14.6. Vaginal Birth Following a previous Caesarean section (VBAC) (MN-6)

14.6.1. Documentation sheet

Description	Proportion of vaginal births following a previous caesarean section.
Calculation	Number of vaginal deliveries among women with prior caesarean (x100), divided by all women who delivered and had a prior caesarean delivery. Results are presented by region. Variability between hospitals is also shown.
Rationale	Vaginal birth after a previous caesarean section (VBAC) not only satisfies patient's preference for vaginal delivery, but is also associated with decreased maternal morbidity and a decreased risk of complications in future pregnancies. [1] Repeated C-sections (following the dictum "once a caesarean always a caesarean") partly contributed to the increase in the rate of caesarean deliveries. However trial of labour after a prior C-section (TOLAC) is now considered as a reasonable approach in select pregnancies. [1] Recommendations in favour of TOLAC translated into increased VBAC rates and decreased caesarean rate. However, it also resulted in an increase in the number of reports of uterine rupture and other complications related to TOLAC. These reports, associated with professional liability pressures, contributed in part to a reversal of the VBAC and caesarean trend. Nevertheless, in 2010, the American National Institutes of Health recognised that TOLAC was a reasonable option for many women with a prior caesarean and encourage organisations to facilitate access to TOLAC. [1] However, to reduce the risk of uterine rupture, it is recommended to avoid any form of inducement, especially by using prostaglandins.[2]
Data source	Statbel (Direction générale Statistique - Statistics Belgium), CEpiP, SPE and Euro-Peristat[3] for international comparison
Related indicator	Caesarean sections rate
Performance Dimension	Quality (appropriateness); Variability of care

14.6.2. Results

Proportion of VBAC

Overall, proportion of VBAC decreased by 2.42 points of percentage in Belgium from 2010 to 2015 (Table 142).

Proportion of VBAC decreased in every Belgian regions, excepting in Brussels where an average annual increase of 0.29 point of percentage was observed between 2010 and 2015.

In 2015, Brussels had the highest VBAC proportion (38.68%), whereas Flanders had the lowest VBAC proportion (30.14%), (Table 142).

Using CEpiP and SPE data (de facto data) instead of Statbel data (law data), the proportion of VBAC became lower in Brussels but the observed trend remains the same, i.e. an impressive decrease from 2010 to 2012 and an impressive increase since 2012. (Table 143, Figure 222)

