	79,152

ANC: antenatal care

Table 2: OCB Obstetrics Activities, 2007-2013

	2007	2008	2009	2010	2011	2012	2013
Number of projects doing deliveries	32	31	29	26	24	27 ¹	29 ²
Number of deliveries	30,948	37,584	53,995	58,107	72,348	47,908	52,525
Number of projects with BEmONC	8	14	20	22	24	35	28
Number of projects with CEmONC	18	14	14	17	16	16	13
Number of caesarean sections	2,096	2,508	2,918	4,007	6,438	5,411	6,051

¹ Among these, the Maban project is counted as 3 projects (Doro, Maban and Jamam), and the Masisi project as 2 projects (Masisi proper and Nyabiondo), while Kamrangirchar (Bangladesh) is not counted as all deliveries are referred.

² Among these, the following are counted as 2 projects: Masisi (Masisi proper and Nyabiondo); CAR emergency (Bangui and Bangassou), and Sierra Leone (Gondama Referral Centre and Gondama Health Centre). BEmONC: basic emergency obstetric and neonatal care; CEmONC: comprehensive emergency obstetric and neonatal care

Table 3: OCB postnatal care activities, 2007-2013

	2007	2008	2009	2010	2011	2012	2013
Number of projects offering PNC:	17	26	20	24	21	23	22
Number of consultations:	8,675	17,631	29,625	21,489	21,680	18,985	24,224

PNC: postnatal care

only provided Basic Emergency Obstetric and Neonatal Care (BEmONC) but had a referral system to a CEmONC facility (either from MSF, from the Ministry of Health (MoH) or another NGO). Two projects, Kabezi in Burundi and the Gondama Referral Centre (GRC) in Sierra Leone, did not cover normal deliveries, but managed complicated deliveries only, which were referred through the district health centres.

An increase in deliveries was observed, from 47,908 in 2012 to 52,525 in 2013, after the sharp decrease in 2012, due to the withdrawal from the BEmONC centres in Malawi, which performed 20,000 deliveries per year (table 2). The Afghanistan mission (Khost and ASB hospital) covered 25,572 or 47% of all deliveries in OCB. Khost in particular is an exceptional project, with all SRH standards implemented from the outset by experienced expatriates, and extensive training of the national staff. With the closure of the Kabezi project in Burundi, which was used as an obstetric training centre for midwives, gynaecologists and surgeons, Khost has become the new “place to be” for training on deliveries and management of obstetrical complications. However, this has created constraints in the training of male SRH staff, who are culturally unacceptable in the Afghanistan context and mission.

A total of 6,051 Caesarean sections were performed in 2013. The two projects focusing on complicated deliveries – GRC and Kabezi – had expectedly high C-section rates of 35% and 38% respectively, a slight

decrease since last year; while three projects focusing on normal and complicated deliveries also presented a relatively high C-section rate: Mauritania with 56% and Masisi and Fellini (Syria) with 28% each. Mauritania, in particular, may need close monitoring for this in 2014. Conversely, the two projects with the highest number of deliveries (Khost and ASB) have low C-section rates (3%), raising the possibility that women facing obstetrical complications did not reach the health facility. A general assessment of the long-term outcomes of C-sections (complications, use of family planning, outcome of next child, etc.) will be conducted in the Kabezi project in Burundi in 2014, in parallel with the study on long-term outcomes of premature neonates (cf. Paediatric Care section, §3.1.).

Other foreseen innovations in obstetrics include a retrospective analysis of outcomes of eclampsia patients in Sierra Leone, and a reorientation of the Gogrial project in South Sudan, which will focus on, amongst others, reduction of maternal mortality, through 1) increased community and male involvement for decision making, and 2) improved, direct access to quality CEmONC services in Gogrial (without referring BEmONC services, but with direct referrals from the community).

2.3. POSTNATAL CARE

Twenty-two projects offered PNC in 2013, compared to 23 in 2012 (table 3). The decrease in PNC consultations which was observed in 2012 was reversed, with 24,224

consultations conducted in 2013. A substantial proportion (86%) were conducted by only seven projects: Masisi (DRC), Kibera (Kenya), Maban (South Sudan), the refugee emergency in Mauritania, Gondama Health Centre (Sierra Leone), ASB (Afghanistan) and Gogrial (South Sudan). Most projects which already offered PNC increased their number of consultations; exceptions were mainly projects being closed/handed over (Niagara, DRC and East Imey, Ethiopia), or facing high levels of insecurity (e.g. Pibor, South Sudan).

A guidance paper on home-based PNC was compiled in collaboration with the Paediatric Care advisor, describing postnatal home visits as a possible strategy for improving neonatal survival. This strategy is particularly promising in settings where the majority of women deliver at home in absence of a skilled birth attendant, and it can have a significant impact on neonatal mortality and maternal morbidity. Impact on maternal mortality is less well documented. Further assessment and development of the experience in home-based PNC in OCB projects is required.

2.4. FAMILY PLANNING

In 2013, 54,320 FP consultations were performed across 28 projects (table 4) – this may be an underestimate, as the emergency missions in the Central African Republic (CAR) and in Guianan (Philippines) did not report data because the standardised data tools were not put in place in the early phase of the emergency. As a large pro-

Table 4: OCB Family Planning Activities, 2008-2013

	2007	2008	2009	2010	2011	2012	2013
Number of projects with family planning:	23	33	36	25	27	27	28
Number of consultations (total):	No data	85,701	159,724	64,363	53,635	47,662	54,320

portion (22%) of FP was covered by only two missions in 2012 (Dakoro in Niger and Bo outreach in Sierra Leone), both of which have been handed over, the increase in overall consultations reflects the strong expansion of FP in missions offering the service. Interestingly, even in settings where FP could be considered a sensitive issue, such as Afghanistan, FP coverage continued to expand.

In the Gitega project in Burundi, FP was offered to all fistula patients (cf. §2.7.), demonstrating the feasibility of offering FP in projects without an outpatient services (which is often perceived as difficult). Offering FP in fistula, nutrition and emergency obstetric care projects is encouraged – particularly in emergency obstetric care projects, every patient should be offered FP.

2.5. SEXUAL VIOLENCE

Care for survivors of SV was reported in 18 projects: a total of 2,582 survivors attended for consultation. Almost all of these (96%) were seen in six projects: Mbare (Zimbabwe), Masisi (DRC), Nasr City (Egypt), Kibera (Kenya), Goma (DRC) and Musina (South Africa). The decrease in cases seen (2,909 in 2012) was mainly due to the closure of Niangara (DRC), the closure of SV activities in Martissant (Haiti) and the reduction of SV activities in Kibera. Projects which saw an expansion of SV activities were Mbare, Masisi and Nasr City – the latter also managed to increase the average number of follow-up visits, and further expansion is foreseen in 2014.

The characteristics of the major SV projects have been the subject of several analyses, allowing the comparison of the different programmes. In DRC, a comparison between Masisi (conflict) and Niangara (post-conflict) highlighted the challenges to providing standardised care in different settings and indicated the need for tailoring care to the characteristics of SV. In Mbare, a typology of SV similar to that in the former project of Liberia (documented in Tayler-Smith et al., *Trop Med Int Health* 2012, 17,1356-60) was observed: many of the

limitations of SV care documented in Liberia (such as social re-integration and child protection) are being addressed in Mbare, and a formal documentation of the individual approach there seems warranted. In the Nasr City project, yet another type of SV, frequently linked to torture (>60% of cases) was observed, underscoring the need for a comprehensive approach to providing care for such cases.

2.6. SEXUALLY TRANSMITTED INFECTIONS

As documented previously (cf. Medical Activity Report 2012, SRH section), data collection on STIs was complicated by limitations of the data collection tools and the fact that STI treatment is provided at multiple levels of care (ANC, PNC, FP, HIV projects, OPD, etc.). Overall, 27,460 STI consultations were reported in 2013, which is an increase since 2012, but is still likely to represent an underestimation, as some projects which should have STI data did not report on STI consultations (such as Kabezi, Martissant, and Karachi).

2.7. FISTULA REPAIR

Only one fistula campaign was organised over the course of 2013, in Gogrial, South Sudan. During the campaign two expatriate midwives, one surgeon and one anaesthetist were sent to support the field teams. A total of 71 patients were admitted to the “fistula village”, 52 of who were new patients: out of this population, 55 women underwent surgical fistula repair, requiring 70 entrances to the operating room (cf. Surgery section). A high closure rate at hospital discharge (success rate) of 83.6% was achieved, possibly because women in this region had not been treated in the past, and there were thus no post-operative complicated fistulas. Follow-up at six months will be required to assess whether this good outcome was maintained over time. Similar campaigns were conducted in Masisi over the previous years, but due to the low success rates there (mainly due to the frequent need for re-interventions on

fistulas in this area) and the possibility for referral of fistula cases to Bukavu (to be explored), the fistula campaigns were discontinued in 2013.

In addition to the campaign, the long-term holistic project in Gitega, Burundi performed 385 surgical interventions in 2013, representing a decrease in activities since 2012 (486 interventions). In addition to offering holistic care for obstetric fistula, this project serves as training centre for surgeons on fistula repair (with two national doctors and two expatriate gynaecologists being trained over the course of 2013), and as a focus area for operational research: three studies were finalised over the course of 2013 (cf. Operational Research and Documentation section, §2.2.), and two additional studies (one on fresh fistulas and one on the impact of physiotherapy in fistula patients) are foreseen for 2014.

In Afghanistan and Sierra Leone, fistula patients were referred to partner organisations. The Ethiopia mission did not report on fistula referrals in 2013, due to the closure of the mission.

Based on the recommendations of a fistula expert who visited the different fistula programmes of MSF (intersectionally), fistula tools will be harmonised between the vertical projects and campaigns, in order to document and analyse the “lessons learned” from the different fistula strategies.

2.8. SAFE ABORTION

TPR was provided in 11 projects, either within the MSF structure (4) or through referral to a partner organisation (7). Across these projects, 553 TPR were performed in 2013, reflecting a modest decrease in projects offering TPR, and a strong decrease in total TPRs performed or referred. This decrease is mainly the consequence of the handover of the abortion clinic in Khayelitsha, South Africa: in 2012, 1,258 TPRs were performed in Khayelitsha alone. Nagaland, India, also decreased its TPR rate, which may have been a result of changes in staffing and willingness to perform TPR.

An assessment needs to be performed into the reasons that some projects remain reticent in implementing TPR (such as Masisi or Gogrial) and the strategies to improve the availability of TPR – missions which have not yet implemented TPR (such as Maban, South Sudan) would also benefit from a full context analysis. Additionally, specific projects such as Nasr City, Egypt, may require a thorough risk analysis of the TPR strategy, as a support to all implicated actors.

Unsafe abortions are responsible for a significant proportion of serious morbidity and mortality (estimated at 13% of global maternal mortality) for women in countries where access to safe abortion is limited. By providing comprehensive abortion care, the risks of maternal morbidity and mortality related to unsafe and incomplete abortions are reduced and the needs of women with unwanted pregnancies are met through provision of comprehensive abortion care.

The package of comprehensive abortion care includes TPR, post-abortion care and family planning. OCB offered post-abortion care in a total of 17 projects to 2,580 patients, by ensuring that staff, drugs and equipment were available to manage incomplete abortion or complications of induced abortion. This represented a sizeable decrease since 2012, when 23 projects reported data and a total of 5,031 patients were offered post-abortion care.

2.9. PREVENTION OF MOTHER-TO-CHILD TRANSMISSION OF HIV

Data on PMTCT was received from the missions in Kenya, Lesotho, Malawi, Mozambique, South Africa, Zimbabwe, Guinea, India and Burundi. A total of 64,959 women were tested: uptake of testing was generally high, with the lowest rate in Thyolo, Malawi (69%) and the highest rate in Kibera, Kenya (100%). However, weaknesses in data collection precluded analysis of testing uptake in some projects.

The perinatal HIV transmission rate and post-breastfeeding transmission rate ranged from 2 to 6%. Only the Tete project in Zimbabwe reported an alarming 42% HIV transmission rate. Coverage of PMTCT differed considerably between projects: in Mbare (Zimbabwe) 48% of the HIV-positive pregnant women received a PMTCT intervention, while this reached 73% in Kibera and 96% in Kawazulu Natal. In Mavalane

(Mozambique), Lesotho and the other projects in Zimbabwe, a coverage >100% was achieved, as projects reported a higher number of women receiving PMTCT than the total number of HIV-positive pregnant women attending ANC.

3. TRAINING AND HUMAN RESOURCES

- OCB hosted the international SRH course in English in 2013: this was the only international SRH course this year; usually it is hosted twice in English and once every other year in French.
- OCB hosted the ALSO training in Denmark twice. The ALSO provider course was extended with seven topics, requiring an expansion of the course from two to three days. The ALSO instructor training was also extended with one day, after initial evaluation of the first ALSOs in MSF projects.
- For the first time, OCB decentralised the ALSO training in the field. In Afghanistan and Pakistan, ALSO trainings were organised. The trainings were usually intersectional, with participants from OCP, OCA and OCB, while the trainers were two OCB ALSO instructors. Courses were evaluated positively and the impact seems considerable.
- Staff from OCB participated in the specific TPR, post abortion and family planning care training organised by RAISE/Marie Stopes International in Nairobi, Kenya.
- OCB organised a training on “Care to Victims of Sexual Violence” for the International Organisation for Migration (IOM) in Egypt.
- SRH modules were included in the Preparation for Primary Departure (PPD) course (twice), Management of Health Services (MHS) (three times), Basic Logistics (BLOC) course (twice) and Health Promotion course (once).
- The SRH department participated in a round table discussion on “Sexual Violence in armed conflict”, organised in Luxembourg. This event was related to the International Day Against Violence to Women. Additionally, a presentation on “Adapting sexual violence programmes to their local context: lessons learned from the field” based on the SV studies in Liberia and DRC was presented to the UN and Luxembourg governmental del-

egation.

