

ATTACHMENT 3: EXAMPLE OF RISK FACTORS FOR FAILED VACUUM

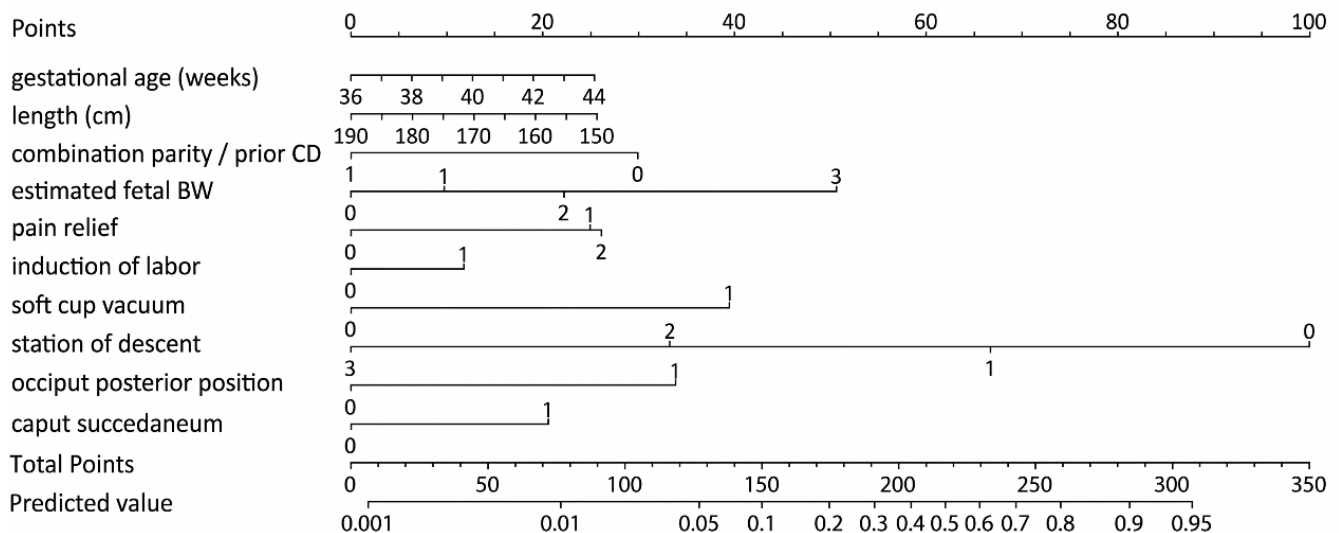


Fig. 3. Nomogram

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Label: As an example, a 175 cm tall nulliparous woman, 37 weeks pregnant of a child with EFW above 3750 g, no pain relief, no indication for vacuum assisted delivery failure to progress, no Malmstro" m cup usage, no descent of the fetal head, occiput posterior position and no presence of caput succedaneum has a risk of vacuum-assisted delivery that is equal to $1/(1 + \exp(1 * (2.60 + 0.104 * 37 + 0.0210 * 175 + 0.981 * 0 + 0.255 * 0 + 0.317 * 0 + 0.729 * 0 + 1.66 * 1 + 0.816 * 0 + 0.855 * 0 + 0.384 * 0 + 1.29 * 0 + 1.09 * 0 + 1.11 * 1 + 0.674 * 0))) = 58\%$.

A similar chance can be found when the nomogram is used: we get 3 points for gestational age of 37 weeks, 9 points for the height of 175 cm, 30 points for being nulliparous, 50 points for an EFW above 3750 g, 100 points for no descent of the fetal head, 34 points for the occiput posterior position, and 0 points for the other characteristics, which adds up to a total of 226 points, corresponding to a predicted risk of failure of vacuum-assisted delivery of approximately 58%.

Reference: Verhoeven CJ, Nuij C, Janssen-Rolf CRM, Schuit E, Bais JMJ, Oei SG, et al. Predictors for failure of vacuum-assisted vaginal delivery: a case-control study. European Journal of Obstetrics & Gynecology and Reproductive Biology. 2016 May;200:29–34. doi:10.1016/j.ejogrb.2016.02.008

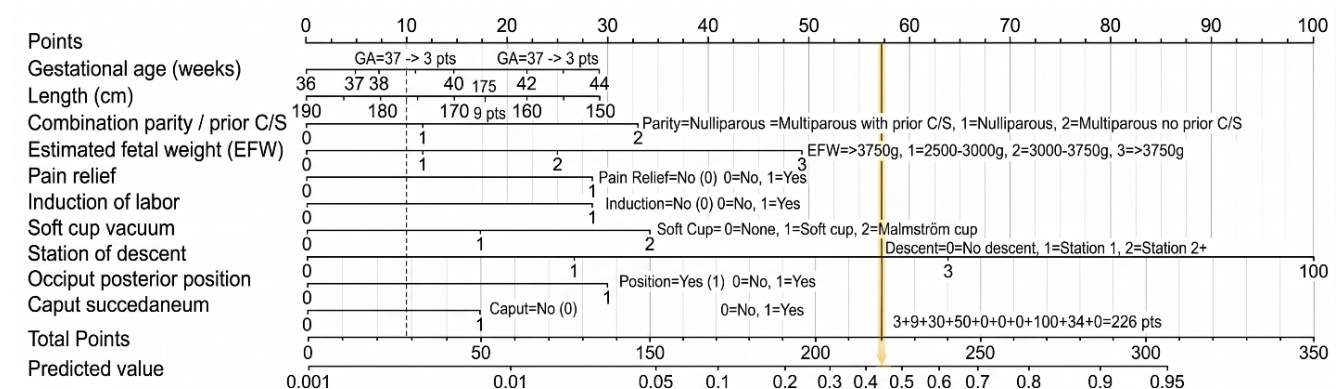


Fig. 3. Nomogram and Calculation Example.

A clean illustration of the sum calculation from the example: $[GA(3 \text{ pts}) + \text{Height}(9 \text{ pts}) + \text{Nulliparous}(30 \text{ pts}) + \text{EFW}(50 \text{ pts}) + \text{Descent-No}(100 \text{ pts}) + \text{Position-OccPosterior}(34 \text{ pts})] = 226 \text{ Points}$. Example: a 175 cm tall nulliparous woman, 37 weeks pregnant of a child with EFW above 3750 g, no pain relief, no indication for vacuum-assisted delivery failure to progress, no Malmström cup usage, no descent of the fetal head, occiput posterior position and no presence of caput succedaneum has a risk of vacuum-assisted delivery failure that is equal to $1/(1 + \exp(-2.60 + 0.104 * 37 - 0.0210 * 175 - 0.981 * 0 - 0.255 * 0 - 0.317 * 0 + 0.729 * 0 + 1.66 * 1 + 0.816 * 0 + 0.855 * 0 + 0.384 * 0 + 1.29 * 0 - 1.09 * 0 + 1.11 * 1 + 0.674 * 0)) = 58\%$. Similar chance can be found when the nomogram is used: we get 3 points for gestational age of 37 weeks, 9 points for the height of 175 cm, 30 points for being nulliparous, 50 points for an EFW above 3750 g, 100 points for no descent of fetal head, 34 points for the occiput posterior position, and 0 points for the other characteristics, which adds up to a total of 226 points, corresponding to a predicted risk of failure of vacuum-assisted delivery of approximately 58%.