Variation of VBAC practice among the Belgian maternity units

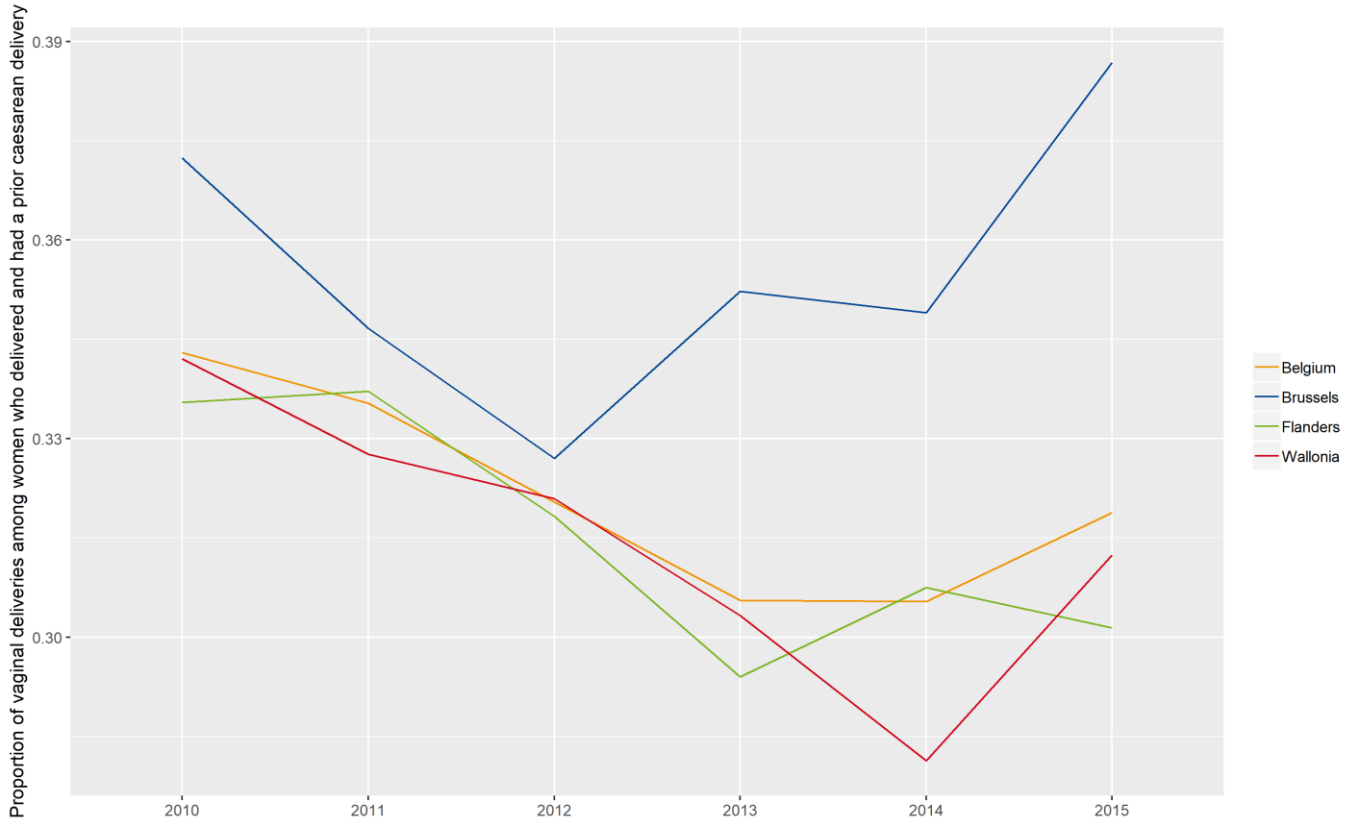
In 2015, it existed differences of VBAC practices among Belgian hospitals. Indeed, VBAC proportions ranged from 12 to 61%. Case-mix was not taken into account and could have an impact on the observed variations of practices. (Figure 223)

No significant linear correlation was observed between the number of deliveries and the rate of VBAC (r= 0.109, p= 0.256). (Figure 224)

International comparison

In the last Euro-Peristat report[3], median EU-26 (Belgium, Czech Republic, Denmark, Germany, Estonia, France, Croatia, Italy, Cyprus, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Portugal, Slovenia, Slovakia, Finland, Sweden, England, Wales, Scotland, Northern Ireland, Iceland, Norway, Switzerland) VBAC was estimated to be 26.1% [Inter-Quartile Range: 21.3-33.2] in 2015, i.e. lower than in Belgium (31.88%) in the same year.

Figure 221 – VBAC, by region, 2010-2015



Data source: Statbel; Calculation: KCE

Table 142 – Proportion of VBAC, by region, 2010-2015

	2010	2011	2012	2013	2014	2015	Average annual difference 2010-2015
Belgium	34.30%	33.54%	32.04%	30.55%	30.54%	31.88%	-0.48%
Brussels	37.24%	34.67%	32.70%	35.22%	34.90%	38.68%	0.29%
Flanders	33.55%	33.71%	31.82%	29.40%	30.75%	30.14%	-0.68%
Wallonia	34.21%	32.76%	32.09%	30.33%	28.13%	31.24%	-0.59%

