Editorial

It is time to Audit Cesarean Deliveries:
Adoption of Robson Classification in Low Resource Settings

Mengistu Welday Gebremichael

High cesarean birth rates are an issue of international public health concern (1–5), and yearly 20 million cesarean deliveries occur in the world. Over the last decades, the use of cesarean section has been increasing to unprecedented levels (6). Brazil has one of the highest rates of cesarean sections in the world, which reached 52% in public and higher (about 90%) in private sectors (7,8). In England and Ireland, one in four women has a Cesarean section (9,10). In China, births by cesarean section reached three fold (11) and in Tanzania, the total CS rose from 19% to 49% in about a decade (12). According to the 2011 Ethiopia Demographic and Health Survey, the rate of cesarean delivery (21.8%) in Addis Ababa (13), and other studies in Ethiopia ranging the rate from 21% to 27.6% in public hospitals (14–16) and reported even higher in private hospitals (16). A national review study reported CS rate variations across the health sectors (Fig.-1) (17). In Tigray, a research study employing the Robson classification system showed that cesarean section rate varies (ranging from 13% to 27%) among public health institutions (18).
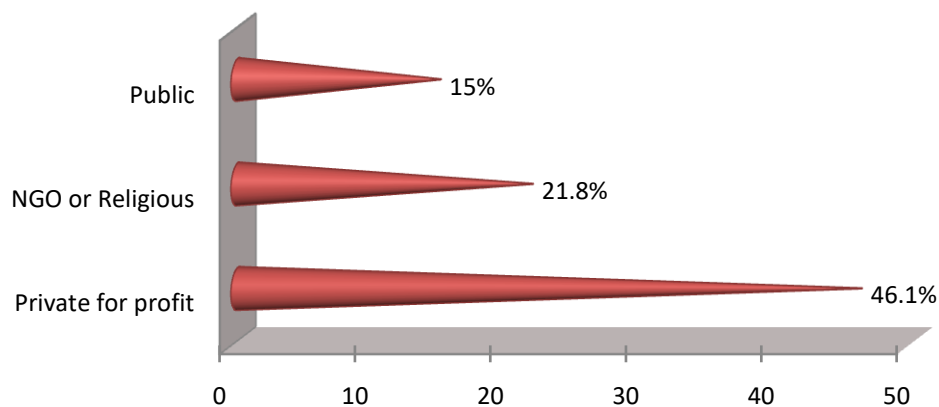

Fig. 1: Institutional cesarean delivery rates in Ethiopia by sector conducted by Fesseha, 2011

Though the cesarean section (CS) is a life-saving surgical procedure, the incidence of total complications is higher in the cesarean section group compared with the vaginal delivery group (19). The complication is higher if it is performed without medical needs reported by Bayoua bout 10% (20) that put mothers and their babies at-risk of short- and long-term health problems. In settings that lack the facilities to conduct safe surgeries or treat potential complications, CS can cause significant complications, disability or death (21). Besides, high rates of unnecessary CS can pull resources away from other services (22), especially in overloaded and weak health systems.

In order to understand what is driving to the higher trend of CS and to ensure that CS is not being used unnecessarily, a tool to monitor and compare CS rates in the same setting over time and between different settings is needed. The lack of such a standardized tool to monitor and compare CS rates (23) in a consistent and action-oriented manner is one of the factors that have hindered a better understanding of this trend.

To monitor CS rates, the World Health Organization (WHO) recommends institutions to use Robson classification. Robson proposed a system of 10 categories that classify all women admitted for delivery according to five obstetric characteristics that are generally routinely collected in most maternity units (24). According to WHO, Robson classification helps to identify high and least contributors of the group to the overall cesarean section rates, choose practices with more desirable results, and optimize the use of cesarean section (25). Those countries like Sweden using Robson classification as a tool of intervention, they decreased the CS rate in nulliparous women in spontaneous labour bring from 10.1% in 2006 to 3.1% in 2015 (26). It also helped to identify subgroups requiring closer monitoring for more in-depth analyses of the indications for cesarean section (27).

Identification of specific contributors employing Robson classification to the total CS rates will improve care, and avoid unnecessary cesarean deliveries, which is not benefiting the mothers and the newborns. Robson classification in countries where resources are scarce like Ethiopia is therefore high time to adapt to audit and optimize CS. In order to assist healthcare facilities in adopting the Robson classification, WHO has developed guidelines (25) for its use, implementation and interpretation, including standardization of terms and definitions.

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