

SUMMARY REPORT

THE GAZA AND MOSUL RECONSTRUCTIVE SURGERY PROJECTS

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This publication was produced at the request of MSF-OCB under the management of the Stockholm Evaluation Unit.

This summary was prepared independently by [Prof. Dr. Amardeep Thind](#). The major evaluation report included lengthy and detailed summary of the project and evaluation conclusions. This summary report offers a brief discussion of the evaluation's main findings, conclusions, and lessons learned. Please see the main evaluation report for further information and data.

DISCLAIMER

The authors' views expressed in this publication do not necessarily reflect the views of Médecins sans Frontières and the Stockholm Evaluation Unit.

INTRODUCTION

Mosul: The capital of Ninewa Governorate, Mosul is Iraq’s second largest city and is divided in two parts (East/left and West/right) by the Tigris River. Its current population is estimated to be 1.6 – 1.8 million (compared to approximately 2.3 million before the takeover by the Islamic State (IS)). This predominantly Sunni Arab city had long perceived itself to be marginalized by Baghdad’s Shia dominated government in the years following Saddam Hussein’s fall in 2003. Mosul and its surroundings gradually became a stronghold of Al Qaeda and its offshoot IS and by June 2014 the IS was deeply entrenched in the city.

The battle to eject IS from Mosul began in October 2016 and culminated in July 2017. It had a steep cost – an estimated 900,000 civilians (including 705,000 from West Mosul) fled the city to refugee camps (mostly in Ninewa and the Kurdistan Region of Iraq), and the city suffered extensive damage to its infrastructure. Reliable figures for the civilian death toll are scarce but the casualty toll is estimated to be high.

Gaza: Gaza is an urban setting with a very high population density; approximately 66% of its inhabitants are refugees. Since 1990, Israel has imposed movement restrictions on Palestinians living in Gaza and has imposed a strict blockade since 2006. This has resulted in deterioration of its infrastructure and healthcare system, negatively impacting living conditions and subsequently, population health. The protracted crisis with waves of acute conflicts has led to limited access to clean water, life-threatening power cuts, a siege mentality amongst the population with closure of its borders and lack of access to essential medications.

In March 2018, Palestinians started the “Great March of Return” (GMR) demonstrations marking the 70th Nakba anniversary, asking for the right of return for refugees and the end of the Israeli blockade. This lasted until the end of 2019, resulting in over 35,000 Palestinian injuries and more than 325 deaths. Although the GMR has ended, hostilities can resume at any time. For example, a fresh round of fighting in May 2021 led to 242 deaths and over 1900 injured Palestinians.

EVALUATION SCOPE

The overall objective of the evaluation is in line with what the ToR specifies – *“to assess the relevance, appropriateness, effectiveness, efficiency, and impact of MSF OCB’s reconstructive surgery project interventions in Gaza and Mosul.”* The intended use is thus to inform the two projects’ *“main orientation for the next few years, including potential adaptations in Mosul and Gaza.”*

EVALUATION FOCUS

Given the differences between the contexts of Gaza and Mosul, each site was evaluated independently, with overarching conclusions drawn at a co-creation workshop with key stakeholders from both sites and HQ. The focus was strictly on the reconstructive surgery (RS) activities with the aim of identifying transversal findings that could be applicable to future RS projects at large, and also help improve the functioning of the existing projects.

CONCLUSIONS

TRANSVERSAL: MSF OCB’s interventions in both Mosul and Gaza were highly **relevant** given the contextual needs. The response was in line with MSF principles, and even though reconstructive surgery was not at the front and center of the initial response, the organization pivoted to provide it when the need became apparent. In both contexts, the response adapted well to the changing needs, whether it was assisting the local health care system during the COVID pandemic, adjusting its admission criteria as the patient case mix changed, and improving its working relationships with key local stakeholders. Projects were **coherent** in terms of working with external partners, but internal coherence within MSF was weak. What was surprising to the evaluators was how little the projects interacted and coordinated with each other – there is a wealth of knowledge and experience that can (and should) be shared, which was unfortunately not happening. While cooperation between these projects (which are run from the same Cell) should be happening on a routine basis, cooperation with other MSF OCs should not be discounted.

