REDUCING FINANCIAL BARRIERS TO HEALTH SERVICE: A PROGRAM SUMMARY REPORT OF EMERGENCY REFERRAL PROGRAMS SUPPORTED BY THE JI-MNCH AND THE 3MDG FUND
Reducing financial barriers to health services: a program summary report of emergency referral programs supported by the JI-MNCH and the 3MDG Fund

While factors influencing uptake of health services are multi-faceted and context dependent, a growing body of literature indicates that financial barrier is one of the persistent demand-side factors that affect timely utilization of health services in low and middle income countries. [1, 2] To address the demand-side issues, Ministry of Health in Myanmar, in partnership with development agencies implemented a number of financing programs¹ with the aim of improving access to essential health services and reducing out of pocket expenditure.

This document provides a synthesis of two of the referral programs: (1) Maternal Neonatal, and Child Health (MNCH) emergency referral program in the Ayeyarwady Region, supported by the Joint Initiative for Maternal Newborn and Child Health (JI-MNCH), and (2) the emergency referral program supported by the 3MDG Fund.

1. Programme Designs

1.1 JI-MNCH supported MNCH Emergency Referral Program (2010-2012): As a continuation of the humanitarian response to Cyclone Nagris, the Joint Initiative on MNCH (JI-MNCH), a multi-donor trust fund managed by UNOPS, implemented a program that sought to increase access to essential maternal and child health services amongst hard-to-reach populations in six townships² in the Ayeyarwady Region.

Township Health Departments – with the support of Merlin, Save the Children, IOM, Relief International and MdM - provided financial and logistical support for maternal, neonatal, and child health emergency referral services for 1.8 million people from 2010 – 2012. While program implementation differs slightly among Townships, the following design guided the roll-out:

**Eligibility:** All women and children under age of five who reside in one of the six priority townships and meet at least one medical emergency criteria outlined in the emergency referral guidelines are eligible to receive financial and logistical assistance for emergency referrals. While the referral guidelines are similar in nature, each township developed its own guideline to reflect local needs and context (see Annex A for Merlin’s emergency referral guidelines).

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¹ Programs include (but not limited to): Hospital Equity Fund, supported by GAVI-HSS; Maternal and child health voucher programs, supported by GAVI HSS; MNCH Emergency referral, supported by JI-MNCH; and Emergency referral program, supported by 3MDG.

² JI-MNCH Townships include: Laputta, Middle Island, Bogala, Mawlamyinegyun, Dedaye, Pyapon
**Reimbursement:** Patients are reimbursed based on actual expenditure up to a set ceiling amount. Cost categories eligible for reimbursement include transportation, food and daily subsistence allowance, and treatment costs. According to the JI-MNCH Program evaluation, patients - on average – paid $56 USD for maternal and child health referrals, and $204 USD for caesarian section. The average reimbursement cost was $19 USD for child and maternal health referrals, and $123 for caesarean section. While the financial reimbursement did not completely offset total cost associated with treatment, the referral program significantly reduced out of pocket expenditures.

Different financing structures were set up to facilitate and manage the payment process. In some townships, cash advances were given to patients (see Box 1 for an example), while in other townships, patients would need to come up with the cash in advance.

See Annex B for an overview of the different referral mechanisms; Annex C for a Case study of Merlin supported programme in Laputa; and Annex D for an independent evaluation of the JI-MNCH Program.

**1.2 3MDG supported Emergency Referral program (2013 – Current):** Building on lessons learned from JI-MNCH, the 3MDG Fund supports emergency referral for pregnant women and children under 5 years of age. To date, the referral system provides coverage for more than 4.4 million people in Ayeyarwady, Magway, Chin, Kayah, Shan and Wa Special Region.