- Presentations on “SRH evolutions, achievements, challenges and future three years?” (MedCo and Head of Mission week), “The PMTCT experience in RDC Masisi” (PMTCT workshop by OCG), and “SRH in MSF” (Institute of Tropical Medicine, Antwerp) were given by the SRH team.

4. NEW DEVELOPMENTS AND INNOVATIONS

- Guidance papers on severe pre-eclampsia and eclampsia, maternal near-miss analyses, and on home-based PNC (in collaboration with the Paediatrics advisor) were written and finalised.
- Ongoing papers and guidelines include a strategy paper on collaboration with traditional birth attendants in the field, a practical tool for implementation and monitoring of maternity waiting houses, and a French translation of the “SRH in emergencies” (in collaboration with “Translators without Borders”).
- In collaboration with MSF-OCA and the SRH international working group, new SRH patient files (ANC, PNC, EmONC patient file, Gynaecology hospitalisation card, Oxytocin and Magnesium Sulphate regimen file, Post-Partum admission and follow up form, and maternal referral form) were developed.
- In collaboration with the Operational Research Unit, the individual electronic patient Sexual Violence database has been revised, translated and shared with the field. Indicators for SV were reviewed and will be part of an automatic analysis sheet in the database. Additionally, the individual electronic SRH patient database, developed in 2012 for the Khost project in Afghanistan, has been distributed and implemented in other missions such as in Lower Dir, Pakistan.
- Specific support was given to the South Sudan coordination and Gogrial project team in order to develop the Maternal Mortality reduction strategy. This close and direct communication approach was appreciated by both the SRH and field teams and facilitated sharing of expertise to develop an appropriate project strategy.
- The International Cervical Cancer policy paper was widely distributed to opera-

tions and the field following its finalisation in 2012. Presentations on HPV vaccination have been developed, and a strategy for implementation of vaccination of HIV-positive adolescents was presented

during the Annual Review of Operations, in collaboration with the Vaccination advisor. Support will be provided to the South African MoH for implementation of HPV vaccination in the Khayelitsha project.

5. LOOKING BACK AND AHEAD

LESSONS LEARNED IN 2013

- The “SRH in emergencies” toolkit (cf. Medical Activity Report 2012, SRH section, §4.) has been successfully used by different missions, and feedback suggests that the toolkit has facilitated the implementation of the different SRH activities in emergencies. Additionally, it seems to have been used increasingly in stable projects as well, and can be considered a success.
- The Midwife Mobile Implementation Officer (MIO) position, created in 2011 to support implementation of SRH recommendations and policies in projects swamped with a high workload, has successfully continued and was much appreciated by field and operations. A new MIO was recruited in May 2013. Support and training of first mission midwives were provided in Masisi, ASB hospital and Khost.
- The implementation of the new briefing/debriefing process has been challenging and not always productive. In the past, briefings were used to highlight specific SRH challenges in particular projects and to assist expatriates in finding the right documents. This is challenging by phone or Skype, in particular as the toolbox on the KITSCH platform is not yet operational and does not allow expatriates to find all SRH documents. A risk exists that the “human contact” with the expatriates is lost, with negative consequences.
- Progress has been made in the implementation of PMTCT activities in non-vertical HIV projects. In 2013, the Masisi project implemented PMTCT, and in 2014 the Maban project in South Sudan will follow.
- The rolling out of the ALSO courses in MSF projects was an intersectional process: sharing trainers and providing trainings for the different sections together. Good collaboration and communication is thus essential, and the aim is to the ALSO courses ahead of time as much as possible during Annual review of Operations process.
- Many tools and guidelines exist on management of fistula, but they remain scattered and many exist only in French – revision and harmonisation between the campaign and vertical approaches is required to provide optimal support to the field.

PROSPECTS FOR 2014

- The South Africa mission will start HPV vaccination in 2014. Technical support will be given by the Gynaecology-Obstetric referent. Lobbying for implementation of HPV vaccination in other projects will continue.
- The ALSO courses will be decentralised in Pakistan, Afghanistan, India and DRC missions, and will be held at least once in Denmark (a reduction from twice yearly, the previous years). This schedule will be re-evaluated in 2015; efforts will be undertaken to keep instructors longer and linked to MSF for ALSO field trainings. Tailored SRH training will be provided in Juba, South Sudan, as the ALSO training was perceived as not meeting the local needs.
- The international medical SV protocol and guidance papers on traditional birth attendant collaboration and implementation of maternity waiting homes will be distributed.
- The SRH policy and SRH resource DVD will be finalised and will feed into the toolbox on the KITSCH/OOPS platform.
- The implementation of the revised SV database and automated indicator calculations will be supported in collaboration with the Operational Research unit.
- The SRH department will contribute to an assessment for opening an SRH mission in Indonesia.

SURGICAL ACTIVITIES

1. OVERVIEW

While surgery is often viewed as a costly and technically demanding activity, surgical care provided in low-cost district hospitals is cost-effective, and compares favourably with selected primary health interventions. In projects offering surgery, OCB provides access to high quality surgical/anaesthetic management of patients. During 2013, and following the trend of the previous years, surgical activities in OCB mainly consisted of lifesaving and essential surgery, requiring only low technology and based in district hospitals or in primary health centres with surgical capacity. In parallel, OCB performed high-level orthopaedic care in specific projects and specialised surgical care to women with obstetric fistula.

Surgical activities were offered in projects by choice, to enhance insufficient local surgical capacity, and during classic emergency interventions after catastrophes (the Philippines typhoon) and acute conflict/violent environments (Mali, Mauritania, South Sudan, Syria – cf. Emergency Unit section, §2.2.). OCB also gave indirect support to surgical activities through training, knowhow and supply.

2. PROGRAMME ACTIVITIES

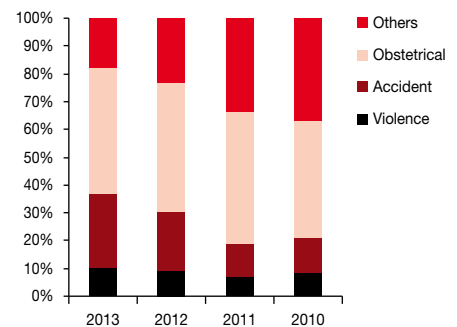
2.1. SURGICAL ACTIVITIES AT COUNTRY AND PROJECT LEVEL

By the end of 2013, there were 14 OCB projects offering surgical care: during the course of the year, five projects were opened or newly started conducting surgery, and six projects offering surgical care were closed (table 1, Annex). Four of the projects which started offering surgery in 2013 were emergency interventions, in Mali, Mauritania, the Philippines, and South Sudan. Similarly to the previous years, surgical activities varied per project, with some projects mainly offering emergency surgical care (e.g. Timurgara, Pakistan), some dedicated to obstetric surgery (e.g. Khost, Afghanistan), and some dedicated to specific pathologies/conditions (e.g. trauma care in Kunduz, Afghanistan and Tabarre, Haiti; and fistula surgery in Gitega, Burundi). Below, only the projects with direct surgical activities are reported: projects in which management of surgery was done by another actor and where OCB only provided support to surgical activities were excluded from the analysis (Nyabiondo and Rubaya, Democratic Republic of Congo [DRC]).

2.2. SURGICAL ACTIVITIES BY INDICATION

In the 18 OCB projects that offered direct surgical activities over the course of 2013, 14,199 primary interventions (new cases) were seen, representing a slight decrease of 3% compared to 2012 (n=14,583). The closure of three projects with an important volume of activities (Lubutu, DRC; Dakoro, Niger; and Dargai, Pakistan), was compensated to a large extent by the increase of activities in the trauma care projects in Tabarre and Kunduz. This increase was reflected in the distribution of surgical activities by indication (fig. 1), which showed a shift from common surgical pathologies towards accidental trauma, directly linked to the expanding projects performing orthopaedic surgery. Accidental trauma causes showed an increase of approximately 20% in absolute numbers and of approximately 5% in proportional share of all indications. Obstetric pathologies remained the major cause of intervention, representing more than 40% of all primary interventions. This proportion varied considerably depending on the type of project: projects such as Khost and Timurgara with a specific focus on maternal care receive >75% obstetric cases, while hospitals in conflicts such as Jabal-Akkrad (Syria) receive up to 40%, and projects such as Niangara (DRC) and

Figure 1: Indications for surgery, expressed in proportions, 2010-2013



Mon (India), where planned elective surgery is performed, see only 10% obstetric cases. Information on such distributions can be useful in planning surgical activities in new projects, as it allows forecasting of the types of pathology to expect.

2.3. PERFORMED ANAESTHESIAS

During 2013, across the 18 projects with direct surgical activities, there were 19,395 anaesthesia interventions, maintaining the status quo with the previous year (n=19,145). The total number of anaesthesia interventions also translates to the total number of entrances to the operating department (OD); as some procedures were re-interventions, the number of anaesthesia interventions/entrances to the OD was higher than the number of primary interven-

Figure 2: Types of anaesthesia, expressed as proportions, 2010-2013

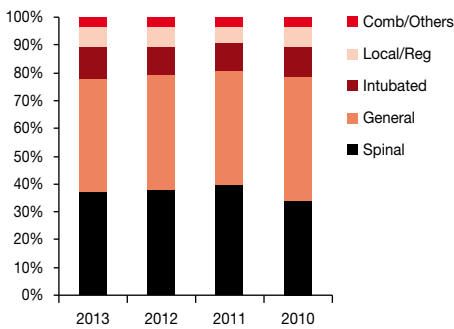
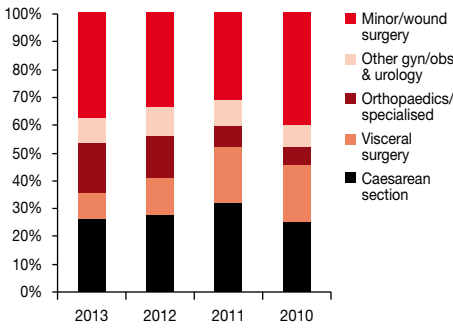


Figure 3: Surgical interventions, expressed in proportions, 2010-2013



tions. The modest increase in anaesthesia interventions combined with the decrease in primary interventions is a consequence of the shift towards a higher number of trauma cases (cf. §2.2.), which typically require a higher number of re-interventions.

No major differences in the anaesthesia procedures were observed over time (fig.2). The quality of anaesthesia care is challenging to assess among projects, because the types of surgical intervention vary considerably; however, the proportion of spinal procedures for Caesarean sections (table 1, Annex) 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 – more than 85% of the projects had such rates, and four projects (Kabul, Afghanistan; Kabezi, Burundi; Masisi, DRC and Mon, India) had a rate >90%, indicating excellent provision of anaesthesia.

2.4. SURGICAL PROCEDURES BY TYPE

OCB projects performing direct surgical activities reported 21,774 surgical procedures in 2013. This number exceeded the number entrances to the OD/performed anaesthesia interventions (cf. §2.3.), as multiple surgical procedures can be performed under the same anaesthesia procedure (in one intervention). It is an important 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 I”) procedures are thus reported here (n=19,395, one pro-

cedure per entry into the OD). Caesarean sections and visceral surgery both decreased proportionally and in absolute numbers, while orthopaedic/specialised surgery and minor/wound surgery increased, again as a consequence of the expansion of the trauma care projects in Kunduz and Tabarre.

2.5. CAESAREAN SECTION

Caesarean sections are an essential type of surgical intervention, and due to their specificity are typically performed as an urgent procedure and as the first procedure for each patient. As such, they present both a relevant and standardised indicator for surgical activities. In 2013, 5,030 Caesarean sections were performed in the OCB projects with direct activities (approximately 35% among all new cases, cf. §2.2.). This represents a slight decrease in absolute numbers (5,296 in 2012) and weight (36% in 2012). Differences in Caesarean section rates between projects and possible determinants are discussed elsewhere in this report (cf. Sexual and Reproductive Health section, §2.2.- numbers of reported Caesarean sections differ between these chapters, as indirect projects were included in de SRH analysis).

2.6. OBSTETRIC FISTULA

Obstetric fistula is a complication of delivery that occurs in resource-poor countries where there is lack of comprehensive emergency obstetrical care, and particularly of timely Caesarean section. Many women suffering from fistula live in poverty: women with fistulas are stigmatised by the population due to the smell and leakages, and are often ostracised from the community.

During 2013, 355 patients (new cases) with obstetric fistula underwent a surgical repair – 278 women in the integrated fistula pro-

ject in Gitega, Burundi, and 77 during the fistula campaign in Gogrial, South Sudan (the only fistula campaign conducted in 2013). However, more fistula repairs were performed during the year, as old cases (107 in Gitega, 14 in South Sudan) also underwent re-interventions – each year, the number of old cases increases in these projects. A full discussion of the pros and cons of the campaign versus the integrated approach is discussed elsewhere in this report (cf. Sexual and Reproductive Health section, §2.7.).

