



**MATERNITY UNITS
OF THE CYPRUS GOVERNMENT CONTROLLED AREAS**

**IMPORTANT PERINATAL HEALTH INDICATORS
CORRELATION WITH CAESAREAN SECTIONS FOR THE
YEARS 2015 - 2020**

HEALTH MONITORING UNIT

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Definitions of the indicators¹

Total births: a birth is defined as the start of life when a child emerges from the body of its mother. The total number of births includes both live births and stillbirths in a given year or period of time. A **live birth** is the birth of a child who showed any sign of life; the number of live births refers to the number of births excluding stillbirths. **Stillbirth** means fetal death, namely death prior to the complete expulsion or extraction from its mother of a product of conception, irrespective of the duration of pregnancy. Death is indicated by the fact that after such separation from its mother the fetus does not breathe or show any other evidence of life, such as beating of the heart, pulsation of the umbilical cord, or definite movement of voluntary muscles (*Eurostat Commission Regulation*).

Maternity Unit district: is the distribution of births by maternity unit district according to the five districts of Cyprus Government Controlled Areas (Nicosia, Limassol, Larnaca, Paphos, Ammochostos).

Distribution of mother's country of origin: is the distribution of the countries of mother's country of birth (*Euro-Peristat Indicator Definitions, R11*).

Distribution of maternal age at delivery: is defined as the distribution of age in years at delivery for women delivering a live or stillborn baby. Data in this report is presented as follows: less than 20 years old, between 20-24 years, between 25-34 years and 35 years old or more (*Euro-Peristat Indicator Definitions, C8*).

Psychoprophylaxis: is a method of preparing women for childbirth without anesthetic, by means of education, psychological and physical conditioning, and breathing exercises, also called Lamaze technique.

Mode of subfertility treatment²: is the number of women delivering liveborn or stillborn babies after the following fertility treatments: ovulation induction (OI), intrauterine insemination (IUI) with or without ovulation induction, in vitro fertilisation (IVF), intracytoplasmic sperm injection (ICSI), in vitro maturation (IVM) which may include frozen embryo transfers (*Euro-Peristat Indicator Definitions, R13*).

Mode of delivery: for a population of women and year: the number of live births or stillbirths associated with each of the following modes: vaginal non instrumental, vaginal forceps, vaginal ventouse, vaginal (other, Thierry's spatula, etc.), caesarean before or at onset of labour/elective, caesarean during labour/emergency, as a proportion of all still and live births (*Euro-Peristat Indicator Definitions, C10*).

Multiple birth rate: is the number of women in a multiple gestation pregnancy at delivery as a proportion of all women delivering live births or stillbirths by number of fetuses (*Euro-Peristat Indicator Definitions, C7*).

¹ All definitions and the glossary are from the sources below:

- a. EUROSTAT: <http://ec.europa.eu/eurostat/statistics-explained/index.php/Glossary:Birth>
- b. COMMISSION REGULATION (EU) No 328/2011 – EUROSTAT: <https://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2011:090:0022:0024:EN:PDF>
- c. EURO-PERISTAT: <http://www.euoperistat.com/our-indicators/indicators-of-perinatal-health.html#footer>

² In this report we present only the following categories: In vitro fertilization (IVF), other treatment.

Gestational age (GA) distribution: is the number of live births (starting from any week) and stillbirths (fetal deaths) at each completed week of gestation (starting from 22 weeks) expressed as a proportion of all live births and stillbirths. Gestational age is defined as the best obstetrical estimate. This distribution is presented, as follows: less than 37 weeks of gestation (preterm births), 37-41 weeks (term births) and 41+ weeks (post-term births). Preterm births can be subdivided as: 22-27 weeks (extremely preterm), 28-31 weeks (very preterm) and 32-36 weeks (moderately preterm) (*Euro-Peristat Indicator Definitions, C5*).

Admission to Neonatal Intensive Care Unit (NICU³): is the number of live births admitted in NICU.

Breast feeding during the first 48 hours after birth: is the number of babies who are partially breastfed (infant receives breast milk and the infant is allowed any food or liquid including non-human milk) and the number who are exclusively breastfed (infant receives breast milk and is allowed to receive drops and syrups) throughout the first 48 hrs (*Euro-Peristat Indicator Definitions, R20*).

Fetal mortality rate⁴: is the number of fetal deaths (stillbirths) at or after 22 completed weeks of gestation in a given year (*Euro-Peristat Indicator Definitions, C1*).

³ In Cyprus, there are two NICU, at the Makarios Hospital in Nicosia and at the General Hospital of Limassol.

