MATERNAL DEATH SURVEILLANCE AND RESPONSE

ANNUAL REPORT 2017

GENERAL DIRECTORATEOF REPRODUCTIVE AND CHILD HEALTH
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ACRONYMS

CD	Cesarean Delivery
FHS-AUB	Faculty of Health Sciences – American University of Beirut
GII	Gender Inequality Index
GNI	Lebanon's Growth National Income
HDI	Human Development Index
HELLP	Hemolysis, Elevated Liver enzymes, Low Platelet count
LSOG	Lebanese Society of Obstetrics and Gynecology
MDG5	Millennium Development Goals 5
MDSR	Maternal Death Surveillance and Response
MM	Maternal Mortality
MMR	Maternal Mortality Ratio
MOPH	Ministry of Public Health
NCSM	National Committee on Safe Motherhood
NVD	Normal Vaginal Delivery
OBS	Obstetrics
PAPFAM	Pan Arab Project for Family Health
PPH	Postpartum Hemorrhage
SBA	Skilled Birth Attendance
UNDP	United Nations Development Programme
UNFPA	United Nations Population Fund
UNHCR	United Nations High Commissioner for displaced

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I. INTRODUCTION

1. BACKGROUND

Lebanon has an estimated total population of 6 million with an annual growth rate of 1.3% and a life expectancy at birth of 80 (total years) (World Bank, 2018). It continues to enjoy favorable population and health indicators despite the unusual circumstances in the Middle East and Arab Region. For instance, Lebanon's 2017 HDI (Human Development Index) of 0.757 is very much the same as the average of 0.757 for countries in the high human development group and above the average of 0.699 for countries in Arab States. Lebanon's life expectancy at birth increased by 9.6 years, mean years of schooling increased by 1.2 years and expected years of schooling increased by 0.8 years. Lebanon's Growth National Income (GNI) per capita increased by about 49.1 percent between 1990 and 2017. Overall, the HDI value witnessed an upward trend from 0.732 to 0.757 between the years 2005-2017 (UNDP, 2018).

On another level, Lebanon is ranking below the median on Gender Inequality Index (GII). GII reflects gender-based inequalities in three dimensions (reproductive health, empowerment, and economic activity). The GII value of the Arab States is 0.531, but Lebanon has a GII value of 0.381, ranking it 85 out of 160 countries in the 2017 index. In Lebanon, 3.1 percent of parliamentary seats are held by women (in 2018, the percentage has increased to 6%), and 53.0 percent of adult women have reached at least a secondary level of education compared to 55.4 percent of their male counterparts. Regarding maternal health indicators, Lebanon has met the MDG5 with a maternal mortality ratio (MMR) - UNFPA of 23. The vast majority of pregnant women seek antenatal care and deliver under skilled birth attendance (SBA). Contraceptive prevalence rate is 58 percent (PAPFAM, 04), and the adolescent birth rate is 11.8 births per 1,000 women. Female participation in the labor market is 23.2 percent compared to 71.1 for men (UNDP, 2018).

Over the past eight years, Lebanon has witnessed a massive influx of Syrian displaced exceeding 1.5 million people with around 81% of them being women and children (UNHCR, 2018). This displaced crisis constitutes a vast burden and present challenge at all levels including maternal and child health services.

2.

PURPOSE OF THE REPORT

This report aims to document maternal death cases for the year 2017, and to provide descriptive analysis of clinical events, by looking at possible causes of maternal mortality and drawing learned lessons and recommendations for future practice. The report will be the first one in a series of yearly reports on maternal mortality and it comes in the light of the National MDSR (Maternal Death Surveillance and Response) Committee recommendation on maternal mortality review and documentation. In specific, the report is intended to:

- Highlight the efforts that were put in place to strengthen MDSR in the country.
- Document, analyze, and discuss causes of maternal death and take necessary measures to avoid and reduce maternal mortality.
- Provide information to stakeholders on the current status of implementation of MDSR in the country.
- Provide an overview of maternal death from collated information for the period January to December 2017.
- Inform stakeholders on existing challenges and planned strategies for MDSR to strengthen the existing system including fostering collaboration and partnerships to reduce maternal deaths.