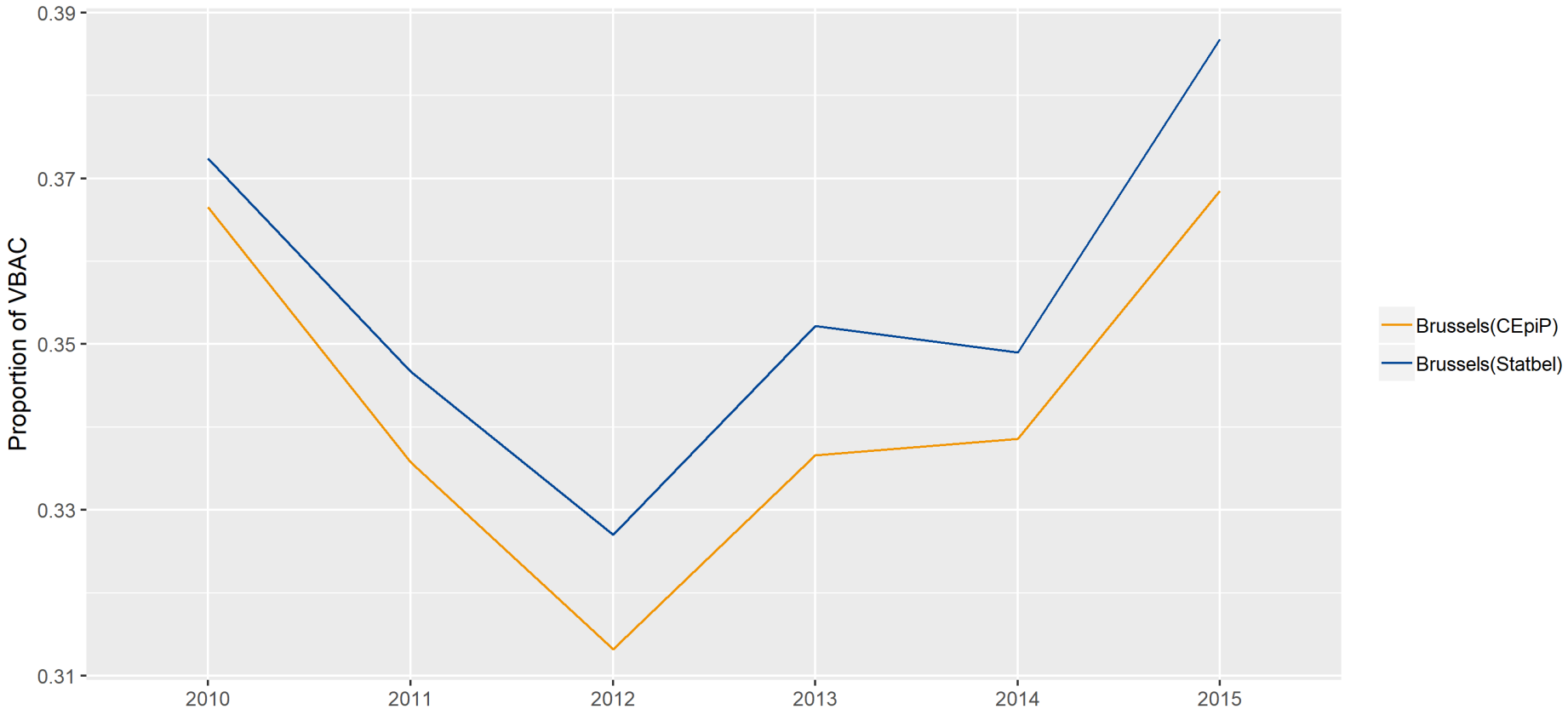
Data source: Statbel; Calculation: KCE

Table 143 – Proportion of VBAC, by region, 2009-2016

	2009	2010	2011	2012	2013	2014	2015	2016	Average annual difference 2009-2016
Brussels*	38.44%	36.65%	33.58%	31.62%	33.66%	33.86%	36.85%	36.67%	-0.25%
Flanders*	34.91%	34.25%	34.43%	32.56%	30.07%	30.91%	30.79%	30.93%	-0.57%
Wallonia	35.47%	31.87%	32.73%	32.58%	30.43%	28.31%	31.73%	32.47%	-0.43%