It was challenging to definitively assess **efficiency** and **effectiveness** of both projects especially without a clear, consistent and accepted definition of RS across the two projects. What is clear, that even using the loosest of definition (and despite being labelled ‘reconstructive surgery’ projects), the numbers of RS procedures seemed to be quite low. Qualitative evidence strongly suggested that both projects were effective, and to a lesser extent, efficient. Anecdotal evidence of “good quality” was universally reported by patients and staff in both projects, as was the perception that both projects could make better use of resources and staff. However, strong objective data to attest to these findings was lacking. Both projects collect large amounts of data, however, it was not ‘fit for purpose’ – both projects could improve in converting data into actionable information.

Assessment to **impact** was similarly mixed. Patients were ecstatic and staff highly supportive; but there were no objective metrics to attest to this. Not only was objective assessment of each project’s impact difficult but comparing across both projects was impossible. It was clear that both projects would not be able to continue at the same level of performance if MSF OCB were to withdraw – the financial wherewithal to support this resource intensive surgical process and treatment pathway does not currently exist in Gaza or Mosul. There is no clear long-term strategy in either location.

LOCAL: Physiotherapy is a weak link in the treatment pathway in **Mosul**. Critical challenges need to be addressed in staffing, skills, and equipment so that the patient treatment-outcomes are not adversely affected. The HR challenges (especially the differential contracts between MSF and Al Awda staff) in **Gaza** remain unresolved. These have the potential to seriously affect the operations of the project and should be addressed in a timely manner.

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If there is an overarching theme emerging from this evaluation, it is the underlying debate between an emergency intervention vs. a developmental approach. MSF entered both locations in an emergency response mode. It quickly recognized that proper treatment of traumatic war injuries is a long-drawn process and requires many stages of reconstruction, along with supportive care services. MSF OCB endeavoured to develop such a system on the fly in both projects; and despite challenges has done good work and is highly regarded in both locations.

In order to apply the lessons from this evaluation for future interventions, addressing the emergency vs. development debate is a sine qua non for MSF OCB. Reconstructive surgery falls squarely within the ambit of developmental projects, which require considerable effort – in time, money, human resources, and commitment. Moreover, demand for RS in conflict areas is, and will always remain far greater than the ability of organizations to address it effectively, so the ability to plan and commit for the long term is critical.

The evaluators strongly feel that MSF has the building blocks to undertake this exercise; but this is contingent upon making this a strategic priority.

RECOMMENDATIONS

⇒ **Recommendation 1: Establish a definition of reconstructive surgery that can be applied across projects. Communicate it clearly to all staff and stakeholders.**

- a. Ensure that orthopaedic surgeons associated with the project have the requisite reconstructive surgery training/skills.
- b. Streamline procurement processes for RS equipment and materials.

⇒ **Recommendation 2: Increase knowledge exchange between the two sites, and with OCP Amman.**

These can start informally (online exchanges etc.) and if there is interest, can be formalized (regular meetings, personnel exchange, etc.).

⇒ **Recommendation 3: Ensure data collected are ‘fit for purpose’.**

- a. Indicators should be of two types: routine monitoring of operations, and for evaluation of outcomes/impacts.
 - i. Whenever possible, indicator baselines should be evidence-based.
 - ii. The MSF OCB standard indicator list is a good starting point for routine monitoring indicators. The MSF OCB Standard Indicator lists the indicators, for IPD surgery, operating department and physiotherapy, which should be considered.¹
 - iii. Evaluation/impact indicators can be project (or intervention) specific; ideally, they should allow for comparisons across projects. Consideration should be given to measuring Quality of Life (e.g., the EQ-5D tool has been used successfully in Gaza by MAP UK and Godwin et al, or other validated and translated tools such as SF-12, WHOQoL).
- b. Indicators should be harmonized across the two projects. The appointment of the MIO in Beirut offers an opportunity to proceed in this direction.

⇒ **Recommendation 4: Strengthen patient follow up to ensure loss to follow up is minimal.** Patients should be followed up till their treatment is complete so that outcomes can be documented.