II. METHODOLOGY

A full description of the process of initiating and reporting of cases is available in the MOPH publication "El Kak and Ammar, Maternal mortality in Lebanon: A story of success. MOPH-UNFPA 2016". For the sake of this report, it is worth mentioning that the process of reporting is initiated in the event of maternal death in any given hospital. The case is immediately reported by MOPH hospital focal points to the MOPH Observatory. Then the National Committee on Safe Motherhood (NCSM) will be notified and following that an OBGYN from the expert group (OBGYN expert group identified and trained by LSOG and MOPH to follow up on maternal death cases) is asked to visit the hospital. At the hospital, the expert will meet with the relevant personnel (hospital director, maternity chief, attending physician, others) to understand the various aspects and determinants that lead to maternal death. The expert will submit a full detailed report to NCSM (as per standardized template approved by LSOG and MOPH).

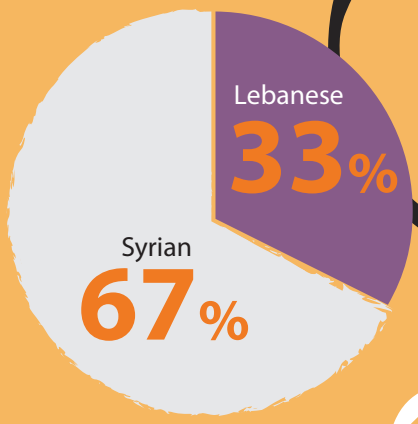
This process is supported by UNFPA Lebanon. The report will include description of clinical events and assessment of the possible factors that could have contributed to maternal death. The notification program at the ministry is required to enter all reported data into the data structure that was developed, and to send entered and cleaned data to the statistics department at the MOPH for further analysis. In addition, the statistics department is also responsible to collect all the reports of investigations from the independent experts, once ready, to generate a unified comprehensive report about maternal death in Lebanon with identified causes and determinants on an annual basis and submit it to the national committee. Currently, the reporting between the hospitals and the MOPH is done online, and all the forms are filled on monthly basis using an application based program with built-in quality check. The National Committee on Safe Motherhood meets quarterly- or upon demand- to look at the maternal death cases and make appropriate recommendations to practice.

III. FINDINGS

A total of 21 hospital- based maternal death cases were reported in 2017, with 14 cases of them being of Syrian nationality (Figure 1.)

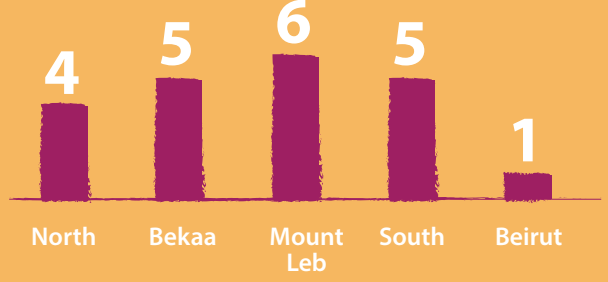
Distribution Of 2017 Maternal Mortality Cases By Nationality

Figure 1. Distribution of 2017 Maternal Mortality cases by nationality



The geographic distribution by governorate showed that cases of maternal death were highest in Mount Lebanon followed by Bekaa and South (equally), then North Lebanon, and Beirut with only one case of maternal death (Figure 2.)