⁴ Fetal deaths in this report are not differentiated by whether they are spontaneous fetal deaths or result from a termination of pregnancy.

Birth distribution – Important indicators

Total births in this report are all births occurred in all the maternity units in the Cyprus Government controlled areas, regardless mother’s residency.

Data for live births and stillbirths were collected by the midwifery staff of the maternity units. They were entered into an electronic database and analysed by the Health Monitoring Unit (HMU) of the Ministry of Health.

The majority of the indicators presented in this report are according to the definitions of the European Perinatal Health Project, Euro-Peristat⁵.

This report presents Important perinatal indicators for the years 2015-2020 and their correlation with the mode of delivery indicator, specifically with the caesarean sections.

Birth distribution

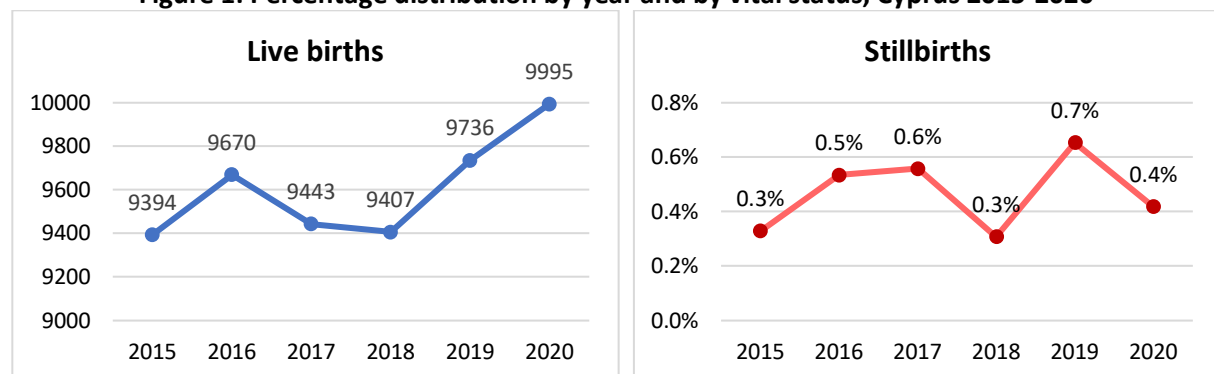
Total births in the year 2020 have increased by 2.4%, compared to the average of the last 3 years. Live births were 9995, while in the year 2019 were 9736. The stillbirths for the year 2019 were 64, much higher than the years 2018 and 2020, giving a high mortality rate of 6.53 per 1000 total births compared to the other years.

Table 1: Birth distribution by year and by vital status, Cyprus 2015-2020

Birth distribution by year and by vital status	2015	2016	2017	2018	2019	2020
Live births	9394	9670	9443	9407	9736	9995
Stillbirths	31	52	53	29	64	42
Total births (trend change ↑↓)	9425	9722 (↑3.1)	9496 (↓-2.4)	9436 (↓-0.6)	9800 (↑3.8)	10037 (↑2.4)

Birth distribution by year and by vital status	2015	2016	2017	2018	2019	2020
Live births	99.7%	99.5%	99.4%	99.7%	99.3%	99.6%
Stillbirths	0.3%	0.5%	0.6%	0.3%	0.7%	0.4%
% of total births	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Figure 1: Percentage distribution by year and by vital status, Cyprus 2015-2020



⁵ <https://www.europeristat.com/index.php/our-indicators/indicators-of-perinatal-health.html>

Mother's age

The percentage of total births of mothers aged younger than 20 was 1.4% in 2015 and increased to 1.9% in 2020. The percentage total births of older mothers, of women giving birth at 35 years or older, was 21.6% in 2015 and increased to 27.5% in 2020. Total births of the group of women aged between 20 and 34 years had 77.1% in 2015 and decreased to 70.6% in 2020.