**Eligibility:** Similar to the JI-MNHC program, eligibility criteria are based on medical needs and assessed by a trained health care professional. A key difference between the JI-MNCH and the 3MDG Fund supported program is the standardization of the Emergency Referral Guideline, which was developed by a Ministry-lead working group. (See Appendix E for draft Emergency Referral

**Reimbursement:** Patients receive payments based on actual costs for the following: Transportation, Meal/Food, Treatment Costs (if not free at the point of care), and ancillary costs, such as lab and radiology services. 3MDG encouraged townships and the supporting implementing partners (IP) to set up local emergency referral funds that are managed by Village Health Committees to provide patients receiving cash advance to pay for the costs, and submit the receipts upon return to the village.

**2. Results and Key Findings of the 3MDG Program**

Township reports show that between 2013 – 2015, the 3MDG supported townships supported more than 52,000 referrals. Of that, 49% of the referrals are for emergency obstetric services, 38% for emergency child health services such as malnutrition and pneumonia, and 12% for life-threatening emergencies of other population groups.

Details of the referral program may be obtained in Annex F: 2014 3MDG Annual report, and Annex G: 2015 3MDG Mid-year 3MDG Report
2.1 Emergency Maternal Referrals

Focusing on maternal referral services, Table 1 provides an overview of increase in overall number of obstetric referrals, as well as increase in proportion of pregnant women who received referral support. As illustrated in Table 1, the total number of emergency maternal referrals steadily increased since program inception: In 2013, Township Health Department reported 5700 obstetric referrals. By 2015, the number is expected to reach 12,000 referrals. While the nearly two-fold increase in the total number of referred obstetric cases is due, in part, to the expansion of population coverage as a result of scaling up the program to other States/Regions, it also reflects a steady increase in the percentage of pregnant women who received emergency referral support. In 2013, approximately 13% of pregnant women in 3 MDG supported townships received referrals for emergency obstetric care. By 2015, the number has increased to more than 15%. It is anticipated that 2015 data will show that between 16 – 18% of pregnant women who reside in one of the 3MDG supported townships received emergency referral support. This is an important benchmark for the Township Health Departments and the 3MDG fund, as empirical evidence show that approximately 15% of pregnancies are likely to have life threatening complications requiring emergency assistance.

Based on an analysis on 2014 obstetric referrals conducted by Myint et al., the top three causes for emergency maternal referrals in the 3MDG supported townships are prolonged/obstetric labor (26%), obstetric complication (19%), Eclampsia and pre-eclampsia (9%). All three are life threatening and/or debilitating conditions that require immediate access to emergency services. (see Appendix I for the Article)

2.2 Emergency Referrals for Children Under 5 Years of Age

From 2013 to December 2015, an estimated total of 20,000 children less than five years of age, living in one of the 3MDG supported townships, were referred for emergency treatment to a Station or Township hospital. This corresponds to coverage of approximately 3% of children under 5 years of age. While the absolute number of referrals per annum increased between 2013 - 2015, the overall coverage remained constant at 3%. Unlike maternal health, scant scientific evidence exists on the expected rate of child emergencies. As such, the targets set for the percentage of children for emergency referrals were based on township experience and local disease context. In the coming year (2016) 3MDG will
further investigate the child health emergency referral patterns and needs, to better inform programming and target setting.

A trend worth noting, however, is the **substantial increase of referrals among neonates** - from 4% of all young child referrals in 2013 to 12% of all young child referrals in 2015. This is a positive trend signaling that the program is reaching a sub-population of children who are most at risk of dying. 

4. **Equity**

Both the JI-MNCH and the 3MDG supported programs **placed an emphasis on increasing uptake of emergency referral services among hard to reach households**. Despite efforts, uptake of maternal and child health referrals remain low among households living further away from a health facility. According to a rapid household survey conducted as part of the JI-MNCH evaluation report, only 5% of referrals of all emergencies came from hard to reach villages. This inverse relationship between distance to facility and uptake of emergency referrals was also observed in a study conducted by Merlin in 2012.

3. **Cost**

A cost-effectiveness analysis was undertaken in 2014 for the referral cases supported during the year in 6 townships of Ayeyarwady (see Annex I for the full value for money report). The authors concluded that emergency referrals constitute a **cost-effective intervention** for MNCH at $0.40 per capita of a coverage area with estimated 1.8 million people.