⇒ **Recommendation 5: Strategically, address the emergency vs. development debate.**

- a. MSF OCB should be careful not to overextend itself, as the need/demand for RS is very large but the resources to provide quality care (human, material, technical and financial) are limited.
- b. Develop a long-term strategy for both projects and communicate it clearly to all stakeholders.

⇒ **Recommendation 6: For future projects:**

Patients should be followed up till their treatment is complete so that outcomes can be documented.

- a. Partner with MoH (i.e., integrate with existing health care system) in politically sensitive contexts.
- b. Increase focus on local skills development (e.g., residency training for surgeons).
- c. Increase length of expat staff deployment to ensure continuity.
- d. Plan for and implement RS activities from the outset.

Recommendation 7: Site specific:

- a. Strengthen physiotherapy services in Mosul by addition of suitable staff and necessary equipment and space.
- b. Address the HR issues facing local staff in Gaza.

Recommendation 7 (of 7)

METHODOLOGY

The evaluation used a case study approach which allowed the team to conduct an in-depth exploration of each project site. The evaluation used a mixed methods approach to primary and secondary data collection and analysis.

DATA COLLECTION

Data was triangulated from the following sources:

- a) Document reviews – a SharePoint library was created with 211 documents in 27 folders, and included project reports, annual reports, research reports, end of mission reports, log frames, sitreps, planning documents, presentations, etc. for the period 2018 - 2022.
- b) Key informant interviews – 99 interviews were conducted in total across the two sites. Interviews were conducted remotely using WhatsApp from May 8 – 20, 2022 (Mosul) and August 9 – 18, 2022 (Gaza). A standard semi-structured interview script with probes was used.
 - i. Key informant interviews (KIIs) n=54. Respondents were national and expatriate MSF personnel and stakeholders at the local, regional and HQ level.
 - ii. Patient interviews n=45. All patients currently admitted in the IPD and all out-patients present in the OPD during the interview period were interviewed in Arabic.
- c) Routinely collected data – based on the logframe of each project, the Objectively Verifiable Indicators pertinent to the evaluation questions were examined.

FINDINGS

PART A – TRANSVERSAL FINDINGS

Finding 1: *The project design was highly relevant in meeting the needs of the conflict afflicted populations.*

MSF aims to respond quickly to the needs of conflict afflicted regions and its deployment in Mosul and Gaza was along these established principles. Given the destruction of the health care system during the battle for Mosul, providing support to the health system was contextually and medically relevant, facilitated by the deployment of a mix of expatriate and local personnel. MSF OCB was given the responsibility of providing post-operative care away from the front lines, which it did by deploying the Mobile Surgical Unit (MUST). Project documents noted that a hospital was supposed to be functional by December 2017 but due to unavoidable delays was only opened in April 2018.

Deployment to Gaza occurred in response to a call for assistance from a local NGO (the Union of Health Workers Committee). The Israeli response led to a large number of traumatic lower limb injuries which the Gazan health care system was ill-equipped to handle. Many international organizations responded to

this call for help, and MSF OCB teamed up with the Union to use its facilities at the Al Awda Hospital. MSF OCB had to overcome a set of unique challenges – Gaza was (and still is) an intensely political space with the Ministry of Health (MoH) exercising a great degree of control over the treatment of the GMR. MSF OCB was forced to work under MSF-France’s registration, an arrangement that led to some friction. In addition, Al Awda hospital was not a MoH facility, which hampered efficient coordination with the MoH. Despite these challenges, MSF persevered and provided much needed clinical support in Gaza.

Reconstructive surgery (RS) was not well established in either location in the first year as the priority was to provide care for relatively “fresh” war/trauma wounded.

Finding 2: *Project implementation has adapted well to the local contexts including adjusting its admission criteria as the patient case mix changed, assisting the local health care system during the COVID pandemic, and working with bureaucratic delays.*

The project was highly responsive to the changing context and local needs. In Mosul, it quickly became apparent that the OT space was inadequate for a number of procedures. Following a request by the Iraqi government for NGOs to provide more advanced care, discussions were initiated with the Al-Salam Hospital to build a more permanent structure on its grounds for use by MSF OCB. Despite delays due to bureaucracy and importation challenges, a 40-bed hospital with 2 OTs was ready by September 2020.