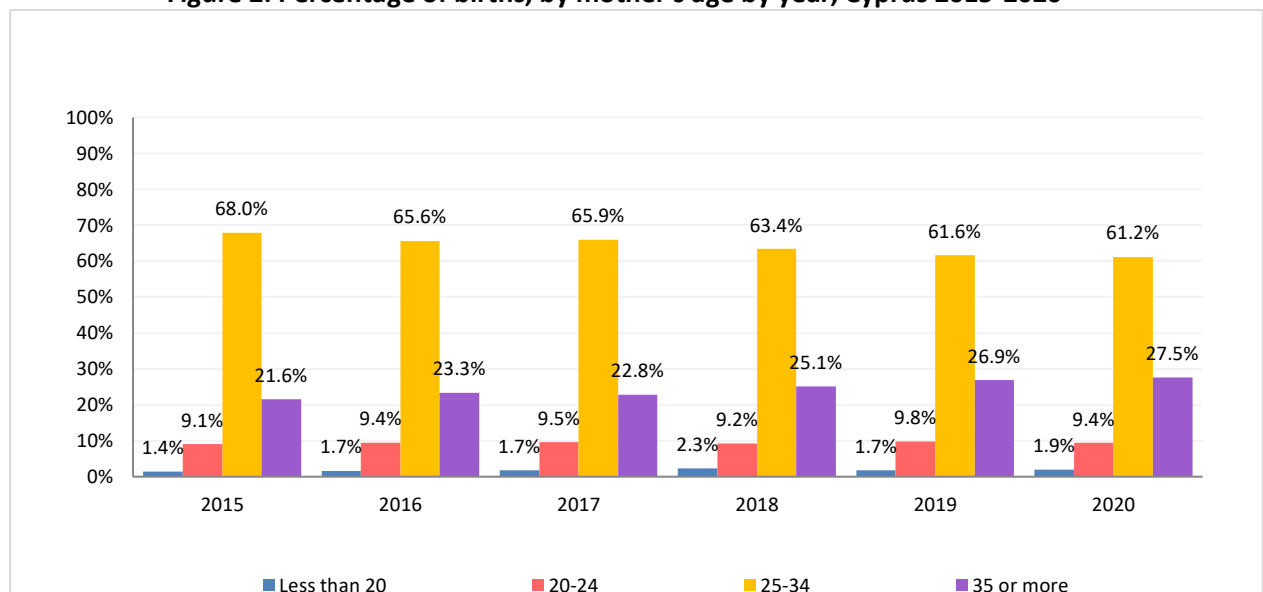
Table 2: Total births by mother's age by year, Cyprus 2015-2020

Mother's age by year	2015	2016	2017	2018	2019	2020
Less than 20	130	162	166	214	171	193
20-24	855	914	906	871	959	940
25-34	6404	6381	6261	5979	6038	6139
35 or more	2034	2264	2163	2371	2632	2764
Not stated	2	1	0	1	0	1
Total births	9425	9722	9496	9436	9800	10037

Mother's age by year	2015	2016	2017	2018	2019	2020
Less than 20	1.4%	1.7%	1.7%	2.3%	1.7%	1.9%
20-24	9.1%	9.4%	9.5%	9.2%	9.8%	9.4%
25-34	68.0%	65.6%	65.9%	63.4%	61.6%	61.2%
35 or more	21.6%	23.3%	22.8%	25.1%	26.9%	27.5%
% of total births*	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

* "Not stated" cases are distributed in each category by a weighting factor

Figure 2: Percentage of births, by mother's age by year, Cyprus 2015-2020



Psychoprophylaxis

The percentage of total births of women who used psychoprophylaxis during pregnancy was 20.1% in year 2015 and decreased to 16.4% in year 2020. Possible reason for the decrease in the year 2020, was the COVID-19 pandemic resulting to lockdowns and movement limitation.

Table 3: Total births by mother's use of psychoprophylaxis during pregnancy by year, Cyprus 2015-2020