2.7. 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 morbidity) cases, as opposed to elective surgery. In MSF, certain planned procedures are considered essential and address conditions amenable to a proven surgical treatment, which by themselves may not affect the patient’s health and/or life immediately, but which bring suffering and/or disability. Surgical activities can thus be classified as in three degrees of urgency: urgent, delayed (together considered as emergent surgery), 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.

For 2013, 18,016 emergent cases were reported, representing a proportion of 93%. This was a slight increase compared to 2012 (89%) – a general increasing trend has been observed over the past years. This may be due in part to the increase in orthopaedic interventions, which usually fall under urgent or delayed interventions. The ratio of emergent to planned elective cases is an important indicator for programmatic planning: knowing the type of surgery aids 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.

2.8. ORDER OF THE INTERVENTION

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, etc.). Unplanned re-interventions can be a quality indicator, as they represent post-operative complications of the surgical procedure that can be linked to the professional performance (lack of experience or skills), lack of medical material and supply, unavailability of a post-operative recovery room, or lack of nursing follow-up of the patient in the hospitalisation ward.

In 2013, 73% of the interventions were primary interventions, 26% planned re-interventions, and 1% unplanned re-interventions. This represents a slight increase of planned re-interventions compared to 2012, again reflecting the performance of the trauma care centres, as these morbidities often require multiple re-interventions during the treatment period.

2.9. PERI-OPERATIVE MORTALITY

Out of the 19,395 entries into the OD in the 18 projects providing direct surgical activities, 44 peri-operative deaths were reported, representing an overall mortality rate of 0.2%, similar to the rate in 2012. Peri-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 in table 1 (Annex), data should not be compared across programmes: peri-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 provided in the project. 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 of the SAGE (Surgery/Orthopaedics, Anaesthesia/Reanimation, Gynaecology/Obstetrics, and Emergency/Intensive Care) unit. Specialist doctors such as surgeons and anaesthesiologists are scarce and those who are willing to operate in resource-limited settings even more so. The different training schemes targeted different types of GAS (Gynaecology/Anaesthesia/Surgery) specialists, taking into consideration their skills and knowledge, and the expected skills and knowledge in function of the operational strategies and needs. Trainings included:

- Training of expatriate surgeons in obstetrical surgery, obstetrical fistula repair surgery, and trauma and orthopaedic surgery, through workshops and on-site training.
- Training of national medical doctors performing surgery in general surgery, obstetrical surgery, orthopaedic surgery, and management, through workshops and bedside training.
- Training of nurses in anaesthesia management through workshops and bedside training.
- Specific training cycles were conducted in:
 - Burundi, Kabezi, for emergent obstetric surgery for doctors with surgical skills, and anaesthesia training for nurse-anaesthetists of different MoH hospitals, preparing the path for the handover of activities.
 - Sierra Leone, Bo: emergent obstetric surgery, in joint venture with a Norwegian NGO. This training is part of a surgical training for Community Health Officers,

who rotate in the project for six months, to address the acute lack of surgical providers in the country.

4. OPERATIONAL RESEARCH AND PRESENTATIONS

The SAGE unit published three peer-reviewed articles in scientific journals this year (cf. Operational Research & Documentation section, §2.2.). Additionally, presentations were conducted at:

- OCB events/courses: the Management of Health Services (MHS) course (three times), Medical Coordinator Course (MCC), Biomedical course, Operational Research Day (cf. Operational Research and Documentation section), OCB Prospects, and the GAS week in Hong Kong.
- MSF intersectional events: Surgical Data Collection (Epicentre, New York) and Surgery: the Present and Future (OCA, Amsterdam).
- International conferences and meetings: Aid, Design & Collaboration (Delft University, the Netherlands); Surgical Care Needs in LMIC (John Hopkins Bloomberg School of Public Health, USA); Surgery in MSF Settings: Conflict Environment (South Africa Surgical Society, South Africa); Tropical Surgery Master Course (University of Verona, Italy); Limb Salvage with External Fixators (34th Orthopaedic World Congress, India); Prerequisites to Perform Surgery in MSF (WHO, Trinidad Tobago); Outcome of Quality Surgical Activities in MSF (World Congress of Surgery, Obstetrics, Trauma and Anaesthesia, Trinidad Tobago); Trauma and Surgical Tools in MSF Settings (Congress in Global Perspectives in Surgery, Philippines).

LESSONS LEARNED IN 2013

- Good quality was assured in the set-up of surgical activities in emergency and violent settings. Clarity was achieved on the performance of surgical activities in MSF, specifically in the following areas: orthopaedics, circumcision, use of peripherally inserted central catheters (PICC) lines, and nutrition.
- The pool of orthopaedic surgeons was strengthened and the skills of local orthopaedic surgeons were increased.
- Good data (statistics) were achieved in surgical care: compliance with OT databases was high.
- An increased intersectional collaboration through both the surgery and anaesthesia working groups was observed.
- Some field coordination teams had insufficient knowledge of surgical activities. Several expatriates in the field did not receive adequate support, leading to the implementation of non-standard protocols and tools. MSF documents were challenged regarding their evidence-base and appropriateness.
- Some expatriates lacked the technical skills to work in MSF field settings. Also, in some cases, management and training skills were lacking.
- Some confusion of the roles within MSF was noted: some operational decisions were perceived to be taken by the SAGE unit, which however remains a medical unit and not an operational one.

PROSPECTS FOR 2014

- As a priority, timely and good support will be provided to operations at cell, mission and field level and to specialists in the field, upon request.
- Further support will be provided to other medical units by sharing guidelines and protocols, such as those on screening and prevention of cervical cancer, and paediatric surgery.
- Training will be provided for specific SAGE specialists: general surgeons in subspecialties (neuro-, thoracic and plastic surgery), anaesthetists (PICC).
- Care for specific patient conditions (head trauma and polytrauma) will be improved.
- The response in case of mass disaster will be strengthened through good coordination between all actors: emergency medicine doctors, anaesthetists, surgeons, orthopaedic surgeons, nurses, and logisticians.
- Further operational research studies will be performed.

VACCINATION

1. OVERVIEW

Vaccination support to the field was irregular during the year, as the referent position was filled permanently only in June and was part-time until December. Because of human resource constraints, only three projects were visited by the vaccination Mobile Implementation Officer (MIO) in 2013. Nevertheless, analyses of missed vaccination opportunities were conducted in several projects, providing a useful overview about performance of vaccination activities supported by MSF.

Compared to 2012, 45% more doses of vaccines were supplied to the field and 57% more doses were administered in OCB projects during the course of 2013. Although the total number of measles doses (530,226) administered during reactive campaigns in 2013 increased by 40% compared to 2012 (378,341), this is still much lower of number of doses administered in 2010 and 2011, which were 1,140,672 and 1,295,000 respectively.

In terms of innovations, a preventive vaccination campaign with the oral cholera vaccine was conducted in South Sudan in collaboration with OCA. This was the first time that the vaccine was used preventively in the African continent.

2. PROGRAMME ACTIVITIES

Only 22 projects reported vaccination activities in 2013. € 1,013,043 was spent on vaccines and vaccination material, representing a 59% increase compared to 2012 (€ 636,075). The increased expenditure is mostly explained by the 45% increase in supply and 57% increase in doses administered, but can also be explained partially by the increased request of expensive immunoglobulins in a selected number of projects. An overview of the doses administered over the course of 2013 is provided in table 1.

2.1. ROUTINE VACCINATION

Although several MSF projects were not involved in routine vaccination (e.g. HIV projects), others, while involved, did not routinely report vaccination data. Additionally, data collection was not systematic across projects: sometimes vaccinations fully performed by the Ministry of Health (MoH) are reported through the MSF tools, while conversely some projects in which MSF supports activities logistically or through human resources did not record any data. This incomplete and unsystematic reporting system does not allow an accurate estimation of MSF involvement in routine vaccination.

Table 1: Distribution of doses administered by type of activity, 2013

Type of activity	Number of doses	Proportion
Routine vaccination	447,808	38%
Post-exposure	44,083*	4%
Preventive campaigns	146,962	13%
Reactive campaigns	530,226	45%
Total	1,169,232	-

* Immunoglobulin doses (tetanus and rabies) are included, as they are part of the post-exposure prophylaxis protocols

A total of 447,808 routine vaccinations were administered in OCB projects over the course of 2013 (fig. 1), representing an increase of 44% compared to the 310,372 doses of 2012. Unfortunately this change is likely the result of improved reporting, rather than an actual increase of OCB involvement in routine vaccination.

Vaccinations performed in nutritional programmes were registered separately in 2013 and were no longer included in the outpatient department (OPD) activities, providing a more reliable picture of the correct implementation of MSF guidelines for vaccination in malnourished children. In Kenya, Hepatitis B (HBV) vaccination was administered to HIV-positive patients who screened negative for HBV infection: more than 1,500 doses were administered from

the beginning of this activity. More projects should follow this example and provide HIV positive patients with the required vaccinations; simple interventions could in fact reduce the burden of vaccine preventable diseases, which represent an important cause of morbidity and mortality in people living with HIV (PLHIV).

Of the 447,808 routine vaccines administered for routine vaccination, a total of 364,437 doses (81%) were administered to children younger than five (fig. 2): 262,960 (72%) to children younger than 12 months and 101,630 (28%) to children aged between 12 and 59 months. As the youngest children are targeted by the national Expanded Programmes of Immunisation (EPI), MSF lobbies for the inclusion of older children into the routine vaccination: this is

Figure 1: Distribution of routine vaccinations among OCB programmes, 2013 (n= 447,808)

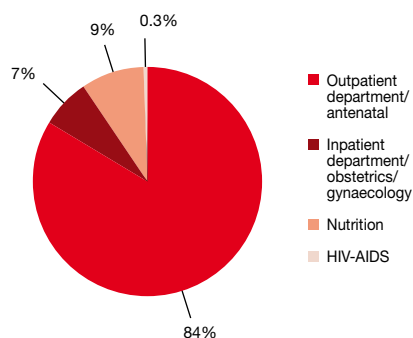
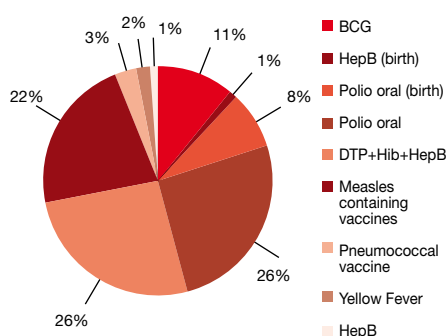


Figure 2: Distribution of antigens administered to children under five in routine vaccination in OCB programmes, 2013 (n= 364,437)



Note: India contributed to the majority of doses of HepB in children because DTP+Hib + HepB (the “pentavalent vaccine”) was not yet introduced during the year.

crucial to allow the catch-up of children who through inefficiency of the system did not receive the doses needed to be fully immunised before the age of 12 months. These children, if fully immunised, will contribute to the protection of their communities and prevention of outbreaks.

Overall drop-out rates in the pentavalent and polio vaccines from the first to the third dose were 33% and 30% respectively. This indicator varied considerably between projects, and the reasons for these high losses to follow-up among children need to be identified urgently at field level, in order to develop context-specific approaches to address them.

Concerning vaccines administered to newborns, BCG and the Oral Polio Vaccine (OPV) dose 0 represented 11% and 8% respectively of the doses administered routinely. When these numbers are compared to the number of live births in OCB projects in 2013, 20% and 40% would miss BCG and OPV dose 0 respectively. Only 4.6% of the children born in OCB in 2013 received

Table 2: Post exposure prophylaxis: type of patients, vaccines, and drop-out rates (among 2,404 victims) in OCB projects, 2013

Type of victims	Vaccine	Doses (%)	Dropout rate*
Wounded	Tetanus	31,127 (90.7%)	82%
	Hepatitis B	1,864 (5.4%)	56%
Suspect of Rabies	Rabies	95 (0.3%)	80%

* Victims who received the first dose of vaccine and did not come back to receive the last dose according to protocol. SGBV: sexual and gender-based violence

one dose of Hep B vaccination at birth; OCB must put all possible effort to improve these figures in the future.

Among the 115,730 doses of tetanus containing vaccines delivered in 2013, there were 83,371 (72%) in routine vaccinations, of which 62% were administered to pregnant women. Although it is not possible to estimate the proportion of women attending antenatal care (ANC) clinics who were fully vaccinated against tetanus, the dropout rate for the second dose among women who received the first dose of tetanus vaccine was low (8%). Unfortunately more than 35% of women who received the second dose did not complete the third dose, which is required for long term protection. As tetanus coverage is unfortunately low in most of the countries where MSF works, ANC consultations are an opportunity to get the vaccination status of those women up to date and protect them and their children from this easily preventable lethal disease.

2.2. POST-EXPOSURE PROPHYLAXIS

Over the year, 34,318 doses of vaccines were used for post-exposure prophylaxis (PEP) in MSF projects (table 2).