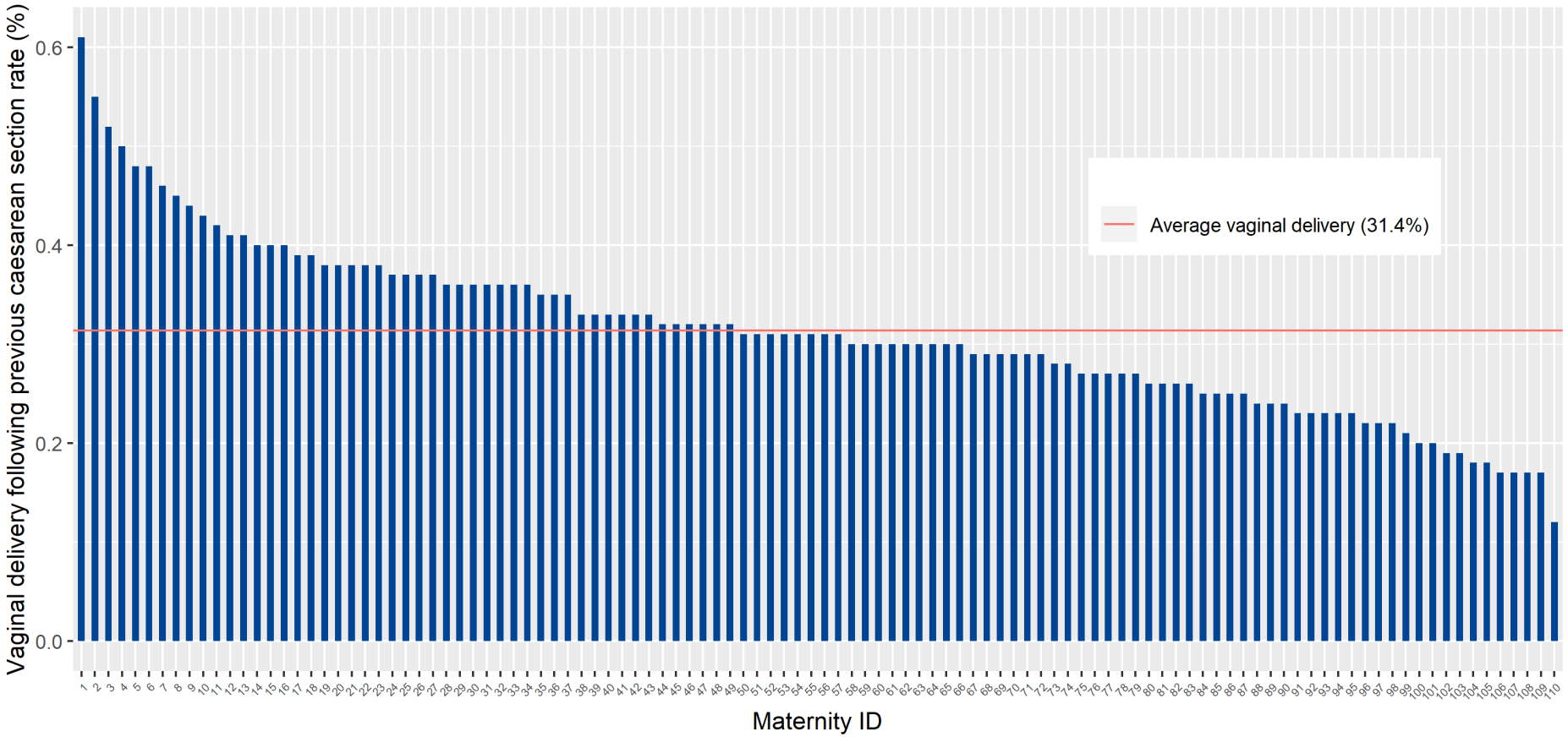
** UZ Brussels is double counted, i.e. in Brussels & Flanders regions; Data source: CEpiP (BRU-WAL) & SPE (FLA); Calculation: KCE*