During the COVID pandemic the MSF OCB facility stopped performing surgical operations but became a COVID treatment hospital for most of 2020. Adaptation also occurred in response to the changing patient population as the cessation of hostilities led to a gradual decrease in “fresh” trauma cases, which led to the revision of the admission criteria. These were changed to include sub-acute cases (2019), patients requiring internal fixation (2020) and a re-shuffling of the waiting list (into red/yellow/blue categories) to identify and fast-track urgent cases, and inclusion of cases requiring basic reconstructive surgery (2021).

A similar trajectory can be seen in Gaza. Lack of its own registration meant that MSF OCB had to operate under MSF-France’s registration with the MoH for the first year in Gaza. While this led to cooperation with the already established OCP programs at the technical and operational level, it did lead to a perception of “competition” for the GMR patients despite an agreement to have different geographic catchment areas. The Al Awda hospital was not a MoH facility, which hampered smooth relations with the MoH at the outset and obtaining clinical data about the GMR cohort was difficult. In addition, the initial expatriate surgical staff were mainly war/trauma surgeons and not reconstructive surgery specialists. There was increasing realization at this early stage that the OCB patient cohort would require reconstructive surgery in the coming months/years, and this should be planned for.

To a lesser extent, MSF OCB in Gaza curtailed its activities temporarily during the COVID crisis, decreasing elective surgeries for a period of two months. With the cessation of the GMR protests in December 2019, the inflow of fresh injured patients dried up, and the project broadened its admission criteria (for example,

it started accepting acutely injured pediatric patients in June 2020, and in August 2020 started to accept “cold cases” from OCP such as old burns and trauma) to continue providing RS.

Currently, both projects remain highly relevant as unmet need exists because of very poor surgical quality and outcomes in the MoH (and private facilities in Mosul), along with lack of basic IPC measures which lead to a high prevalence of infected limbs (often with multidrug resistant organisms).

Finding 3: *There is a lack of clarity and understanding about reconstructive surgery, which has downstream implications.*

The evaluation team was not able to ascertain how the two projects defined ‘reconstructive surgery’, with neither documents nor interviewees (save for a few surgeons) being able to define it. Respondents and documents attempted to define it in terms of the procedures being done in the OTs. One orthopedic surgeon did attempt to develop a clear definition for use in these programs but has not been successful in getting it approved. The evaluation team noted the implications of the lack of a clear understanding of the definition, breadth and scope of RS. There was an underlying assumption that the skill sets required to treat acute/sub-acute injuries and perform reconstructive surgeries were interchangeable (when they clearly are not). The surgeries scheduled are dependent on the specific skill sets of the orthopedic surgeons available at the time. An additional issue is the logistical challenges in ordering and procuring RS equipment, as it is considered an MSF non-standard item. A similar issue was noted with respect to the definition of acute osteomyelitis.

Finding 4: *Knowledge sharing and exchange among the reconstructive surgery projects in Gaza, Mosul and Amman is limited.*

Internally, the projects are aligned with many of MSF’s priorities, especially the focus on trauma care, antibiotic resistance, and medical services provision in ‘middle income countries’. In the early phases of the Mosul project (when RS had not been fully launched), some patients were referred to Amman and Tripoli for reconstructive surgery. However, this came to an end when the wait lists for Amman exceeded its capacity; Mosul then started doing such procedures locally. In Gaza, collaboration with OCP was a necessity in the beginning. Relations with OCP were a mixed– some operational areas reported working well, but others reported challenges; these were marked at the senior/strategic levels. Relations did seem to improve once OCB received its own registration. Similar to Mosul, it seems that the experience of MSF in Amman was not shared/utilized in the Gaza project.

The evaluation team did not see any evidence for a formal mechanism to share knowledge, experiences, or personnel between the two locations.