Table 1 provides direct cost for both maternal and under 5 referrals in the six townships, in 2014. The average direct cost for one referral amounted to $64.

Data for the first 6 months of 2015 shows several cost patterns for an extended area of coverage. The average direct cost for referral of a pregnant woman in the Ayeyarwady, Chin, Magway, Kayah and Shan was $70 per episode of care (range: $51-$150), and the average direct cost for referral of a child under the age of 5 was $53 per episode of care (Range $36-$120).

It should to be noted that these costs exclude the administration costs for the operation of recording and reimbursement system.

More information on the referral for the entire year of 2015 will be available in March 2016. The updated analysis will include cost data from Magway, Chin, Kayah and Shan.

3.1 **Estimated costs for nation-wide scale-up**

3 In Myanmar, neonatal mortality accounts for 40% of death among under 5 years of age, are neonates.
Based on available information, estimated cost for a nation-wide MNCH referral system would be approximately $20 million dollars per year. Tables 2, 3, and 4 provide the assumptions for the estimation.

**Table 2: Estimated Cost of Nation-wide Scale-up of Emergency Maternal Referrals in USD**

<table>
<thead>
<tr>
<th>Description</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total estimated pregnancies per year</td>
<td>1,200,000</td>
</tr>
<tr>
<td>15% of pregnancies requiring emergency care</td>
<td>180,000</td>
</tr>
<tr>
<td>Average direct cost per referral</td>
<td>$70</td>
</tr>
<tr>
<td>Total direct costs of maternal referrals per year</td>
<td>180,000 x $70 = $12,600,000</td>
</tr>
</tbody>
</table>

**Table 3: Estimated Cost of Nation-wide Scale-up of Emergency Under 5 Child Referrals in USD**

<table>
<thead>
<tr>
<th>Description</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total estimated children under 5 per year</td>
<td>4,500,000</td>
</tr>
<tr>
<td>3% of children under 5 requiring emergency care</td>
<td>135,000</td>
</tr>
<tr>
<td>Average direct cost per referral</td>
<td>$53</td>
</tr>
<tr>
<td>Total direct costs of U5 referrals per year</td>
<td>135,000 x $53 = $7,155,000</td>
</tr>
</tbody>
</table>

**Table 4: Combined Estimated Cost of Emergency MNCH Referral Program per year, in USD**

<table>
<thead>
<tr>
<th>Type</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maternal Referral</td>
<td>$12,600,000</td>
</tr>
<tr>
<td>Under 5 Referral</td>
<td>$7,155,000</td>
</tr>
<tr>
<td><strong>Estimated total cost</strong></td>
<td><strong>$19,755,000</strong></td>
</tr>
</tbody>
</table>

It should to be noted that the above coverage could not be reached in the first year and a gradual scale up of the coverage would need to be planned for.
4. Summary

Emergency referral is a **cost-effective intervention** that enables patients to have **timely access** to life saving MNCH interventions. The financial support provided through the emergency referral programs significantly **reduces catastrophic health expenditures** for poor households. As demonstrated by JI-MNCH and the 3MDG supported Townships, emergency referral program is feasible to implement at the Township level and in context as varied as Ayeyarwady and Shan State.
5. Appendix: List of Documents

Annex A: Merlin’s emergency referral guidelines

Annex B: Presentation on the referral mechanisms in the Delta

Annex C: Case study - *Addressing maternal and child health morbidity and mortality – supporting emergency referrals – evidence from Merlin’s Programme in Laputa.*

Annex D: Evaluation of the JI-MNCH Program

Annex E: Draft MOH Emergency Referral Guidelines


Annex G: 2015 3MDG Mid-Year Report

Annex H: Article - *Support to Maternal Emergency Referrals through the 3MDG Fund – A life Saving Intervention* by Dr. Theingyi Myint, Dr. Panna Erasmus, Markus Buhler, Dr. Kyaw Nyunt Sein, and Dr. Min Min Zin.

Annex I: 3MDG Value for Money Analysis (2014)

Annex J: Delta Transition Strategy

Annex K: Video
References