Distribution of 2017 Maternal Mortality cases by region (N)



Distribution of 2017 Maternal Mortality cases by region (%)

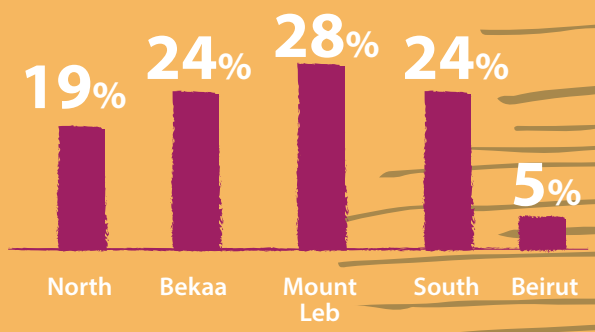
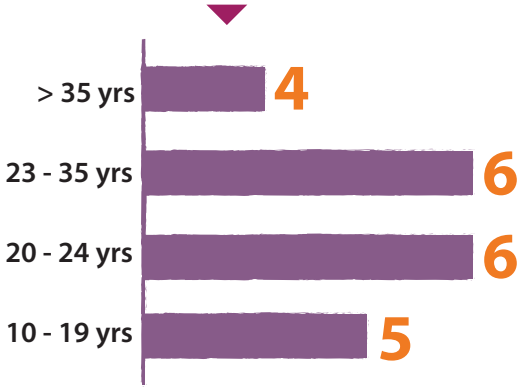


Figure 2. Distribution of 2017 Maternal Mortality cases by region

Regarding maternal death cases by age, results show that more than 50% of the cases (12/21) are between the ages of 20-35 years, and around 23% of all the maternal death cases are children and adolescents aged 10-19 years. Close to 20% of maternal death cases are above the age of 35 years (Figure 3.)

Distribution of 2017 Maternal Mortality cases by age group (N)



Distribution of 2017 Maternal Mortality cases by age group (%)

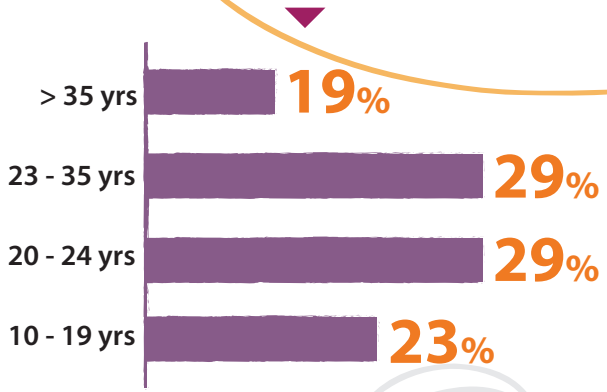


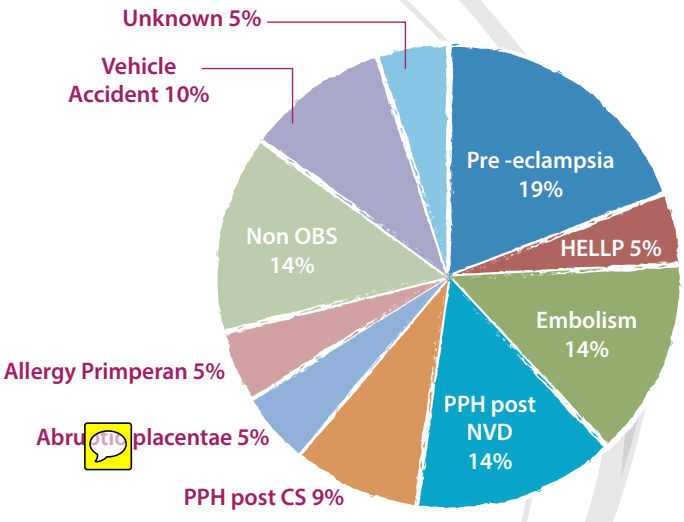
Figure 3. Distribution of 2017 Maternal Mortality cases by age group

Distribution of 2017 Maternal Mortality cases by Gravida (G)

Figure 4. Distribution of 2017 Maternal Mortality cases by Gravida

Maternal Mortality 2017 cause of death

According to the reports on the 21 maternal death cases, data revealed that postpartum hemorrhage (PPH) ranks first as a cause of maternal death at around 24% of all causes, followed by Pre-eclampsia (19%), non- obstetrical causes (14%), embolism, vehicle accident, and others like HELLP syndrome and placental abruption (Table 1., Figure 5.)