Among the 2,404 new cases of sexual violence registered in the individual electronic SGBV database in 2013 (i.e. not counting SV cases outside of the major SV programmes, cf. Sexual and Reproductive Health section, §2.5.), only 949 (39%) victims received the first dose of Hep B (part of the protocol). As shown in the table, drop-out rates were very high in post-exposure vaccination.

2.3. EVALUATION OF MISSED VACCINATION OPPORTUNITIES

The results of 17 missed opportunity evaluations conducted during 2013 as exit interview in MSF-supported health structures are presented in table 3 (Annex). Addition-

al evaluations were done in Afghanistan but results are still pending.

When such evaluations were conducted in Niger in 2011, 72% of the children in CSI Guidan Roundji and in CSI Sae Saboa were found to have a missed opportunity. The important reduction in missed opportunities observed in 2013 in these two centres underscores how missed opportunities evaluations are a useful tool for monitoring of routine immunisation activities, and can be used to improve project performance.

2.4. MASS VACCINATION CAMPAIGNS

In 2013, a specific project was created to respond to major measles outbreaks in the Democratic Republic of Congo (DRC). A total of 15,823 cases were treated and more than 500,243 persons were vaccinated through mass vaccination campaigns. Reactive mass vaccination campaigns were also conducted in North Sudan, where 13,149 individuals were vaccinated, and in Pakistan, where a total of 16,834 children aged 6 to 10 years were vaccinated.

Preventive cholera mass vaccination in Doro refugee camp, South Sudan took place in January 2013: a total of 146,962 doses were delivered in two rounds, vaccinating 73,481 beneficiaries. In 2013, OCB responded to cholera outbreaks in Pakistan, Haiti and Guinea by treating 11,868 cases, but no reactive vaccination campaigns were launched to respond to these outbreaks.

2.5. VACCINE-PREVENTABLE DISEASES

Similar to previous years, the reporting system of vaccine preventable diseases (VPDs) was poor, and the reported figures underestimate the real situation. As the vaccination coverage in most countries where MSF intervenes is low, and surveil-

lance systems and diagnostic capacity are often poor, the number of VPDs is likely to be much higher. This lack of reliable figures may affect MSF capacity to detect and respond to VPDs in a timely manner.

On the other hand, the continued notification of VPDs in our projects, while under-reported, indicated the poor performance of routine vaccination in these settings, and underscores the need of a more consistent MSF involvement in routine vaccination.

3. DEVELOPMENTS AND INNOVATIONS

- A new epidemiological approach (the “coup de poing” strategy) was tested during the measles outbreak response in DRC and its results will be documented in 2014.
- A proposal for a study on the use of a measles vaccine under controlled temperature chain (i.e. out of conventional cold chain) was developed, submitted

and approved by the innovation fund. The study will be conducted in 2014 with the collaboration of Epicentre.

4. TRAINING

OCB gave support to two international trainings (the Populations in Precarious Situations (PSP) in English and the Nutrition/Vaccination course 2 in French) and to the vaccination module of the Management of Health Services (MHS) course.

5. LOOKING BACK AND AHEAD

LESSONS LEARNED IN 2013

- New measles guidelines were finalised in 2013.
- Although a joint effort was made to allow the use of the pneumococcal vaccine (PCV) in a preventive mass vaccination campaign in South Sudan, OCB failed to obtain the required authorisations.
- There is an urgent need to improve reporting of vaccination data in order to have a reliable picture of routine vaccination activities in OCB projects. There is also a need to strengthen the continuous monitoring of vaccination indicators in all projects where data collection tools are in place.
- Documentation of missed vaccination opportunities continued in 2013. The tool helped the projects where it was implemented to monitor the activities and to respond to gaps in routine vaccination (as illustrated in Niger). Staff in the field was trained about the objectives and correct use of the tool.
- A guidance document for preventive vaccination in emergencies was developed in 2013 and will be implemented in 2014.
- The memo for routine vaccination activities was developed and will be revised and finalised in 2014. These guidelines will provide a user-friendly tool for implementation and follow up of routine vaccination activities in MSF projects.

5.2. PROSPECTS FOR 2014

- As OCB was assigned the leadership on routine vaccination in DRC, specific efforts will be placed on defining the objectives, activities and timeframe of this ambitious project.
- Evaluations of routine vaccination activities in HIV projects in collaboration with the South Africa Medical Unit (SAMU) will be conducted.
- The use of PCV in reactive or preventive mass vaccination campaigns will be further explored.
- A capitalisation of all Missed Opportunity evaluations performed in OCB projects will be done and the lessons learned will be shared. A revised protocol will be developed and will be submitted to the ethics review board. More Missed Opportunity evaluations will be conducted in different projects (Niger, Pakistan, Afghanistan, South Sudan and Sierra Leone) during the year.

WATER, HYGIENE AND SANITATION

1. OVERVIEW

The 2013 activities of the Water, Hygiene and Sanitation (WHS) unit were dominated by follow-up interventions in the refugee camps in South Sudan, the events in Central African Republic (CAR), emergency responses to a dengue outbreak in Pakistan and to the threat of a dengue outbreak in the Philippines. Work on water quality to support a nutritional project in Niger, providing support to set up the Water and Sanitation (WatSan) component in field hospitals in Syria, supporting the refugee camps in Mauretania, and managing Hepatitis E in South Sudan were also key activities. Additionally, installation of WHS infrastructures in state-of-the-art MSF hospitals was high on the operational agenda in 2013.

In addition to the strong support of the WHS unit to both regular and emergency OCB projects, a large number of operational research and innovative initiatives were launched.

The intersectional WHS working group continued to serve as an expedient platform for development and dissemination of tools and guidelines and for harmonising intersectional WHS activities. Operational collaborations, such as the WHS approach during the refugee crisis in South Sudan or viral haemorrhagic fever (VHF) outbreaks in Uganda and the Democratic Republic of Congo (DRC), were successfully managed by the working group. In addition, a large number of tools for further standardisation of WHS activities were developed. All outputs of this intersectional collaboration were shared through Tukul.

2. PROGRAMME ACTIVITIES

2.1. ACTIVITIES AT A COUNTRY AND PROJECT LEVEL

Similar to 2012, OCB did not manage any vertical WHS projects due to its integrated approach, while almost all OCB projects included a WHS component. Systematic scanning for WHS needs was performed for all OCB projects – trained Water and Sanitation (WatSan) personnel from the pool were then sent to the field if the WHS needs proved too complex or large for the field staff. In 2013, a focus was placed on providing expert WHS support to established missions to ensure that the essential Water, Hygiene and Sanitation requirements in the MSF medical structures were respected, to minimise nosocomial transmission of diseases, and to optimise infection control. WHS needs in the large OCB emergency interventions were mainly addressed by specialised staff with technical support from headquarters. About 25 WHS experts supported projects in 10 missions (Philippines, CAR, Niger, South Sudan, Sierra Leone, DRC, Syria, Afghanistan, Mauretania, and Somalia). The five experts of

the WHS unit provided support on the field during 345 days or an average of 3.5 months each in Dakar, Mauritania, Kampala, Uganda, Kenya, South Sudan, Burkina Faso, Afghanistan, Philippines, Guinea, DRC, and Egypt.

2.2. SPECIFIC WHS INTERVENTIONS AND FIELD VISITS

- An issue that needed attention was scaling of sterilisation equipment and repair of damage to the heating element by high water calcium levels in the MSF-supported hospitals in Libya. A water softener requiring minimal maintenance has been procured and is being tested in the Espace Bruno Corbe.
- Regarding water quality, state-of-the-art borehole rehabilitation techniques and training were introduced in Niger to avoid repeated drilling of new boreholes, ultimately to improve the efficiency of the nutrition programme. Identification of underground water with high fluoride concentration was undertaken to address existing health problems related to excessive fluoride consumption, and to guide which depths of groundwater exploitation need to be avoided in these areas.
- Provision of water through boreholes and installation of an adduction network was done in Doro refugee camp to decrease the risk of Hepatitis E infection. An evaluation of the transmission mechanisms of Hepatitis E was initiated with the support of Epicentre.
- In Egypt in the Abu Elian Maternal Care project, essential WHS requirements were reinforced and a pilot project for an adapted sanitation system in hot dry climate (digester) was initiated.
- In Somaliland, WatSan activities were implemented following an evaluation visit in 2012 to improve the degraded WatSan situation in a prison where in particular the sanitation component needed an innovative approach.
- The typhoid fever situation in Harare was studied in collaboration with Epicentre and revealed post factum the importance of two contaminated wells in the transmission. Bucket chlorination was implemented as an emergency intervention in 2012 but in 2013 an improved

- technical solution was implemented in preparedness for potential future outbreaks of typhoid fever and of cholera.
- An evaluation of the WatSan infrastructures in the Mauritanian refugee camps was implemented and debriefed at headquarters level with the other operational actors. This drew attention to the difficult situation and the important quality challenges faced by humanitarian actors on the ground.
 - In Pakistan an important innovative response was initiated to a dengue epidemic that caught international attention. Similarly, in the Philippines an important innovative response was developed to reduce the risk of a dengue outbreak following Typhoon Yolanda on the 8th of November 2013, which devastated the central region of the Philippines (cf. Emergency Unit section, §2.2.1.).
 - In the Kabezi project of Burundi, mud streams provoked by heavy rain and erosion flooded the hospital. In collaboration with the Musée Royal d'Afrique Centrale (MRAC) of Tervuren, Belgium, the risk of repetition of this event was studied with the help of satellite imagery and solutions were presented in a workshop in Burundi in the presence of the Ministry of Health (MoH), MSF and MRAC.
 - The refugee situation in CAR required the support of an experienced WatSan to make sure that the basic WHS needs of the affected population were covered.
 - In Bo, Sierra Leone the existing Gondama Referral Centre (GRC) as well as the future site for the hospital needed WatSan support to comply with essential requirements, using innovative technologies for water tanks, wastewater treatment systems, chlorination systems, etc.
 - In Port aux Prince, Tabarre hospital, monitoring was done of the new state of the art incinerator – mediburn – and of the equally innovative rotating biological contactor waste water treatment system that was implemented, to assure proper functioning of the container hospital.
 - In Syria support was provided by a WatSan to set up emergency field hospitals enabling emergency surgery (cf. Emergency Unit section, §2.2.2.).
 - In Donetsk, Ukraine, tuberculosis (TB) infection control in relation to air quality was investigated.

- A very important activity in 2013 was to improve essential WHS requirements in the medical projects in DRC (Kinshasa and Niangara), Guinea (Matam), Cambodia (Preah Vihear), Kenya (Kibera), Sudan (Shaeria), South Sudan (Doro refugee camp), Afghanistan (Kabul, Khost and Kunduz), Egypt (Abu Elian), Pakistan (Karachi and Timurgara), Somaliland (Burao), Lesotho (Semokong), Malawi (Chikhwawa, Nsanje and Thyolo), Zimbabwe (Bureha and out of district), India (Nagaland and Chhattisgarh), Niger (Guidan Roudji), Sierra Leone (GRC), and Haiti (Tabarre),

3. INTERSECTIONAL COLLABORATION

The intersectional working group on WHS has been active since 2007 to improve the intersectional collaboration on WHS issues. Over the course of 2013, activities of the WHS working group included:

- Four meetings of the working group, with minutes and presentations disseminated through Tukul.
- Exchange of experience and improved coherence on technical approaches in the context of Hepatitis E, disseminated through an intersectional “lessons learned” document.
- Organisation of a technical day addressing insecticide resistance, new tools and innovations, in collaboration with the malaria working group.
- Organisation of a technical day on the use of GPS, mapping with Google Earth and Q-Gis in November 2013; however, this was rescheduled to February 2014 because of the emergency response in the Philippines.
- Conference calls to discuss the WHS approach in South Sudan, Syria and the Philippines emergency.
- Development of common operational approaches, such as an update of the recommendations on Long-Lasting Insecticidal Nets to streamline purchasing for central or field emergency stocks.
- Systematic updates of the WHS group space on Tukul, including technical documents, digital maps, presentations and meeting minutes.
- Implementation of a field visit and organisation of a common expert visit to compare and validate waste water treatment equipment in Haiti.

4. DEVELOPMENTS AND INNOVATIONS

4.1. DOCUMENTS, GUIDELINES

The WHS unit, in close collaboration with the intersectional working group, was involved in the generation of a broad array of documents and guidelines (disseminated during 2013), including:

- The “Public Health Engineering in Precarious Situations”, is being translated into French in 2013/14 as MSF Public International guideline.
- An update of the international WHS library list was done.
- Technical and editorial support to a World Health Organisation (WHO) publication that came out in 2013: 1) Malaria control in complex emergencies – an interagency field handbook, and 2) Menstrual Hygiene Manual.
- The Public Health Engineering was for 40 % translated in French with external support and proof-reading by MSF.
- The first round of feedback was provided to the manual on hospital waste water treatment, but extra time will be required following feedback of the Haiti experience.
- Several technical updates/files were implemented in the International Technical Coordination (ITC) catalogue in close collaboration with the international office (module dosing pump, new chlorine sprayer, couplings, sleeve submersible pump, pumping test kit, water quality & monitoring, bladder repair kit).
- Support to the Nutrition Guidelines (WHS part)
- Support to the Temporary Shelter Guidelines (WHS part)
- Review of the Hazardous Waste Manual

4.2. TOOLS AND STRATEGIES

The WHS unit, in close collaboration with the intersectional working group, was involved in the generation of a series of tools:

- A water softener was identified and acquired, and its impact on scaling of sterilisation equipment will be tested in 2014 (cf. §2.2.).
- The compact dry Escherichia coli test was compared to the traditional Delagua kit for bacteriological water testing dur-

ing a study on typhoid fever in Kikwit, but was not retained for this study. However it has been used by OCA as an emergency bacteriological test.