Finding 5: *The MSF OCB facilities occupy a unique niche in both Mosul and Gaza and has introduced the concept of orthoplastic surgery in both sites.*

The MSF OCB facility in Mosul links to other players in the health care system. Patients are referred to the International Committee of the Red Cross (ICRC) for prosthetics after amputation. Post-operative physiotherapy was provided by Humanity and Inclusion (HI) until 2021, when it was brought in-house. Microbiology is being done by a central laboratory in Erbil; it is anticipated that it will soon be done locally in Mosul on the completion of an MSF supported facility. Interactions with local hospitals (besides Al-Salam) are limited.

In Gaza the OCB facility is also integrated into the local health care system. Outreach is conducted among the local hospital Heads of Departments about the admission criteria; and a key decision-maker from the MoH is on board. Two local organizations collaborate on amputations and stump revisions, and training activities and patient exchanges occur with the other facility providing RS in Gaza (Nasser Hospital).

Overall, in terms of the level of care provided, the OCB facilities occupy a unique niche that is above and beyond the capacity of the local health system. One very important contribution of these projects is the introduction of the orthoplastic concept, which is more than a plastic and an orthopedic surgeon working together at the same time, but a multidisciplinary and holistic approach in the evaluation, planning, treatment, recovery and rehabilitation of these patients with chronic complex problems.

Finding 6: *Resources are being used well in Mosul; a similar assessment for Gaza was difficult to make. The number of RS being performed at each site seemed to be on the lower side.*

Data reported in the Annual Reports from Mosul attests to the fact that the resources are being used to generate an increasing amount of output. As the table below shows, OPD encounters, IPD admissions and the number of interventions has increased significantly as the project matured from 2018 to 2021.

INDICATOR	2018	2019	2020	2021
# OPD encounters	1186	3186	1560	7888
# IPD admissions	144	326	185	872
Violence related admissions	41.5%	48.4%	4.5%	69%
Accident related		51.6%		
# Interventions	274	575	297	1304
IPC measures				
Hand hygiene	66%	79%	79%	72%
PPE	86%	90%	92%	78%
Surface cleaning	51%	70%	71%	

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The decrease in numbers in 2020 was due to the facility being converted to treat COVID patients. The number of violence related admissions has increased a bit while the IPC measures fluctuate from year to year but remain relatively high. It is unclear if these variations are due to incomplete data, poor data quality or a reflection of 'true' practice. It was challenging to assess the number of RS procedures being

done as the data was not reported consistently. The first quarter report for 2022 stated that “21 reconstructive surgeries (RS) were performed in Q 1 2022”; but in later sections lists “Introduction to RS” as a priority for Q2 2022. No RS data were available for the preceding years.

Qualitatively, there was a strong perception from a large number of interviewees that resources and staff could be used better. A common refrain was the underutilization of the OTs with a relatively low number of surgeries per day, primarily due to delays in starting in the morning and the large down time between patients. Another challenge was the varying skill sets and availability of the expatriate staff, which when coupled with equipment importation challenges, hampered optimal scheduling and use of the OT.

Quite a lot of data for Gaza (table below) is not available, and the 2018 data appears to include all MSF supported hospitals in Gaza, rendering it non-comparable to the later years. The 2019 and 2020 numbers were extracted from the 2021 Final Report; the 2021 report appears to be a hybrid between the Annual and Quarterly Report.

INDICATOR	2018	2019	2020	2021
# OPD encounters		9287	7039	8934
# IPD admissions	8024 ¹	634	436	501
Violence related admissions	44%			
Accident related				
# Interventions	1759	751	556	675
IPC measures				
Hand hygiene			84%	74%
PPE				
Surface cleaning				

During the interview phase, the evaluators noted only 5 patients in the IPD. Actual numbers of reconstructive surgeries done seems to be low. As per reports, RS accounted for only 7% (n=90) of the total admissions for the period May 2018 – Sep 2021. RS volumes seem to ebb and flow with the level of political violence and patient flows remain dependent on the goodwill of the MoH. A revised referral pathway had recently been approved by the MoH and it was expected that publicizing this to the Heads of various Departments in Gaza hospitals would lead to increased referrals and patient volumes in the future.