III. FINDINGS | Continuous

Table1. Distribution Of 2017 Maternal Mortality Cases By Cause Of Death

2017 Maternal Mortality Cause of Death	Frequency	Percent
Pre -eclampsia	4	19
HELLP	1	5
Embolism	3	14
Placenta acc/inc/percreta	0	0
PPH post NVD	3	14
PPH post CS	2	10
Abruptio placentae	1	5
Allergy primperan	1	5
Non OBS	3	14
Vehicle accident	2	10
Unknown	1	5
Total	21	100

IV. DISCUSSION

The total number of maternal death cases for 2017 was less than year 2016 with 21 cases as compared to 24 cases respectively. The geographical distribution of cases is consistent with previous years and is commensurate with clustering of Syrian displaced who are receiving antenatal care and delivering in several main hospitals in Mount Lebanon, Bekaa, South, and North of Lebanon. The causes of maternal mortality in Lebanon remain- overall- comparable to those of developing and developed countries in relation to postpartum hemorrhage and hypertensive disorders of pregnancy, and non-obstetrical causes. However, data showed several alarming findings that warrant immediate attention:

1.

The first alarming finding is the increase – albeit small- in the number of maternal mortality cases among Syrian displaced especially over the past 3 years. It is well known that the number of Syrian displaced is growing over the past 8 years, with an estimated higher fertility rates and crude birth rates. This will rise the total number of deliveries and increases the risk of maternal mortality and morbidity. It is alarming that possible delays and drop in antenatal care visits, delay in reaching or seeking care could have contributed to maternal death (Bulletin of the World Health Organization 2015). Several studies have shown that cost, transportation, and humiliation in PHCs were responsible for delays in seeking care or in going to care in the first place. No incidence of humiliation have been reported at the level of PHC network of the MOPH. .Delay in seeking care and booking early in pregnancy will increase the risk of delays in identifying medical or obstetric conditions that complicate pregnancy and childbirth and increase risks of maternal mortality and morbidity.

2.

The second alarming finding is the fact that close to 35% of the maternal death cases among Syrian displaced are children and adolescents 10-19 years of age. Reports indicate severe economic hardships for Syrian displaced families, sexual harassment and violence, in addition to traditional practices of adolescent marriage, may have contributed to the rise of adolescent marriage and consequently the rise in their vulnerability to maternal morbidity and mortality. A recent report from FHS- AUB showed that adolescent marriage among Syrian displaced increased by 3 times compared to pre- Syrian crisis.

3.

The third alarming finding is the increase number of maternal death cases due to non-obstetrical causes. In the face of shrinking humanitarian support to Syrian displaced, and in view of the increased poverty and rising cost of health care (UNHCR, 2018), less and less pregnant women are seeking care, implying a delay in identifying high risk pregnancies which may increase the risk of maternal morbidity and mortality due to non-obstetrical causes.

4.

The 2 main medical entities responsible for maternal death cases were preeclampsia and PPH. Although PPH remains a leading serious cause of MM, preeclampsia would mandate proper and early identification of signs and symptoms of this medical condition for timely intervention and management. Health care providers need to be cognizant of optimal management of preeclampsia and its consequences.

V. RECOMMENDATIONS

The data on maternal mortality 2017 show that Lebanon, and despite the maternal health care burden- is still adhering and meeting the MDG5 target with an official MMR below 23. The dire economic conditions of refugees and host communities are contributing to delays in pregnancy care and absent skilled attendance at birth, which consequently contributing to maternal morbidity and mortality. The pattern of maternal death in 2017 points to delays in early identification of medical conditions and in timely response and management. Advocacy, economic support to women and communities and focused obstetrical workshop for health care providers are recommended to reduce maternal complications and potential mortality and to improve maternal health care.

VI. References

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