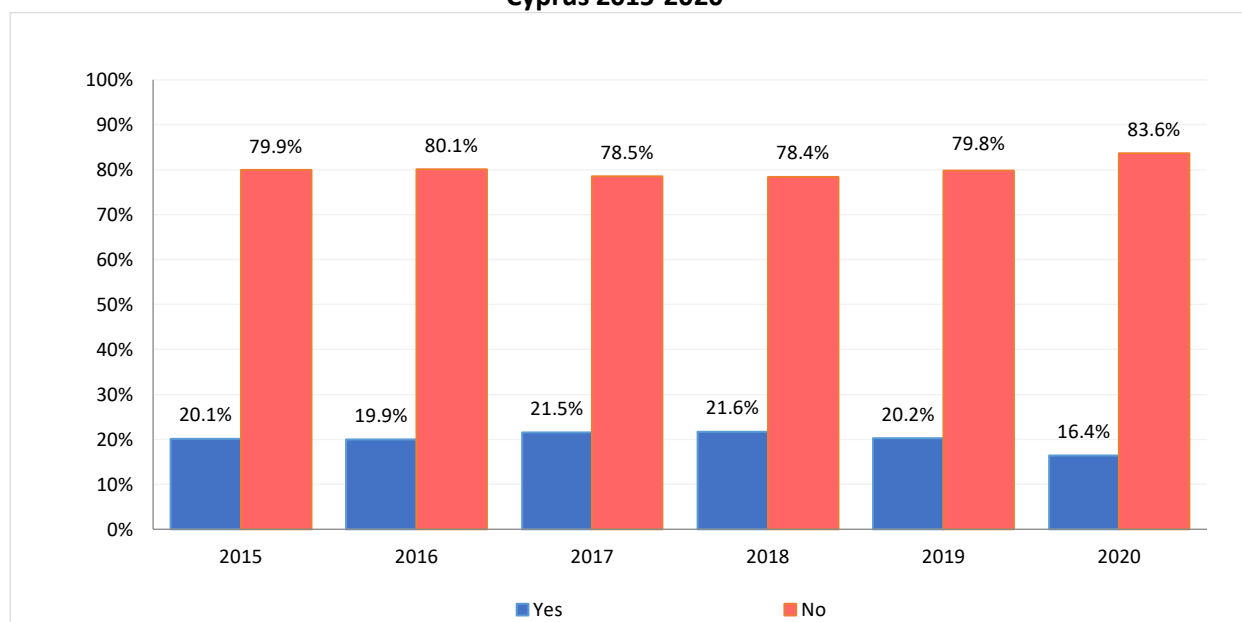
Psychoprophylaxis* during pregnancy by year	2015	2016	2017	2018	2019	2020
Yes	1896	1938	2042	2041	1980	1643
No	7526	7778	7452	7394	7818	8393
Not stated	3	6	2	1	2	1
Total births	9425	9722	9496	9436	9800	10037

Psychoprophylaxis during pregnancy by year	2015	2016	2017	2018	2019	2020
Yes	20.1%	19.9%	21.5%	21.6%	20.2%	16.4%
No	79.9%	80.1%	78.5%	78.4%	79.8%	83.6%
% of total births**	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

* "Psychoprophylaxis" is a method of preparing women for natural childbirth by means of special breathing and relaxation

** "Not stated" cases are distributed in each category by a weighting factor

Figure 3: Percentage of births by mother's use of psychoprophylaxis during pregnancy by year, Cyprus 2015-2020



Subfertility treatment (assisted fertilization)

On average in the years 2015-2020, 5.2% of the total births are of women that became pregnant after some form of assisted reproductive technique. Particularly, the percentage of in vitro fertilization (IVF) was on average 4.6%. The older the mother is, the more the possibility for an assisted reproductive technique.

Table 4: Total births by mother's mode of subfertility treatment by year, Cyprus 2015-2020

Subfertility treatment by year	2015	2016	2017	2018	2019	2020
None	9005	9186	9020	8937	9247	9505
In vitro fertilization (IVF)	363	459	398	446	500	481
Intrauterine insemination	17	14	17	40	29	31
Ovulation induction	30	31	50	5	16	7
Unspecified treatment	7	25	9	7	5	13
Not stated	3	7	2	1	3	0
Total births	9425	9722	9496	9436	9800	10037

Subfertility treatment by year	2015	2016	2017	2018	2019	2020
None	95.6%	94.6%	95.0%	94.7%	94.4%	94.7%
In vitro fertilization	3.9%	4.7%	4.2%	4.7%	5.1%	4.8%
Other or unspecified	0.6%	0.7%	0.8%	0.6%	0.5%	0.5%
% of total births*	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

* "Not stated" cases are distributed in each category by a weighting factor

Figure 4: Percentage of births by mother's mode of subfertility treatment by year, Cyprus 2015-2020