- The cholera bed is available in the catalogue and field: headquarters feedback on prototype Four was provided and is being incorporated further by the supplier.
- In 2013 the dengue kit was used in the Pakistan and Philippines emergencies, and modifications based on field feedback were made.
- The diagnosis equipment of boreholes developed for Niger was shared amongst sections and other agencies, and the emergency diagnostic kit was used in Afghanistan and Sudan.
- Transport of medical waste from Haiti to Canada was implemented and a report is available.

4.3. OPERATIONAL RESEARCH

The close collaboration with the Operational Research Unit (LuxOR) enabled the WHS working group to generate a considerable number of operational research initiatives over the course of 2013:

- The household water treatment strategy study was terminated in Chad: results were shared amongst sections and other agencies and the write-up is ongoing.
- A paper on the "Effect of refugee camp location on the capacity to meet humanitarian standards in the 2011/12 South Sudan refugee crisis" was submitted for publication.
- A study on decay of chlorine in an emergency in Maban, South Sudan was completed and the write-up is ongoing.
- Support was provided to an operational research initiative of the University of Barcelona on the impact of chlorine on the Hepatitis E virus in the South Sudan refugee camps, but further sampling in the 2014 rainy season is required prior to developing a study manuscript.
- Funding is being obtained, a PhD student has been identified and a memorandum of understanding is being formalised between MSF and the London School for Hygiene and Tropical Medicine to improve the evidence base for WHS interventions in the next three major cholera outbreaks.

- A paper entitled "Can the detection of early epidemic risk factors, combined with a timely malaria vector control intervention, prevent the evolution and impact of malaria epidemics? A case study from Wajir district, Kenya" was submitted for publication.

- A first paper on "Typhoid Fever outbreak investigation to determine water and sanitation-related risk factors and high transmission zones during the 2011 outbreak in Kikwit, DRC" is ready to be submitted and a second paper is being developed.

- A paper on "Spatial and Temporal Clustering of Typhoid Fever Identified Foci of Transmission During an Outbreak in Harare, Zimbabwe, 2012" was submitted for publication.

- A paper on the results on the testing of the Gender and WatSan tool has been submitted for publication.

- A cross-sectional, random-sample survey to assess water chlorination as an intervention against cholera and to identify risk factors for cholera transmission in Cité Soleil, Haiti, during the cholera epidemic was submitted to the Ethics Committee in Haiti.

- A study comparing the Rotating Biological Contactor as packaged sewage and sludge plant (managed by OCB), the upflow sand filter clarifier (managed by OCA), a single septic tank (managed by OCP) and multiple septic tanks in line (managed by OCG) in health structures in Haiti took place in 2013 and will be written up.

- A study into the feasibility, acceptability and impact of postnatal health facility distribution of water filters on diarrhoeal morbidity and mortality in infants (accepted by the MSF Innovation Fund) is awaiting identification of an appropriate operational context.

- A cross-sectional study to verify chemical water quality in MSF-supported medical infrastructures, in collaboration with SGS, is under development.

4.4. COMMUNICATION

MSF experience in WHS activities was actively shared at multiple platforms through scientific presentations and discussions, including:

- Publication of the interagency manual "Malaria in complex emergencies" (with strong MSF input) by WHO in 2013 (cf. §4.1.).

- Participation in the Malaria Policy Advisory Committee.

- Hosting of an interagency WASH meeting in Bordeaux. MSF presented the issue on the cost of bottled water, household water treatment, and borehole diagnosis/rehabilitation.

- Contributions to the "Péril fécal. Prévention des épidémies en situation de crise humanitaire" course at Université Paris VII.

- Contributions to the "Réduire les risques infectieux en support aux activités médicales" course at Institut Pasteur – Paris.

- Participation in an advisory board meeting of the Humanitarian Innovation Fund in London.

- Participation as an observer in the WASH cluster meeting in Geneva.

- External training (e.g. at the Institute for Tropical Medicine (2 complete new modules), Bioforce, University of Johannesburg, and Liverpool School of Tropical Medicine).

5. TRAINING & HUMAN RESOURCES

The WHS unit was involved in over 50 full-time days of dedicated training – including the WHS module of the Populations in Precarious Situations (PSP) training, the WHS in Emergencies training (English and French), the Response to Epidemics (REPEPI) course and the Water, Engineering and Development Centre course – as well as providing WHS components for trainings such as the Preparation for Primary Departure (PPD) course, Management of Health Structures (MHS) course, Basic Logistics Course (BLoC), and others. Additionally, in an intersectional collaboration, new modules were developed on GPS mapping with Google Earth, practical aspects of VHF isolation practices, pipe installations and Emergency Preparedness (Eprep).

6. LOOKING BACK AND AHEAD

LESSONS LEARNED IN 2013

- The intersectional working group continues to demonstrate its worth and has managed to harmonise the WHS activities of the different sections. The dedicated working group space on Tukul is a well-suited communication channel for the working group, but information flow could benefit from further attention.
- An increasing number of operational research studies focusing on WHS have been launched. This serves to improve the international visibility of OCB WHS activities and will increasingly allow OCB to shape the WHS agenda of MSF and other actors in the field. A close collaboration with the Operational Research Unit has been forged in the process, to the mutual benefit of both units.
- The need for an intersectional Water, Hygiene and Sanitation Policy Paper is required and requested for by the medical directors.

PROSPECTS FOR 2014

- The high level of technical support to the field on all WHS issues will be maintained, and the systematic scanning of WHS 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 level through intersectional WHS trainings, and further roll-out of innovative tools. Additionally, the unit will attempt to influence the WHS 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.).
- The dramatic events in South Sudan with other agencies responding very late and MSF taking in charge of 50% of the water supply influenced the Operational Prospects document, leading to the consensus that MSF will take a much more proactive and leading role for the first three to six months of an intervention, and search for a feasible handover partner early on. For the period of these prospects, MSF has a clear ambition to increase its activities and role in the field of WatSan, primarily in emergencies, but possibly also in more stable contexts.
- Perspectives concerning the intersectional working group work include interacting on cross-cutting issues with other working groups (such as nutrition, HIV, tuberculosis, malaria, and VHF), further positioning of the working group in a number of strategies, and a comparison of the WHS training trajectories to harmonise the process. Furthermore, a common WHS policy paper, endorsed by the medical and logistics directors, will be developed and its implementation monitored.
- The “Public Health Engineering in Precarious Situations” has been published in 2012 as MSF Public International MSF guideline and will be translated into French in 2014.
- In terms of training perspective, a collaboration with the “Office Internationale d'Eau” will be sought, in order to be able to offer trainings for WatSan experts who already did the WHS in Emergencies course and are in need of expert skills.

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 05: MEDICAL DATA	
TABLE 1: OCB Global Summary of Outpatient and Inpatient data using Epicentre OPD/IPD/Gynobs Tools in 2013	93
SECTION 07: EMERGENCY MEDICINE	
TABLE 1: OCB emergency departments during 2013	94
SECTION 10: EVALUATION UNIT	
TABLE 1: Findings and recommendations from OCB project evaluations carried out over the course of 2013	95
SECTION 12: HEALTH PROMOTION AND SOCIO-ANTHROPOLOGY	
TABLE 1: OCB emergency interventions with HP activities, 2013	98
TABLE 2: OCB projects with HP/anthropological activities, 2013	99
TABLE 3: OCB ICU activities in Afghanistan, Haiti and Sierra Leone, 2013	102
SECTION 16: LABORATORY	
TABLE 1: OCB laboratory activities, 2013	103
SECTION 19: MENTAL HEALTH	
TABLE 1: Mental health activities integrated into OCB medical projects, 2013	104
TABLE 2: OCB MH activities in emergency/short term interventions, 2013	105
SECTION 20: NUTRITION	
TABLE 6: OCB Therapeutic Feeding Programmes in 2013 by project	106
SECTION 21: OPERATIONAL RESEARCH AND DOCUMENTATION	107
SECTION 25: SURGICAL ACTIVITIES	
TABLE 1: Overview of OCB surgical activities per project, 2013	110
SECTION 26: VACCINATION	
TABLE 3: Evaluations of missed vaccination opportunities in OCB projects, 2013	112

SECTION 05: MEDICAL DATA

TABLE 1: OCB Global Summary of Outpatient and Inpatient data using Epicentre OPD/IPD/Gynobs Tools in 2013

	Burundi	DRC	Ethiopia	Haiti	India	Kenya	Mali	Mauritania	Niger	North Sudan	Philippines	Siera Leone	Total
N° consultations	NA	182,575	2,451	69,697	34,252	93,126	54,231	46,954	141,960	13,409	10,972	49,684	699,311
New cases	NA	166,331	2,450	50,814	32,887	83,410	52,074	46,644	140,491	13,151	10,917	48,197	647,366
N° <5 years	NA	55,104	530	6,366	6,227	29,030	167,42	9,210	140,491	4,434	2,097	33,015	303,246
N° IPD admissions	NA	8,172	81	4,601	2,173	NA	592	1,370	11,120	NA	369	7,380	35,858
<5 years	NA	3,500	28	642	270	NA	278	504	11,119	NA	122	6,651	23,114
N° Exits	NA	8,163	82	4,572	2,126	NA	583	1,421	11,047	NA	341	7,203	35,538
% Discharged%	NA	93.7	93.8	96.7	96.4	NA	90.7	94.2	96.3	NA	92.4	88.8	94.0
% Defaulters	NA	1.5	0	1.3	0.9	NA	0.3	1.1	0.4	NA	3.8	2.5	1.3
% Deaths	NA	4.9	6.1	2.0	2.7	NA	8.9	4.6	3.2	NA	3.8	8.7	4.7
N° of ANC consultations	NA	24,960	680	NA	3,783	12,867	5,308	15,222	NA	1,596	NA	12,002	76,418
N° of deliveries	896	5,972	11	NA	686	1,722	549	1,839	NA	875	NA	2,404	14,954
% of caesarean sections	56	22	0	NA	6	0	0.2	NA	NA	0	NA	35	18
N° of Family Planning consultations	NA	3,214	88	NA	5,766	14,991	361	2,427	NA	261	NA	3,275	30,383

DRC: Democratic Republic of Congo; IPD: Inpatient Department; ANC: Antenatal Care; NA: Not Available; N°: Number

SECTION 07: EMERGENCY MEDICINE

TABLE 1: OCB emergency departments during 2013

Project ED	Afghanistan		DRC		Ethiopia		Haiti		India		Pakistan		Sierra Leone		Somalia		South Sudan		Syria	
	Kabul	Kunduz	Masisi ¹	Niangara	East-Imey	Martissant	Tabarre	Nagaland	Karachi	Timurgara	GRC-Bo	Burao	Gogrial	Pibor	Jabal-Akkrad					
Total number of cases	52,416	17,200	5,928	2,416	114	46,658	6,777	9,322	17,065	26,006	7,847	N.D.	5,045	723	13,074					
Mean cases per month	4368	1433	494	268	57	3888	565	777	1422	2167	654	N.D.	420	241	1698					
Percentage of patients < 5 years	32.7	7.9	38.7	41.3	24.6	13.0	6.4	N.D.	29.8	26.5	89.2	N.D.	44.6	50.2	12.3					
Female percentage	45.7	20.7	47.4	N.D.	N.D.	42.7	30.2	N.D.	45.0	N.D.	46.7	N.D.	N.D.	N.D.	28.8					
Admission rate	2.6	17.8	52.7	69.2	19.3	1.7	41.7	18.9	0.0	55.8	92.1	N.D.	40.0	7.9	N.D.					
Referral rate	1.57	7.5	0.0	0.0	5.3	4.2	2.7	N.D.	2.4	1.6	1.6	N.D.	0.1	0.14	N.D.					
Defaulter rate	N.D.	1.3	0.1	N.D.	N.D.	0.1	1.0	N.D.	1.0	N.D.	0.1	N.D.	N.D.	N.D.	N.D.					
Percentage of Trauma cases	26.2	99.9	21.8	7.8	43.9	77.6	98.0	12.8	16.1	17.3	1.3	N.D.	11.2	6.8	15.2					
Percentage of violent trauma	0.6	11.0	5.2	0.4	9.6	12.3	14.8	0.7	0.4	4.9	0.2	N.D.	2.4	1.8	3.5					
Mortality rate	0.13	0.09	0.13	N.D.	N.D.	0.04	0.07	N.D.	0.01	2.70	1.0	N.D.	0.3	0.14	0.13					
Data tool used	MINOS	Individual	Individual	Epitools	Epitools	Individual	Individual	Epitools	Individual	Excel aggregated	Individual	Individual	MINOS	MINOS	Excel aggregated					
Months of data	Jan-Dec	Jan-Dec	Jan-Dec	Jan-Sep	Jan-Feb	Jan-Dec	Jan-Dec	Jan-Dec	Jan-Dec	Jan-Dec	Jan-Dec	Jan-Aug	Jan-Dec	12 weeks	Mar-Dec (33 weeks)					

DRC: Democratic Republic of Congo; ED: emergency department; GRC: Gondama Referral Centre; ND: no data available

¹ Red figures based on individual data tool implemented since June 2013.

