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# Caesarean births among migrant women in high-income countries

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High caesarean birth rates among migrant women living in high-income countries are of concern. Women from sub-Saharan Africa and South Asia consistently show overall higher rates compared with non-migrant women, whereas women from Latin America and North Africa/Middle East consistently show higher rates of emergency caesarean. Higher rates are more common with emergency caesareans than with planned caesareans. Evidence regarding risk factors among migrant women for undergoing a caesarean birth is lacking. Research suggests that pathways leading to caesarean births in migrants are complex, and they are likely to involve a combination of factors related to migrant women's physical and psychological health, their social and cultural context and the quality of their maternity care. Migration factors, including length of time in receiving country and migration classification, have an influence on delivery outcome; however, their effects appear to differ by women's country/region of origin.



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## Introduction

Over the last two decades, caesarean birth (CB) rates have increased dramatically in most high-income countries (HICs) [1]. Although rates have remained relatively low in some countries such as Norway (16.6%), Sweden (16.3%) and the Netherlands (15.6%), current rates in the US, Canada, Australia and a number of countries in central and southern Europe have reached 25% or higher [1]. While it is debated whether an optimal CB rate should be proposed, it has been shown that at the population level, rates above 10–15% are higher than can be medically justified [2,3].

The high CB rates in HICs are considered a source of public health concern due to associated health risks. Maternal health risks include infection, wound haematoma, increased blood loss, thromboembolism, surgical injury, a lengthy recovery and higher rates of maternal death [4,5]. Complications in subsequent pregnancies include uterine rupture, stillbirth, placenta previa, placental abruption and invasive placental disease [6–8]. For newborns, there is a greater risk of respiratory problems, admission to a neonatal intensive care unit (NICU) and perinatal mortality [5].

A CB is also a costly procedure [9,10]. Costs include the material and human resources associated with performing the procedure, a longer hospital stay and hospital readmissions due to complications. Given the associated health risks and costs, and the fact that some countries with low CB rates also have low perinatal mortality rates [9,11], high CB rates have been questioned, and recommendations issued that CBs only be undertaken when medically necessary [3,12].

Worldwide, there are over 135 million international migrants living in HICs, half of whom are women [13]. 'International migrants' (hereafter referred to as 'migrants') are individuals who have moved from one country to establish themselves temporarily or permanently in another country [14]. The majority of migration is from low- and middle-income countries (LMICs) [13]. In some HICs, births to migrants represent 20% or more of all births [15–18]. Both the migrant population and the number of births among migrant women are expected to grow.

CB rates of migrants living in HICs are not readily available in government reports and statistics. Based on the most recent data available from published studies [19–37], the population rates for migrants are generally well above the recommended 10–15% range, although they appear to vary according to the rates of the receiving countries. Data also suggest that rates vary for different migration subpopulations defined by migration indicators including country of birth, length of time in receiving country and migration classification (e.g., economic immigrant and refugee). A number of studies also show higher rates for certain migrant groups when compared with non-migrant women [20,23,31].

Although migrants are often healthier than non-migrants upon arrival (i.e., the 'healthy-immigrant effect'), many migrant women, especially from LMICs, face conditions that may exacerbate health and childbearing risks including poverty, social isolation, discrimination, limited or no health insurance, barriers to accessing health care and stress related to migration and resettlement [38]. 'Humanitarian migrants', including refugees, those seeking asylum (i.e., those applying for refugee status at the border or from within the receiving country) and undocumented persons (i.e., those individuals with no legal status in the receiving country) may have suffered violence and trauma [38]. Risks for various diseases may also vary between different migrant subgroups depending on their country of origin, their migration trajectory and genetic predisposition.

In this context, CB rates among migrant women in HICs are of concern. This review aims to provide a synthesis of what is known regarding CBs among migrants living in HICs, and it offers recommendations for clinical care to improve childbirth outcomes in migrant women. Agreed migrant indicators (i.e., country of birth, length of time in receiving country, language fluency and ethnicity) have guided the focus of the review [39], with the exception of ethnicity as it is a concept that applies both to migrants and to non-migrants, and it is often conflated with the country of birth.

## CB rates: migrants compared with non-migrants

A systematic review and meta-analysis comparing CB rates of migrants by region/country of origin to non-migrants living in HICs was published in 2013 [40]. The search was exhaustive (to January 2012), and it had no language restrictions. The primary inclusion criterion was that studies must have examined