SUPPLEMENTARY TABLE 1. Medical necessity of reasons for C-section delivery

Reasons for C-section delivery	Risk associated with vaginal delivery?
Medically unnecessary reasons	
Mother fears pain/wants faster delivery	No risk[1-4]
Mother is aged >35 years	Women aged >35 years are slightly more likely to have childbirth complications, which increase the risk of difficult vaginal delivery. However, this risk depends on the mother's health; mothers aged >35 years will not necessarily have a complicated or difficult birth.[5,6]
Expected date of delivery has passed	Even if the expected delivery date has passed, it is safe to wait until spontaneous labour if the fetus remains healthy. Labour induction and oxytocin are also safe methods to promote spontaneous labour.[7,8]
Amniotic sac ("water") is broken	Risk of difficult vaginal delivery depends on gestational age. In early pregnancy, water breaking is referred to as premature rupture of membranes (see below).[9] In late pregnancy, water breaking may be a sign of early labour. However, it does not increase the risk of difficult vaginal delivery.[10]
Premature rupture of membranes	For women with preterm premature rupture of membranes at ≥34 weeks of gestation, vaginal delivery is generally recommended to avoid an infection. C-section delivery is not necessary.[11]
Twins or in vitro fertilisation	Twins and in vitro fertilisation do not increase the risk of difficult vaginal delivery if the attending physician is trained to perform vaginal delivery for twins/in vitro fertilisation pregnancies.[12,13]
Repeat C-section	Prior C-section delivery does not increase the risk of difficult vaginal delivery if the attending physician is trained to perform vaginal delivery after prior C-section.[14-16]
Presumed very large fetus (birth weight <4000 g)	No risk[17]
Possibly medically necessary reasons	
Improper fetal position	Depends on fetal position (could not be determined from our survey data).[18,19]
Poor maternal health (high blood sugar/ hypertension/heart disease)	If gestational diabetes is the only abnormality, delivery before 41 weeks of gestations is not recommended.[20] Severe hypertension can create unfavourable cervical conditions for delivery; mild to moderate hypertension generally does not increase the risk of difficult vaginal delivery.[21]
Mother is overweight or underweight	Overweight/underweight status is based on body mass index (could not be determined from our survey data). Obesity may increase pelvic soft tissue, which narrows birth canal diameter. Overweight and obese women also have longer labour durations than women of normal weight; fetal monitoring may be more difficult during labour. Obesity can increase the risk of difficult vaginal delivery. However, obesity also increases risks of infection, bleeding, and other complications during C-section delivery.[22-24]
Excessive/insufficient amniotic fluid	Low amniotic fluid level in the last trimester is associated with increased risk of difficult vaginal delivery; however, the decision to perform C-section delivery depends on fetal health. Excessive amniotic fluid may require reduction by amniocentesis or indomethacin medication. Both methods carry less risk than C-section delivery.[25,26]
Presumed very large fetus (birth weight ≥4000 g)	Elective C-section delivery is strongly recommended for patients with diabetes with estimated fetal weight ≥4250 g. However, normal vaginal delivery is recommended for nondiabetic individuals with estimated fetal weight ≥4000 g.[17]
Small pelvic bone	Women with small pelvic bones may have longer delivery or fail to progress. C-section delivery may be necessary to avoid further complications.[27]
Cord around neck	Risk of difficult vaginal delivery depends on cord length, number of turns, and tightness around neck.[28]
Insufficient cervical dilation	Some methods may aid cervical dilation. However, such methods may not be sufficient to permit vaginal delivery. In such cases, C-section delivery carries less risk.[29,30]
Reason unknown/physician preference	Risk cannot be determined.
Medically necessary reasons	
Dystocia/failure to progress	Dystocia is an important reason for C-section delivery because it significantly increases the risk of difficult vaginal delivery. However, a diagnosis of dystocia cannot be made until the latent phase of labour has ended and a trial of labour has occurred.[31]
Uterine/placental complications	Women with placenta previa are prone to bleeding during the second trimester, which increases the risk of adverse maternal and perinatal outcomes. These patients have an increased risk of uncontrolled bleeding before, during, and after vaginal labour.[32]
Poor fetal health	Vaginal delivery may be safe in some cases, but C-section delivery is generally recommended.[33]

Abbreviation: C-section = caesarean section

SUPPLEMENTARY TABLE 1. (cont'd)

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SUPPLEMENTARY TABLE 2. Developmental outcomes according to gestational age

Gestational age	Cognitive scale	Language scale	Motor scale
	(1)	(2)	(3)
37 weeks	94.9	89.1	93.7
38 weeks	95.2	91.4	95.1
39 weeks	96.2	92.6	96.6
40 weeks	96.2	93.0	96.9
41 weeks	97.7	94.1	97.1
>41 weeks	97.6	94.3	95.5

SUPPLEMENTARY TABLE 3. Rate of medically unnecessary caesarean section delivery according to gestational age (n=428)

Gestational age	No. (%)
37 weeks	32 (7.5%)
≤38 weeks	106 (24.8%)
≤39 weeks	279 (65.2%)
≤40 weeks	379 (88.6%)
≤41 weeks	419 (97.9%)
>41 weeks	9 (2.1%)