SECTION 10: EVALUATION UNIT

TABLE 1: Findings and recommendations from OCB project evaluations carried out over the course of 2013¹

Project	Main Findings	Main recommendations
PUC, DRC	<ul style="list-style-type: none"> - Unreliable pooling of PUC documentation. - Very few impact indicators and a profligacy of quality control and process indicators. The expected results did not reflect the actual PUC impact. - Unreliable emergency supply delivery system. - Insufficient assessment of intervention costs per person taken care of. - Ongoing debate not clearly understood between medical and humanitarian interventions and PUC positioning in them. 	<ul style="list-style-type: none"> - PUC should appoint a person specifically to keep a well-organized and efficient documentation tool in a complex operational structure. - An effort should be made to retrieve best practices from the massive amount of PUC documentation. - Facilitating PUC's capacity for swift reaction by streamlining its maintenance and supply procedures and perhaps seeking opportunities to decentralise some competencies should be a must. - A balance should be reached between the indicators reflecting process / outcome and those reflecting impact.
Martissant, Haiti	<ul style="list-style-type: none"> - The context of Martissant in June-July 2013 remains similar to the one that justified the intervention at the beginning; therefore, the intervention remains still relevant. - A key criticism in the intervention is its limited capacity to effectively reach the most vulnerable because of the focus on the provision of services. - The key challenge of the project is now "right-sizing" it and focusing on populations in danger of being left behind. - There is greater emphasis on activities and intra-facility quality indicators rather than on achieving results and a deficit / lack of critical analysis of orientation of the quality of the response and how it fits into the needs of the most vulnerable populations. 	<ul style="list-style-type: none"> - To Increase emphasis on targeting the most vulnerable and improve their access to key services. Need to map vulnerability zones and groups and facilitate their access to key components. - These weaknesses reinforce the need to regularly identify the most vulnerable populations and their vulnerabilities, measuring the coverage of the different components, balancing technical/clinical aspects with the humanitarian essence of any MSF intervention. - To facilitate access and referrals within the restricted "red zones" not just to violence/accident related victims but to reach maternal and paediatrics' priority situations. - To document the identification of the most vulnerable and excluded in particular zones.
Emergency, Mali	<ul style="list-style-type: none"> - Lack of planning tools made staff lose sight of priorities - A comprehensive and affordable package of essential services was provided at primary and secondary health care level. - However, there were gaps in nutrition at district hospital level and in health promotion - Context volatility, operational capacity, and spread of communities over a vast territory limited the extent of coverage. - There was continuity in the advice and support given by the various senior staff at headquarter level - Implementation was hampered by human resources challenges - Strengthening the capacity of systems was introduced too late in the intervention cycle Insufficient attention has been given to monitoring of health data - Insufficient attention has been given to the application of quality standards - Limited consultation with users of services 	<ul style="list-style-type: none"> - Develop a planning tool to serve as strategic guidance from the onset and throughout the intervention (e.g. Logframe) - Continue to prioritise the coverage of basic medical needs. - Strengthen the analysis of the specific vulnerabilities of the health facilities (nutrition, health promotion). - Improve monitoring of outcomes through the systematic use of Logframe and indicator tracking tables - Define and reinforce quality standards (use of protocols, correct diagnosis, rational use of drugs, especially for malaria treatment) - Encourage, among OCB staff, dissemination and use of quality standards for essential health services - Promote the use of exit interviews to monitor both satisfaction and quality of services
Kibera, Kenya	<ul style="list-style-type: none"> - The project has had a tremendous impact at the patient, community and policy level. For patients, the project has decreased mortality and morbidity within Kibera. At the community level, MSF has reduced stigma and raised awareness of HIV/AIDS, making it significantly easier for residents of Kibera to access available services, regardless of the provider. At the policy level, MSF has demonstrated the merits of a decentralised model of care bringing comprehensive care for HIV and TB closer to patients. 	<ul style="list-style-type: none"> - Communicate on handover timelines with staff: anxieties could be assuaged through clearer communication on the handover. - Increase communication with beneficiaries on Ministry of Health presence. - Consider closing the Silanga Clinic and concentrating resources within Kibera South Health Centre. - Evaluate results after completion of handover.
Thyolo, Malawi	<ul style="list-style-type: none"> - The handover has been thought about since 2008 and later on shaped and implemented in June 2011, while the Thyolo programme started in 1997. This late set up of the exit plan hindered the buy in and feeling of ownership from the Ministry of Health. - There were 6 + 17 indicators to measure handover progress, most of them activity indicators. - There have been reports of patients threatening to place a complaint with the police at a time when medicines were not available. 	<ul style="list-style-type: none"> - Include a paragraph about exit strategy in the MSF Annual Project Document to ensure exit is thought about right from the start of a project. - Dedicate the last 3 months to monitoring and evaluation, rather than having some activities going on up till the end of the project. - Set up a maximum of 10 indicators per project to follow and use only result indicators, not activity ones. - In each project set up a complaint mechanism accessible by all beneficiaries.

² Full evaluation reports as well as executive summaries can be found on Tukul and Inside OCB

Maputo, Mozambique	<ul style="list-style-type: none"> - Phasing out and handover of all activities of MSF Maputo project not (completely) planned yet. - Dashboard Indicators measure only quantity. Reviews of patient files were not done, client satisfaction and staff motivation not assessed. Level and origin of baseline not always clear. Level of aggregation too high. 	<ul style="list-style-type: none"> - The handover strategy and its expected results should be fully incorporated in the Logframe for 2014 and 2015 for reasons of accountability, transparency and proper information of leadership. - Invest in participatory formulation of indicators to safeguard ownership and cover complexity - Enhance community approach together with the Ministry of Health by visualising social impact and diversifying tools - Elaborate handover process and tools at both city level and health centre/community-level to diversify and secure input of crucial stakeholders.
South Africa	- Due for completion in 2014	- Due for completion in 2014
Guinea	- Due for completion in 2014	- Due for completion in 2014

DRC: Democratic Republic of Congo; PUC: Pool d'Urgence Congo

SECTION 12:

HEALTH PROMOTION AND SOCIO-ANTHROPOLOGY

TABLE 1: OCB emergency interventions with HP activities, 2013

	Emergency in 2013	Type of HP activities
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
Lebanon	Beirut	<ul style="list-style-type: none"> - Health education on water-borne disease, leishmaniasis, mother and child health care (with a special focus on breastfeeding)
Philippines	Typhoon	<ul style="list-style-type: none"> - Assessment and mapping of the different actors in the field - Health surveillance: follow up of outbreak alerts (diarrhoea, measles, leptospirosis, etc.) - Non-food item distribution - Searching for dead bodies - Awareness-raising on hygiene measures (e.g. the correct use of latrines, water treatment, etc.) - Close collaboration with MoH on a door-to-door Dengue prevention strategy - KAP survey on health seeking behaviour for Dengue
Central African Republic	Bangui	<ul style="list-style-type: none"> - Promotion of MSF services - Social mapping of the two camps and a quick census report - Awareness on patient flow in the health clinics

HP: health promotion, KAP: knowledge, attitudes and practices, MoH: ministry of health

TABLE 2: OCB projects with HP/anthropological activities, 2013

	Project	Key activities in 2013
Afghanistan	Helmand	<ul style="list-style-type: none"> - Handover of the project to MSF Amsterdam, with continued support from the HP flying position - Participation in the study on antibiotic resistance (cf. Laboratory section) - Revision of all HP activities and messages linked to the closure of the OPD - Specific focus on nutrition and breastfeeding (linked to the ITFC)
	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, etc.) - Awareness raising on primary health care (including EPI) and preventive messages within the mobile clinics
	Kunduz	<ul style="list-style-type: none"> - Health education on personal and environmental hygiene, physiotherapy, mental health - Specific focus on blood donation and care takers rules
	Khost	<ul style="list-style-type: none"> - 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 and birth spacing
Burundi	Kabezi	<ul style="list-style-type: none"> - Health education on SRH: family planning, kangaroo methods, ANC/PNC, STIs - PMTCT: opt out strategy for all women - Handing over to the MoH (end of the year)
	Gitega	<ul style="list-style-type: none"> - New HP strategy: division of the team into two: one team in the health facility (Urumuri centre) and one team for the outreach activities - Inside the Urumuri centre: health education (fistula, hygiene, nutrition, malaria, etc.), recreational activities, family planning individual sessions - Development of the women ambassador strategy: awareness raising through peer to peer contact (healed patients) - Promotion of the "Free toll line" phone number - Two screening strategies: one concentrating on one province to screen and raise awareness; the other concentrating on remote health centres in the whole country.
Cambodia	Preah Vihear	<ul style="list-style-type: none"> - Anthropological (qualitative) part of the baseline survey : "A cross-sectional population-based malaria survey Preah Vihear province" - Assessment, mapping and Household listing of the different villages for the survey - Social mobilization of the target population for the survey
DRC	Niagara	<ul style="list-style-type: none"> - Awareness campaign and mobilisation for routine EPI activities - Health promotion strategy developed to explain the disengagement from the Health Centres & the closure of the project - Ongoing health education activities in the hospital
	Masisi	<ul style="list-style-type: none"> - Focussed efforts on HP activities in the different camps: health education on hygiene, STIs, use of traditional drugs, diarrheal diseases, etc. - Ongoing health education activities in the hospital and in the community
	Kinshasa PUC	<ul style="list-style-type: none"> - Various measles interventions and vaccination campaigns (Yahisuli, Djolu, Yahuma, and Kasai Province) - HP during the intervention for IDP's in Bunia
	Kinshasa Coordination	<ul style="list-style-type: none"> - Regional HP workshop (third one) - Work on HP monitoring indicators and data base - Routine HP activities
Egypt	Nasr City Cairo	<ul style="list-style-type: none"> - Reorientation of the HP strategy towards a more focused geographical area and target population, and increased collaboration with partners. - Promoting MSF services in Nasr City area - Review and redefine the HP activities and messages to support the changes of the project objectives
	Abu Elian	<ul style="list-style-type: none"> - Promotion of MSF services in the Abu Elian area - Conducting HP activities on maternal and child health care both inside the clinic and in the communities.
Haiti	Martissant & Tabarre	<ul style="list-style-type: none"> - Ongoing HP activities
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. - Supporting for the context analysis being conducted in the area affected by conflict
	Nagaland	<ul style="list-style-type: none"> - HP activities in OPD, IPD & communities on all medical issues tackled in the hospital: SRH, hygiene, malaria, blood donations, etc. - Specific focus on patients with tuberculosis - HP strategy developed to explain the disengagement process and progressive hand over to the MoH
Italy	Chagas project	<ul style="list-style-type: none"> - Promotion of MSF services in the Bergamo area targeting Latin American people (promotion of the screening calendar) - Health education activities on Chagas disease - Cultural mediation services during pre-test and post-test counselling - Facilitating patient' access to Chagas staging and treatment trough practical and administrative advices
Niger	Guidan Roudjji	<ul style="list-style-type: none"> - HP activities in the community to mobilize and sensitize the population for the three rounds of seasonal malaria chemoprophylaxis (SMC) and for the distribution of mosquito nets - 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 - Participating in the assessment on the feasibility of a community management approach for acute malnutrition - KAP on nutrition in the targeted area

Pakistan	Timurgara	<ul style="list-style-type: none"> - HP activities in the hospital to support all relevant medical topics: hygiene, maternal health, diabetes, etc. - Specific support for a Dengue outbreak
	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
Sierra Leone	GRC Hospital	<ul style="list-style-type: none"> - HP activities in the hospital to support all relevant medical topics: nutrition, malaria, family planning, ANC/PNC, Hygiene, use of the latrines, Lassa Fever etc. - HP strategy developed to reinforce the Lassa Fever component with a better understanding of the perception of Lassa and adapted health education and prevention strategies
South Soudan	Gogrial	<ul style="list-style-type: none"> - Review the HP strategy in order to increase the number of deliveries in the PHC centre of Gogrial - HP activities in the PHCC to support all relevant medical topics: nutrition, malaria, hygiene, family planning, ANC/PNC, etc. - HP activities in the community: defaulter tracing, community meetings, individual interviews of patients lost to follow up
	Doro	<ul style="list-style-type: none"> - Promotion of MSF services - Health surveillance (mortality, nutrition, Hepatitis E, etc.) - Health education (in the health facilities and in the camp) on all relevant medical topics (maternal health, nutrition, Hepatitis E, etc.) - Cholera vaccination campaign
Zimbabwe	Mbare (SGBV)	<ul style="list-style-type: none"> - Review of the HP strategy in order to increase the number of adult victims of sexual violence seeking for health care - Expanding the community approach in Mbare through partnerships with other actors - Expanding use of the toll free phone number for victims of sexual violence

ANC: Antenatal care; **ATFC:** Ambulatory therapeutic feeding centre; **EPI:** Expanded Programmes of Immunisation; **HP:** Health Promotion; **IPD:** Inpatient Department; **ITFC:** Intensive therapeutic feeding centre; **KAP:** knowledge, attitudes and practices; **MoH:** Ministry of Health; **OPD:** Outpatient Department; **PHC:** Primary health care; **PMTCT:** Prevention of mother-to-child transmission; **PNC:** Post-natal care; **STI:** Sexually transmitted infection