Figure 222 – VBAC, by data source, Brussels, 2010-2015



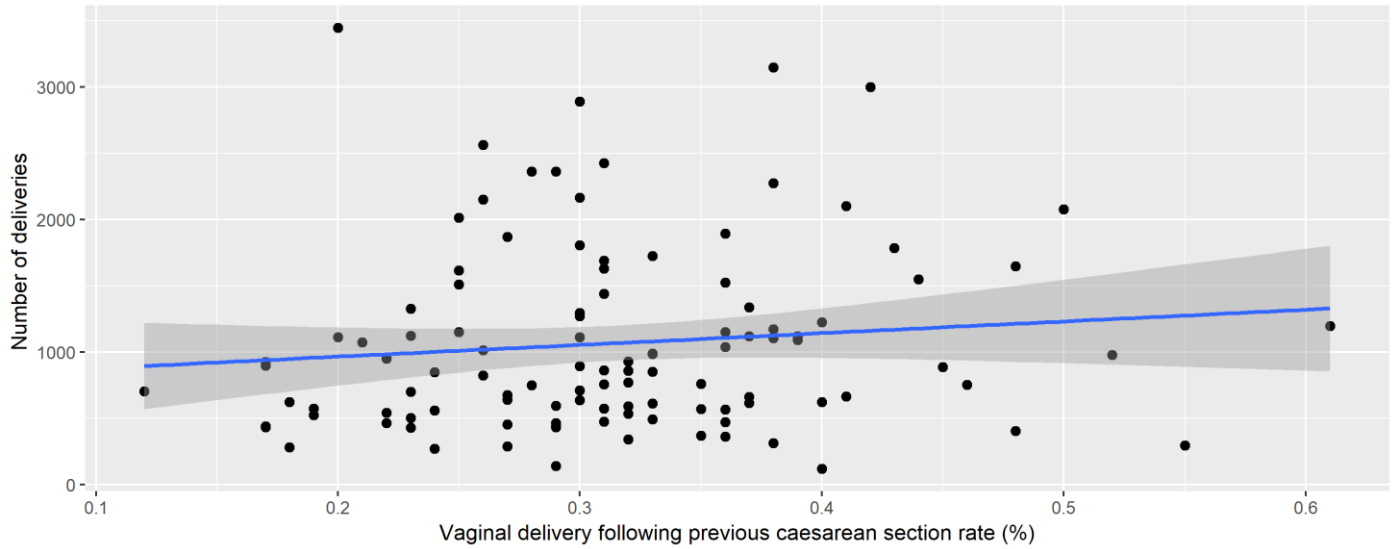
Data sources: Statbel & CEpiP; Calculation: KCE

Figure 223 – VBAC rate (%), by maternity, 2015



Data source: Statbel; Calculation: KCE

Figure 224 – Linear correlation between the number of delivery and VBAC rate, 2015



Data source: Statbel; Calculation: KCE

Key points

- **In 2015, in Belgium, the VBAC proportion was 31.88%, with a proportion of 38.68% in Brussels, 31.24% in Wallonia and 30.14% in Flanders.**
- **Proportion of VBAC decreased in every Belgian regions, except in Brussels where an average annual increase of 0.29 point of percentage was observed between 2010 and 2015. Nevertheless, in each region, and important decrease at the beginning of the period is followed by an increase in the recent years.**
- **It exists differences of VBAC proportion among Belgian hospitals which ranged from 12 to 61% in 2015.**

References

[1] American College of Obstetricians Gynecologists. ACOG Practice bulletin no. 184: Vaginal birth after previous cesarean delivery. Obstetrics and gynecology. 2017;130(5).

[2] Stordeur S, Jonckheer P, Fairon N, De Laet C. Elective caesarean section in low-risk women at term: consequences for mother and offspring.Health technology assessment. 2016. KCE Report 275

[3] Euro-Peristat Project. European perinatal health report. Core indicators of the health and care of pregnant women and babies in Europe in 2015. 2018.