Qualitatively, Gaza respondents felt that their activities were efficient. There was a perception that more could be done – the OT is currently run only 3 days/week and many respondents felt that with the addition of more staff, it could be possible to run it 5 days/week. The quality of the local national staff was perceived to be very high.

¹ This number seems to be the total of all MSF supported hospitals and includes burns.

Finding 7: *There is widespread subjective perception that the project provides high quality care, but objective evidence is lacking.*

All interviewees unanimously asserted that the MSF OCB facility provided the highest quality care in Mosul. Patients hear about the MSF facility by word of mouth in their community and are drawn to it, reportedly even from distant governorates. There was a strong sense of pride and achievement among the staff. However, it was not possible to obtain objective measures of this perception. While the initial logframes of both sites had detailed indicators specified for each expected result, these were not reported on consistently. Respondents in Mosul were largely unaware of the logframe or if any changes had been made to it.

The table below suggests that these indicators are inconsistently reported, especially those that can truly be considered an outcome indicator (perioperative mortality and SSI). Indicators were changed when personnel changes occurred; the evaluation team was also not able to identify any documentation of indicator definitions or standard data management procedures.

INDICATOR	2018	2019	2020	2021	2022 (Q1)
> 80% BOR	41.5%	68.4%	55.2%	69%	60%
> 90% admissions within criteria			63.2%		
< 1% perioperative mortality			0%		
> 65% surgeries with loco-regional anaesthesia		2%	47.8%	49%	51%
< 1% SSI	3.6%	0%	0%	0.91%	

There are a multitude of databases in different formats for different purposes that are not very well linked. Routine data from the OPD, IPD and OT are collated by the Data Officer and entered in the DHIS-2 database, from which monthly reports are generated. There does not seem to be a concerted effort to collect data (outcome or otherwise) on patients being followed up in the OPD post-discharge.

The next table below presents the comparable indicators for Gaza. There is a difference in the indicators collected between the two sites – for example, the percent of admissions within admission criteria and the percent of surgeries are not collected; the SSI indicator is subdivided between wound and pin infections. Data for 2018 and 2019 are not available, and the data quality for the SSI indicator in 2021 and 2022(Q1) is questionable as there is a wide dissonance between the wound and pin infections for the same year.

INDICATOR	2018	2019	2020	2021	2022 (Q1)
> 80% BOR			31.3%	60%	36%
> 90% admissions within criteria					
< 1% perioperative mortality			0%	0%	
> 65% surgeries with loco-regional anaesthesia					
SSI					
<3% wound			2.2%	13%	15%
<5% pins			17.7%	2.7%	0%

Qualitative interviews gave the impression that a lot of data is being collected in Gaza in a systematic way, but it was not clear if the data were “fit for purpose.” It is reported regularly in the monthly, quarterly and Annual reports, but many respondents were not able to describe how it was used. Indicators, reporting periods and the logframe were constantly being modified without documentation of appropriateness or utility, and baselines were constructed without evidence to back them up. In a manner similar to Mosul, respondents in Gaza attested to the quality of care with anecdotes and subjective assessments. Documents indicated that quality of life measures were being collected but the evaluation team was not able to review the actual numbers.

Finding 8: The Activity Independence Measure – Trauma (AIM-T) measure is not fit for purpose as an outcomes assessment tool.

The AIM-T is an outcome measure that consists of battery of tests for upper limbs, lower limbs and core functions that was designed by HI to assess physical function only. This measure seems to have been validated only internally within MSF and there is no peer reviewed publication on its psychometric properties. It is administered at admission and at discharge; it was not apparent if this was being administered at any time during the follow-up physiotherapy sessions. The evaluation team was not able to identify any materials that would allow for its standardized implementation and were told that its application was done in a highly variable manner.

Finding 9: Patients are being lost to follow-up, but an accurate number of this loss is unavailable.