TABLE 3: OCB ICU activities in Afghanistan, Haiti and Sierra Leone, 2013

ICU 2012	Jan	Feb	March	April	May	June	July	Aug	Sep	Oct	Nov	Dec	Total
Admissions													
Kunduz	28	30	43	38	31	32	46	38	40	37	28	20	411
Tabarre	26	11	26	21	34	21	30	35	26	18	19	19	286
GRC-Bo	156	130	100	151	190	178	186	209	133	127	103	93	1,756
Mortality													
Kunduz	N°	4	2	3	1	2	6	6	7	4	5	1	41
	%	14.3	6.7	7.0	0.0	6.3	13.0	15.8	17.5	10.8	17.9	5	10.0
Tabarre	N°	2	1	6	1	6	1	2	3	2	2	5	38
	%	7.7	9.1	23.1	4.8	28.6	3.3	5.7	11.5	11.1	10.5	26.3	13.3
GRC-Bo	N°	41	31	38	70	50	39	28	21	24	24	19	448
	%	26.3	23.8	38.0	46.4	28.1	21.0	13.4	15.8	18.9	23.3	20.4	25.5
Bed occupancy rate (%)													
Kunduz (4 beds)	68.5	80.5	83.2	92.0	99.7	76.7	86.8	87.8	101.9	82.7	89.6	57.9	83.9
Tabarre (7 beds)	55.5	27.0	57.7	54.1	59.2	58.7	60.2	46.1	43.4	43.3	28.1	34.2	47.3
GRC-Bo (30 beds)	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Average length of stay (days)													
Kunduz	4	4	3	4	5	4	3	4	3	4	4	5	3.9
Tabarre	5	6	4	5	4	5	4	3	4	5	3	4	4.3
GRC-Bo	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

GRC: Gondama Referral Centre; **ICU:** intensive care unit; **ND:** no data available

SECTION 16: LABORATORY

TABLE 1: OCB laboratory activities, 2013

	Project	No. of Labs	HIV & TB	TB	Malaria	Transfusions (only)	Hospital (transfusions included)	Other	Project status
Cambodia	Preah Vihear	1			1 (RDT & PCR)				New
DRC	Kinshasa	1	1						Ongoing
	Masisi	1					1		Ongoing
	Niangara	1				1			Ongoing
	Bandoudu/Kasai	0						0 (HAT)	Closed
Burundi	Bujumbura	1				1			Ongoing
	Kirundo	1			1 (RDT only)				New
Somalia	Galgaduud	0				0			Closed
Somaliland	Burao	0					1		Closed
Kenya	Nairobi	1	1						Ongoing
Guinea	Conakry	1	1						Ongoing
	Gueckedou	0	0			0			Closed
North Sudan	Port-Sudan	1		1					Ongoing
South Sudan	Pibor	1					1		Ongoing
	Gogrial	1				1			Ongoing
Niger	Dakoro	0					0		Closed
	Guidan Roumdji	1					1		Ongoing
Haiti	Port-au-Prince	1					1	1 (MB (referred))	Ongoing
India	Nagaland	0					0		Closed
Ukraine	Donetsk	1		1 (MDR-TB)					Ongoing
	Dire Dawa	0		0					Closed
Zimbabwe	Birch. B.	1	1						Ongoing
	Gutu	1	1						Ongoing
	Murambinda	1	1						Ongoing
South Africa	Khayelitsha	1	1	1 (MDR-TB)					Ongoing
	Musina	0	0						Closed
	KwaZulu-Natal	1	1						Ongoing
Malawi	Thyolo	1	1						Ongoing
	Nsanje	1	1						Ongoing
Sierra Leone	Bo	1				1			Ongoing
Lesotho	Roma	1	1						Ongoing
Mozambique	Maputo	1	1						Ongoing
	Tete	1	1						Ongoing
Afghanistan	Kabul	1					1		Ongoing
	Khost	1				1			Ongoing
	Lashkar-Gah	0					0		Handed over to OCA
	Kunduz	1						1 (MB)	Ongoing
Total Active Laboratories	28	28	13	3	2	6	6	2	—

ANC: Antenatal Care; DRC: Democratic Republic of Congo; HAT: Human African Trypanosomiasis; MB: Microbiology; MDR-TB: Multidrug resistant tuberculosis; PCR: Polymerase chain reaction; RDT: Rapid Diagnostic Test; TB: tuberculosis

SECTION 19:

MENTAL HEALTH

TABLE 1: Mental health activities integrated into OCB medical projects, 2013

	Project	Type of activities	Total no. individual consultations ¹	No. group sessions
New MH activities				
Afghanistan	Kunduz	Psychological support for patients and relatives at the MSF Trauma Centre	619 (May-Dec)	32 (202 persons)
Libya	Tripoli	Psychological and psychiatric care for victims of violence	298 (Sept –Dec)	NA
Lebanon	Beirut	Psychological support for refugees in Shatila camp, with a focus on Syrian refugees	ND (as MH activities only begun end of 2013)	
	South Lebanon	Psychological support for Syrian refugees (groups, family and individual sessions)	388	NA
Greece	Alexandroupolis	MH care for migrants in detention centres and police stations	198 (mid Sept-end Dec)	NA
Italy	Sicily	MH services for migrants and asylum seekers in CPSA (centre for reception and first aid)	ND (as MH activities only begun end of 2013)	
Bulgaria	Vrazhdebna, Voena Ramp, Harmanli	MH care for Syrian refugees in three refugee camps (open centres)	ND (as MH activities only begun end of 2013)	
Haiti	Tabarre	Psychological support and external referrals for specialized care in the MSF trauma centre	981	NA
Ongoing MH activities				
Egypt	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	3,240	NA
Pakistan	Karachi	MH support integrated into an OPD in a urban slum	1,175	121 (903 persons)
	Timurgara	Psychological support integrated into the MSF medical services (postoperative care, emergency room and mother and child health)	2,554	49 (580 persons)
Kenya	Kibera	SV centre, Olympic, in the outskirts of the Kibera slum	744	NA
	Kibera	MH support integrated within the PHC and HIV/TB consultations	1,051	NA
Sierra Leone	Bo, Gondama Referral Centre	MH support integrated within the referral centre (Gondama Referral Centre, secondary level hospital) for nutrition, TB, HIV and SV	1,291	NA
South Sudan	Doro	MH support to the refugees from Blue Nile state (group and individual) in MSF health facilities and in the community, with particular focus on the beneficiaries of nutritional activities	1,460	804 (12518 mothers and children) 921 group discussions (19693 persons)
DRC	Masisi	Psychological support to victims of violence, including SV	1,313	34 (327 persons)
Zimbabwe	Murambinda, HIV project	Psychological support to victims of sexual, domestic or political violence provided by counsellors to the patients of the HIV cohort.	256	NA
	Harare	Care of victims of sexual violence	1,238	NA
India	Mumbai	Psychological and psychiatric support for MDR-TB/3 rd line HIV patients	ND	ND
Ukraine	Donetsk	Psychological and psychiatric support of MDR-TB/HIV patients in prison	214 new patient consultations*	ND
Project closures				
Afghanistan	Helmand	MH support integrated within the medical services of (MH activities handover to OCA beginning of 2013)	Handover with MSF-OCA at the beginning of 2013	
	Kabul	Technical support of an IPSO organization (International Psychosocial organization) for the implementation/development of MH care integrated within the medical services of Ahmad Shah Baba district hospital	NA	NA
DRC	Haut Uélé, Niangara	Psychological support to victims of the conflict, including SV victims (closed in Aug 2013)	439	6 (34 persons)
South Africa	Musina, migrants from Zimbabwe	Integrated package of care for SV victims, especially migrants from Zimbabwe	ND	NA
Lebanon	Beirut (in remote control)	Regular training and supervision for Syrian MH professionals (counsellors and psychiatrists)	NA	NA

¹ Not including HIV counselling sessions

* Data only available for the number of new consultations, not the total number of consultations

ER: Emergency Room; MDR-TB: multidrug resistant tuberculosis; MH: Mental Health; MoH: Ministry of Health; NA: Not applicable; ND: No data available; OCA: Operational Centre Amsterdam; OPD: Outpatient Department; PHC: Primary Health Care; SRH: Sexual and Reproductive Health; SV: Sexual Violence; TB: Tuberculosis

TABLE 2: OCB MH activities in emergency/short term interventions, 2013

	Project	Type of activities	No. individual consultations ¹	No. group sessions
South Sudan	Gumruc	Psychological support to the population affected by violence (within OPD and in the community)	245	168 (1969 part)
CAR	Bangui	Emergency psychological interventions in two refugee camps	Will be available in 2014 (Started in Dec)	
Lebanon	Beirut, Chatila camp	Technical support to a local organization working with refugees in the camp (training and technical support for implementation of activities); clinical MH care activities integrated in the OPD	NA	NA
	South Lebanon	Psychological support for Syrian refugees (groups, family and individual sessions)	ND (as MH activities only begun end of 2013)	
Syria	Darkoush	Psychological support for patients attending MSF health facilities	146 (Aug-Nov)	43 (793 participants)
	Fellini	Psychological and psychiatric support for patients from Fellini hospital, OPD and maternity & mobile clinic and in the community	573 (Feb-Oct)	115 (1086 participants)
Egypt	Alexandria	Psychological support for Syrian refugees in detention centre	ND	NA
Philippines	Tacloban	Psychological and psychiatric support for the populations affected by the typhoon (health facilities, mobile clinics and community), psychoeducation for groups	119 (mid Nov-end Dec)	Psychoeducation: 77 (2265) Activities 6 (168) Therapeutic 15 (342)

¹ Not including HIV counselling sessions;

ATFC: ambulatory therapeutic feeding centre; **CAR:** Central Africa Republic; **IDP:** internally displaced persons; **IPD:** inpatient department; **MH:** mental health; **NA:** Not applicable; **ND:** No data available; **OPD:** outpatient department

SECTION 20:

NUTRITION

TABLE 6: OCB Therapeutic Feeding Programmes in 2013 by project

	Project locations 2013	Number of patients	% hospitalised	% cured	% died	% defaulted
Vertical Programmes / Emergencies						
DRC	Yahuma, Djolu, Wamba, Kamonia, Mutena	1,138	19.0%	ND	ND	ND
Mali	Mopti	381	12.1%	97.8%	0.9%	0.4%
	Douentza	665	3.9%	67.8%	1.0%	21.8%
Mauritania	Hodh El Chargui (refugees camps)	3,860	8.7%	79.9%	0.9%	9.8%
South Sudan	Maban (Doro)	1,747	7.3%	73.0%	1.3%	14.3%
Integrated Programmes						
Afghanistan	Kabul	480	33.5%	52.0%	0.0%	31.6%
Bangladesh	Kamrangirchar (Dhaka) ¹	ND	ND	66.0%	0.0%	25.0%
DRC	Nord Kivu (Masisi)	1,314	48.2%	63.3%	5.2%	19.0%
	Haut Uele (Niagara)	216	34.7%	78.7%	3.8%	9.5%
India	Chhattisgarh (Ayam Pradesh) ¹	36	NA	16.9%	1.7%	81.4%
Kenya	Nairobi (Kibera)	265	ND	ND	ND	ND
Niger	Guidam Roudji	21,415	23.7%	84.0%	2.4%	6.9%
Sierra Leone	Bo (Gondama) ²	509	45.8%	48.7%	0.0%	6.7%
North Sudan	Darfur (El Serif camp) ¹⁺³	49	NA	100.0%	0.0%	0.0%
South Sudan	Gogrial	2,708	22.3%	47.6%	1.0%	34.3%
	Jonglei (Pibor)	158	7.0%	47.3%	1.1%	45.1%

DRC: Democratic Republic of Congo; **NA:** not applicable; **ND:** no data

¹ No hospitalisation recorded because MSF runs only ATFC and no ITFC in those locations

² Data coming only from Gondama ATFC (Gondama ITFC data are incomplete)

³ Activities started in week 50, so only 2 exits occurred (so 100% cured)

SECTION 21: OPERATIONAL RESEARCH & DOCUMENTATION

List of OCB-associated publications, 2013

1. OPERATIONAL RESEARCH

1. **State of the art:** Kumar AMV, Naik B, Gudemane DK, Bhat P, Wilson N, Sreenivas AN, et al. Efficient, quality-assured data capture in operational research through innovative use of open-access technology. *Public Health Action*. 2013;3(1):60-2.
2. **State of the art:** Demez C, Zachariah R, Reid T, Harries AD. Oh no! Power out, internet down! Two challenges in running training courses in low- and middle-income countries. *Public Health Action*. 2013;3(2):96.
3. **Viewpoint:** Zachariah R, Reid T, Van den Bergh R, Dahmane A, Kosgei RJ, Hinderaker SG, et al. Applying the ICMJE authorship criteria to operational research in low-income countries: the need to engage programme managers and policy makers. *Trop Med Int Health*. 2013;18(8):1025-8.
4. **Viewpoint – comment on 3:** Cairncross S, van Asten H, Jaffar S, Junghanss T, Meyer CG, Van der Stuyft P. The ICMJE authorship criteria: a response from the editors. *Trop Med Int Health*. 2013;18(10):1162-3.
5. **Viewpoint – comment on 4:** Zachariah R, Reid T, Van den Bergh R, Kumar AMV, Tayler-Smith K, Khogali M, et al. RE: Applying the ICMJE authorship criteria to operational research in low-income countries: the need to engage programme managers and policy makers by Zachariah et al. *Trop Med Int Health*. 2014;19(1):129-30.
6. **Viewpoint – comment on 3:** Briët OJT, Smith TA. Response to 'Applying the ICMJE authorship criteria to operational research in low-income countries: the need to engage programme managers and policy makers' by Zachariah et al. *Trop Med Int Health*. 2014;19(1):128.
7. **Viewpoint:** Satyanarayana S, Kumar AMV, Wilson N, Kapur A, Harries AD, Zachariah R. Taking on the diabetes-tuberculosis epidemic in India: paving the way through operational research. *Public Health Action*. 2013;3(S1):S1-2.
8. **Viewpoint:** Oladimeji O, Isaakidis P, Zachariah R, Hinderaker SG, Koghali M, van Griensven J, et al. Oops, what about ethics? *Public Health Action*. 2013;3(3):253-4. **(Union-MSF course student)**
9. **Viewpoint:** Harries AD, Kumar AMV, Satyanarayana S, Bissell K, Hinderaker SG, Edginton M, et al. References for scientific papers: why not standardise to one global style? *Public Health Action*. 2013;3(3):255-7.
10. **Viewpoint:** Harries AD, Zachariah R, Maher D. The power of data: using routinely collected data to improve public health programmes and patient outcomes in low- and middle-income countries. *Trop Med Int Health*. 2013;18(9):1154-6.
11. **Original research:** Kumar AMV, Satyanarayana S, Wilson N, Zachariah R, Harries AD. Operational research capacity building in Asia: innovations, successes and challenges of a training course. *Public Health Action*. 2013;3(2):186-8.

