

**Research Article**

**Prevalence of Cesarean Section at  
ALTAWLID Hospital during the Syrian  
Crisis**

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**ABSTRACT**

Cesarean delivery (CD) rates are becoming a global concern because of their steady increase, lack of awareness about their indications, associated short and long-term risks. In this study, we offer you the rates of cesarean deliveries compared to natural births during the Syrian crisis. This study is a retrospective study in ALTAWLID University Hospital in Damascus, Syria from 2010 until the end of the first half of 2017. Data were analyzed using Spss 23.0. We found 90054 deliveries (natural and caesarean) in all years included in the study. While the number of deliveries in the crisis years was 78,115 divider to (45,649) normal and (32466) CS. The highest rate of CS was at the end of the first half of 2017 with 51%. The rate of Caesarean deliveries has increased globally and in Syria in recent years so it is necessary to raise awareness on this issue to reduce the excessive use of this procedure, which may be dangerous for the mother and newborn.

## INTRODUCTION

A caesarean section (CS) is a life-saving operation when certain complications happens during pregnancy and labour. Nevertheless, it is still a major surgery and has immediate maternal and perinatal risks and may affect future pregnancies. In addition, its long-term effects are still being investigated [1-4]. Furthermore, while CS should only be done for obstetrical indications, it is sometimes done for maternal request and could have many risks for the infant. These risks include neonatal depression due to general anesthesia, fetal injury during hysterectomy and/or delivery, increased likelihood of respiratory distress even at term, and breastfeeding complications. [5]

The use of CS has risen largely globally in the last decades particularly in middle- and high-income countries, [6]. Changes in maternal characteristics and professional practice styles, increasing malpractice pressure Cesarean delivery on maternal request might be the cause for this increase. [7–10]. Also, Cesarean delivery on maternal request (CDMR) an elective cesarean in the absence of any medical or obstetric contraindication for attempting vaginal

delivery [11–12] is the commonest reason for the increasing cesarean sections [13–14].

This study aimed to determine the prevalence of CS in Damascus, Syria at ALTAWLID University Hospital to increase the awareness about the increasing CS. Up to Our knowledge this study is the first of its kind in Syria.

## MATERIALS AND METHODS

This study was a retrospective study in the patients reviewing ALTAWLID university hospital from 1/1/2010 to 30/6/2017 for delivery. The study included 92653 deliveries either normal or cesarean section. This study was done in Damascus, Syria at ALTAWLID university hospital. All The data were collected by medical students or doctors to insure the privacy and all the names were blinded. Statistical Analysis was done using SPSS 23.0 (SPSS Inc.)

## RESULTS

We reviewed the number of deliveries from 2010 till the mid of 2017 considering the year 2010 the base year (before the crisis) to which we compared the following years to. We had a total of 90054 deliveries (normal and cesarean) including 2010 divided to (54,105) normal deliveries and (35949) CS. The number of deliveries in the Syrian

Crisis (excluding 2010) was (45,649) normal and (32466) CS with a total of 78,115 deliveries. (Table 1) and (Figure 1).

Over the past decades, the unprecedented and significant rise in caesarean delivery rates has increased research and anxiety among healthcare professionals [15, 16-19]. Despite the importance and interest about this issue worldwide, there are only few studies about it. Globally, the latest available data show that nearly 1 in every 5 women in the world now give birth to Caesarean. [20] The percentage of cesarean delivery in ALTAWLID Hospital has increased during the years of crisis since 2011 until now, and this includes CDMR (perhaps because of the lack of prenatal care or because of the difficulties in reaching hospitals and due to large population displacements) among other reasons.

The average global cesarean section is 18.6%. It ranges between 6% in the less developed regions and 27.2% in the more developed regions. The lowest CS rates are found in Africa (7.3%) and more specifically in West Africa (3%). The highest rates are found in Latin America and the Caribbean (40.5%) and South America has the highest rate of 42.9%, all until 2014. [17]

We found 78,115 natural and caesarean births in the crisis. The number of normal deliveries during the crisis years was 45,649 with a rate of 58.4% while the number of caesarean deliveries was 32,466 with a rate of 41.6%. We used the number of deliveries (natural or caesarean) of the year 2010 as a base year (before the crisis) to compare the number of deliveries in crisis years. In 2010, the percentage of caesarean births was 29%, and this percentage increased gradually until reaching its peak in the first half of 2017.

In 2011, the percentage of caesarean births reached 32% (an increase of 3%) and in 2012, it became 33%, an increase of 1% until it reached its highest increase in 2013 at 43.5% (10.5% rise) and continued to increase until reaching its peak in the first half of 2017 by 51%. In 2014, caesarean delivery was 43% in South America. It was the highest percentage of global Caesareans in that period [20] compared to 43.5% in the ALTAWLID University Hospital in Damascus, Syria in the same year.

## CONCLUSION

Given the increasing rate of CS in the crisis and globally it is very important to focus our attention on the causes of this incidence in order to reduce it.

## COMPLIANCE WITH ETHICAL STANDARDS

ALTAWLID University Hospital

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**Ethical approval:** All procedures performed in studies involving human participants were in accordance with the ethical standards of the institutional and/or national research committee and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards.

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### FIGURE AND IMAGES

Table 1: Results of the study including the number of deliveries in each year (whether it is a normal delivery or a caesarean section).

Year	Total	Normal	Normal Percentage	CS	CS Percentage
2010	11939	8456	71%	3483	29%
2011	10928	7397	68%	3531	32%
2012	13051	8700	67%	4351	33%
2013	11125	6298	56.5%	4827	43.5%
2014	12731	6790	53%	5941	47%
2015	12521	7168	57%	5353	43%
2016	12481	6697	54%	5784	46%
1/2					
2017	5278	2599	49%	2679	51%

Base Year: Comparison Year

Highest CS rate

Figure 1: Results of the study including the number of deliveries in each year (whether it is a normal delivery or a caesarean section).