Many Mosul respondents reported that patient follow up was a challenge and an “exceedingly high rate of loss to follow up” was noted in the draft Q1 2022 Quarterly Report. Patients do not return for follow-up despite receiving a follow-up date on discharge and repeated reminders via phone. Patients who do not return for follow up obviously have no data recorded for their follow up visit; this absent data is recorded as ‘missing’ and is dropped from the calculations leading to an inaccurate picture. The picture was similar in Gaza – accurate numbers of patients lost to follow up were unclear and many respondents acknowledged that the project was weak on post-discharge follow up.

Finding 10: Patients and staff are very appreciative of the project; but impact on the community is unclear.

A majority of respondents felt that the impact in both Gaza and Mosul had been uniformly positive, especially when they considered what existed prior to MSF’s arrival. All patients in both locations interviewed were uniformly grateful of the project and especially the care received, and many respondents wished that the services provided be extended to other conditions. A similarly high level of appreciation was reported by the staff, especially the opportunity to broaden their skill sets and practice in a high

functioning environment that met the needs of patients. From the patients’ perspective, the community is being served by the provision of high-quality care that is otherwise not available from the existing health care system in both locations. The impact on the health care system is mixed, especially in Mosul, where some local orthopedic surgeons reported that the MSF facility did siphon away some cases that would have come their way, while others said that their practices were sufficiently different that they were not in competition.

No such negative impacts were reported in Gaza, but a minority of respondents noted that the presence of OCB in the RS space could lead to dependence on part of the MoH and hamper its efforts to develop RS (and associated IPC) skills locally; these respondents felt it might be preferable to let the MoH take over this area.

Finding 11: Long term continuation of impact is highly unlikely in the event of MSF’s withdrawal.

Both projects have provided an opportunity to learn and acquire new skill sets to local personnel. However, the context is not fully optimal for the exercise of such skills. Mosul was initially planned as a five-year project and conceived as a ‘catalyst of change’ imparting training on IPC, ABR, microbiology and RS management. Attempts were made to transform CPOC into a teaching hospital where surgeons could learn RS, but this was stymied by local opposition; currently only junior orthopedic surgeons in training under the Arabic Board can rotate through the facility as observers. The Gaza RS project started as a response to an acute need and has expanded to cater to non-conflict trauma and be a standby facility in case the political situation leads to more hostilities. There are no discussions at present to convert this to a teaching facility. Overall, the barrier to sustainability in both projects is financial – especially the wherewithal to procure materials. In both projects, there is currently no long-term strategy and respondents were not aware of any discussions regarding this.

Finding 12: Improvements can be made in planning for reconstructive surgery in MSF surgical deployments.

In Mosul, respondents felt it would have been preferable to partner with a fixed facility to implement the RS project. A few respondents noted that MSF came in with very high standards and wanted perfection from the outset when it might have been preferable to come in with a basic facility and grow it slowly. Others felt that there were unnecessarily long delays in the project, although they agreed that some factors were beyond MSF’s control. Respondents in Gaza felt that it would have been preferable to partner with a MoH facility from the outset, and to have been more aware of the complex political environment. Respondents in both locations felt that the project scope (especially in terms of RS) should have been better defined and communicated better from the outset.

PART B – SITE SPECIFIC FINDINGS

Finding 13: *Physiotherapy (PT) services are very limited in all respects.*

The physiotherapy department is one of the weakest aspects of the reconstructive surgery project. Prior to April 2021 PT services were provided solely by HI when MSF took over service provision. The local staff lack any physiotherapy background since there is no physiotherapy school in Mosul. They are nurses who were trained by MSF or received a rehabilitation training program (1-year) at a local college that is not sufficient to provide knowledge on how to deal with orthopedic trauma cases. There is neither a proper physiotherapy space nor any tools or equipment to use in treatment.

Finding 14: *Human resource issues with Al Awda staff still remain.*

The initial memorandum of Understanding (MoU) was for an emergency situation for 6 months, with the plan to review at the end of this period and develop a more long-term partnership. During the renewal process, issues of compensation came to the fore, especially the salary differentials between MSF and Al Awda staff. It seemed that a plan had been developed to reach agreement between all parties, but interviews revealed that there were still unresolved issues of remuneration especially for the assigned staff.

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