2. HEALTH SYSTEMS & HEALTH POLICY

12. **Original research:** Basnet R, Shrestha BR, Nagaraja SB, Basnet B, Satyanarayana S, Zachariah R. Universal health coverage in a regional Nepali hospital: who is exempted from payment? *Public Health Action*. 2013;3(1):90-2. **(Union-MSF course student)**
13. **Original research:** Kumar R, Chauhan G, Satyanarayana S, Lal P, Singh RJ, Wilson NC. Assessing compliance to smoke-free legislation: results of a sub-national survey in Himachal Pradesh, India. *WHO S-E Asia J Publ Health*. 2013;2(1):52-6. **(Union-MSF course student)**

3. HEALTH PROGRAMME MONITORING & MANAGEMENT

14. **Review:** Decroo T, Rasschaert F, Telfer B, Remartinez D, Laga M, Ford N. Community-based antiretroviral therapy programs can overcome barriers to retention of patients and decongest health services in sub-Saharan Africa: a systematic review. *Int Health*. 2013;5(3):169-79.
15. **State of the art:** Benoît A. New roots for rural health: challenging unequal access in South Africa. *The Musina model of care 2013*. MSF South Africa. 2013;1-12.
16. **Original research:** Estill J, Egger M, Blaser N, Vizcaya LS, Garone D, Wood R, et al. Cost-effectiveness of point-of-care viral load monitoring of ART in resource-limited settings: Mathematical modelling study. *AIDS*. 2013;27(9):1483-92.
17. **Original research:** Islam S, Harries AD, Malhotra S, Zaman K, Hussain A, Islam A, Ahmed F. Training of community healthcare providers and TB case detection in Bangladesh. *Int Health*. 2013;5(3):223-7.
18. **Original research:** Aiyub S, Linh NN, Tayler-Smith K, Khogali M, Bissell K. Nurses graduating in Fiji between 2001 and 2010: sufficient supply for Fiji's health service demands? *Public Health Action*. 2013;3(1):63-7. **(Union-MSF course student)**
19. **Original research:** Patten GEM, Wilkinson L, Conradie K, Isaakidis P, Harries AD, Edginton M, et al. Impact on ART initiation of point-of-care CD4 testing at HIV diagnosis among HIV-positives youth in Khayelitsha, South Africa. *J Int AIDS Soc*. 2013;16:18518. **(Union-MSF course student)**
20. **Original research:** Shah SK, Kumar AMV, Dogar OF, Khan MA, Qadeer E, Tahseen S, et al. Xpert® MTB/RIF under routine conditions in diagnosing pulmonary tuberculosis: a study in two hospitals in Pakistan. 2013;3(1):20-2. **(Union-MSF course student)**
21. **Original research:** Singogo E, Kanike E, van Lettow M, Cataldo F, Zachariah R, Bissell K, Harries AD. Village registers for vital registration in rural Malawi. *Trop Med Int Health*. 2013;18(8):1021-4. **(Union-MSF course student)**
22. **Original research:** Kilale AM, Ngowi BJ, Mfinanga GS, Egwaga S, Doulla B, Kumar AMV, et al. Are sputum samples of retreatment tuberculosis reaching the reference laboratories? A 9-year audit in Tanzania. *Public Health Action*. 2013;3(2):156-9. **(Union-MSF course student)**

23. **Original research:** Miilo N, Sandy C, Harries AD, Kumar AMV, Masuka N, Nyathi B, et al. Does the type of treatment supporter influence tuberculosis treatment outcomes in Zimbabwe? *Public Health Action*. 2013;3(2):146-8. **(Union-MSF course student)**
24. **Original research:** Shastri S, Satyanarayana S, Nagaraja SB, Kumar AMV, Rewan B, Harries AD, Zachariah R. The journey to antiretroviral therapy in Karnataka, India: who was lost on the road? *Int J AIDS Soc*. 2013;6:18502. **(Union-MSF course student)**
25. **Original research:** Shastri S, Boregowda PH, Rewari BB, Tanwar S, Shet A, Kumar AMV. Scaling up antiretroviral treatment services in Karnataka, India: impact on CD4 counts of HIV-infected people. *PLoS One*. 2013;8(8):e72188. **(Union-MSF course student)**
26. **Original research:** Decroo T, Lara J, Rasschaert F, Bermudez-Asa EH, Couto A, Candrinho B, et al. Scaling up community ART groups in Mozambique. *Int STD Res Rev*. 2013;1(2):49-59.
27. **Original research:** Estill J, Egger M, Johnson LF, Gsponer T, Wandeler G, Davies M-A, et al. Monitoring of Antiretroviral Therapy and Mortality in HIV Programmes in Malawi, South Africa and Zambia: Mathematical Modelling Study. *Plos One*. 2013;8(2):e57611.
28. **Original research:** Garone DB, Conradie K, Patten G, Cornell M, Goemaere E, Kunene J, et al. High rate of virological re-suppression among patients failing second-line antiretroviral therapy following enhanced adherence support: A model of care in Khayelitsha, South Africa. *S Afr J HIV Med*. 2013;14(4):166-9.
29. **Original research:** Gungowo H, Zachariah R, Bissell K, Ndebele W, Moyo J, Mutasa-Apollo T. A 'one-stop shop' approach in antenatal care: does this improve antiretroviral treatment uptake in Zimbabwe? *Public Health Action*. 2013;3(4): 282-5. **(Union-MSF course student)**
30. **Original research:** van Soelen N, duPreez K, van Wyk SS, Mandalakas AM, Enarson DA, Reid AJ, Hesselning AC. Does an Isoniazid Prophylaxis Register Improve Tuberculosis Contact Management in South African Children? *Plos One*. 2013;8(12):e80803. **(Union-MSF course student)**

4. HIV

31. **Review:** Harries AD, Zachariah R. *AIDS Review*. Africa Health. 2013:41-2.
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SECTION 25:

SURGICAL ACTIVITIES

TABLE 1: Overview of OCB surgical activities per project, 2013

Mission		AFG	AFG	AFG	BDI	BDI	COD	COD	COD	COD	HTI
Project		Kabul	Khost	Kunduz	Gitega	Kabezi	Masisi	Niangara	Nyabiondo*	Rubaya*	Tabarre
Patients	N°	1,006	508	1,850	292	703	2,002	472	94	111	2,317
Cases	N°	1,046	519	3,646	430	766	2,674	583	94	111	3,741
Procedures	N°	1,096	601	4,508	461	789	2,812	646	94	111	4,285
Mean Age	Years	28	31	24	33	27	26	34	24	25	31
Female	%	71.3	100.0	14.2	100.0	100.0	77.3	44.7	100.0	99.1	26.3
All trauma	%	7.6	0.2	99.8	0.7	0.0	13.3	14.4	1.1	0.0	92.7
Violent trauma	%	3.8	0.2	31.6	0.0	0.0	4.5	6.4	1.1	0.0	14.0
Caesarean sections	%	45.4	75.8	NA	NA	73.4	52.0	8.3	98.9	99.1	NA
Post-op infections	%	1.4	0.4	2.4	4.5	2.4	ND	1.5	ND	ND	2.8
Primary interventions	%	96.2	97.9	50.7	67.9	91.8	74.9	81.0	100.0	100.0	61.9
Emergent cases	%	87.3	100.0	100.0	5.6	100.0	89.2	67.1	100.0	100.0	100.0
Minor / wound surgery	%	14.8	0.4	57.6	4.4	7.6	43.2	45.0	0.0	0.0	41.9
Spinal anaesthesia	%	61.7	66.9	14.2	91.4	58.9	40.9	42.6	92.6	0.0	29.4
Spinal procedure / C-section	%	93.4	85.2	NA	NA	90.1	92.9	87.2	95.7	NA	NA
Intra-operative mortality	%	0.1	0.0	0.4	0.0	0.3	0.2	0.0	1.1	2.7	0.3
Occupancy rate	minutes/ day	197	105	609	117	181	401	152	15	32	951

*: indirect activities only; **NA**: not applicable; **ND**: no data

IND	MLI	MTI	PAK	PHL	SLE	SOM	SSD	SSD	SYR	
Mon	Douentza	Bassikounou	Timurgara	Guiuan	Bo	Burao	Gogrial	Gumuruk	Jabal-Akkrad	Total
502	105	146	1,548	27	1,096	679	467	34	445	14,404
510	106	160	1,720	28	1,217	775	883	49	542	19,600
519	115	161	1,938	29	1,431	796	934	49	606	21,981
27	27	23	31	39	26	28	22	23	28	
54.0	81.0	67.8	87.0	51.9	99.7	66.4	52.9	58.8	49.7	
20.5	12.4	32.2	11.9	25.9	0.2	20.6	29.8	26.4	45.6	
4.0	3.8	8.2	4.7	0.0	0.0	7.8	10.1	17.6	36.6	
8.2	64.8	46.6	71.8	29.6	76.3	37.8	12.0	0.0	32.6	
ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
98.4	99.1	91.3	90.0	96.4	90.1	87.6	52.9	69.4	82.1	
51.6	93.4	99.4	99.8	100.0	99.6	99.1	92.3	91.8	96.9	
63.5	11.3	23.8	14.5	39.3	10.4	40.6	72.9	87.8	45.2	
15.9	27.4	45.6	60.5	71.4	51.3	34.6	14.6	8.2	27.9	
90.2	26.5	89.7	85.5	100.0	76.7	84.8	67.9	NA	88.9	
0.0	0.0	0.6	0.1	0.0	0.2	0.3	0.2	0.0	0.7	
ND	34	36	278	60	216	234	121	96	114	

SECTION 26: VACCINATION

TABLE 3: Evaluations of missed vaccination opportunities in OCB projects, 2013

Country	Structure	Date	Target population	Participants	MO*	Agreed**
Niger	CSI Guidan Roumdji	January 2013	0-59 m	137	24.5%	88%
Niger	CSI Sae Saboa	January 2013	0-59 m	138	27.5%	94%
Niger	CSI Tibiri	January 2013	0-59 m	115	24%	100%
Niger	Guidan Sori	January 2013	0-59 m	127	26.4%	100%
Niger	Soulolou	January 2013	0-59 m	149	48.3%	97%
Niger	ITFC	January 2013	0-59 m	148	60%	92%
DRC-Masisi	Masisi health centre	October 2013	0-59 m	146	70%	92%
		October 2013	pregnant women	49	82%	NA
	Nyabiondo health centre	October 2013	0-59 m	144	85%	93%
		October 2013	pregnant women	20	69%	100%
	Masisi general hospital	October 2013	0-59 m	201	74%	93%
		October 2013	pregnant women	167	37%	NA
Mauritania	Fassala	December 2013	0-59 m	115	56%	98%
	Bassikounou [°]	December 2013	0-59 m	57	37%	95%
	Bassikounou ^{°°}	December 2013	0-59 m	59	64%	95%
	Mberra	December 2013	0-59 m	41	73%	97%
	Postes I-III+1-2	December 2013	0-59 m	73	56%	100%

* Missed Opportunity (MO): proportion of individuals exiting a health structure who have missed an opportunity of being vaccinated during their visit.

** Agreed: proportion of individuals with missed vaccination opportunities who would have agreed to be vaccinated if vaccination had been proposed.

[°] vaccination day

^{°°}no vaccination day

ITFC: inpatient therapeutic feeding centre; NA: not available



OCB Medical Activity Report 2013

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