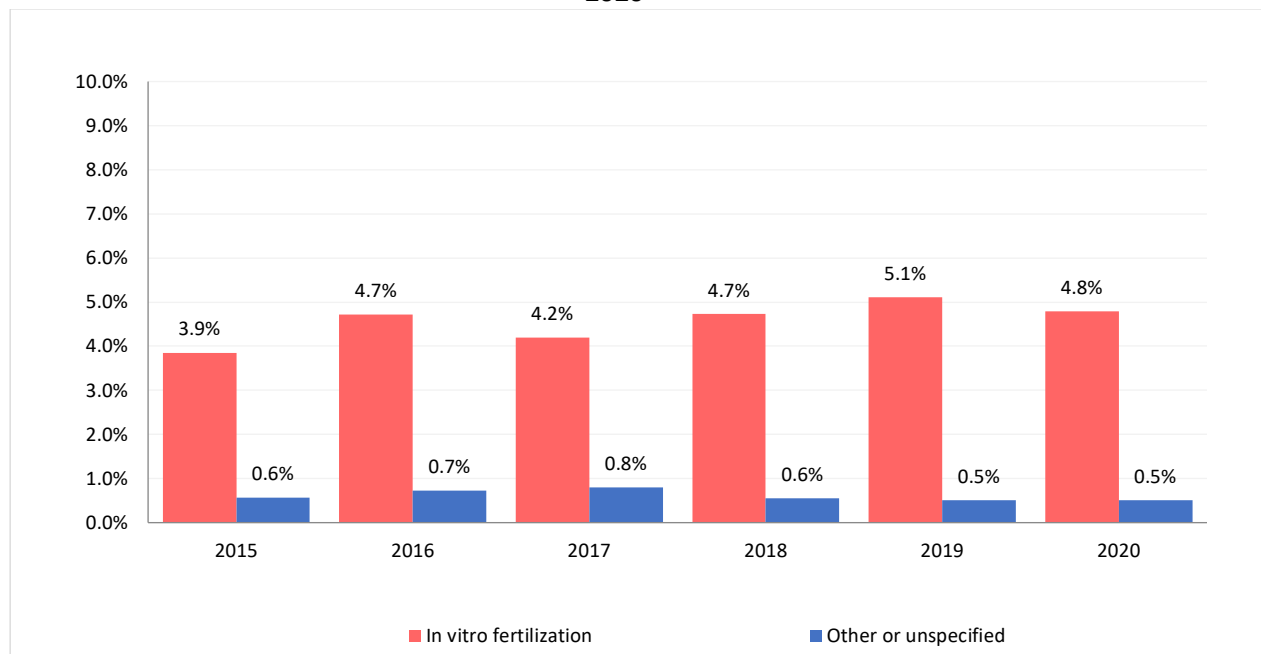


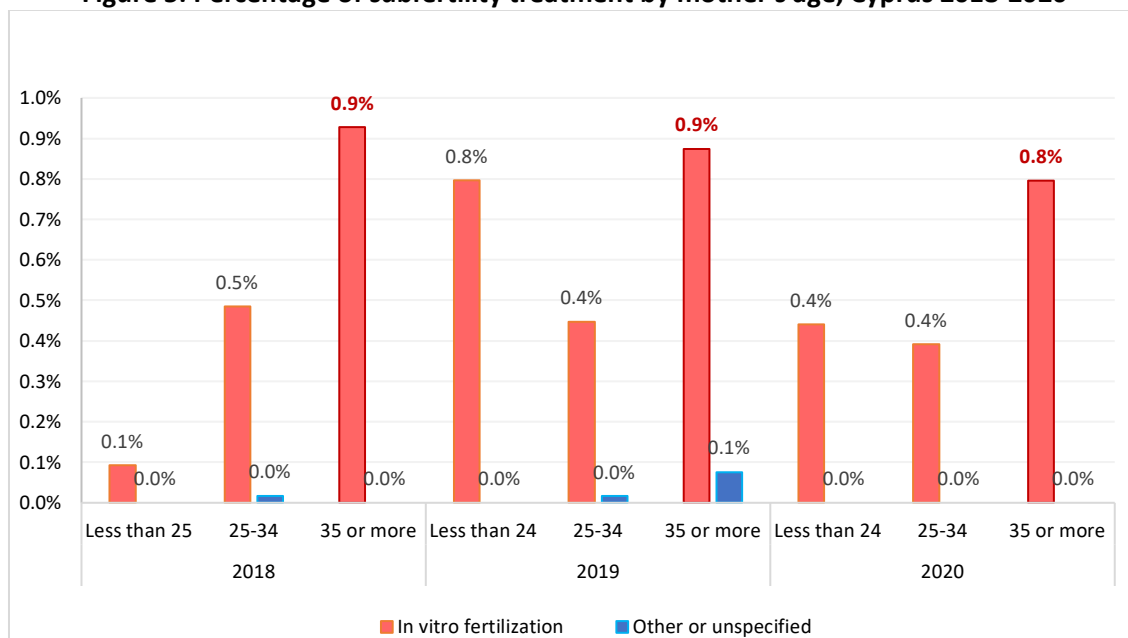
Table 5: Total births by subfertility treatment by mother's age, Cyprus 2018-2020

Subfertility treatment by mother's age	2018			2019			2020		
	Less than 25	25-34	35 or more	Less than 24	25-34	35 or more	Less than 24	25-34	35 or more
None	1082	5766	2089	1121	5821	2305	1126	5904	2475
In vitro fertilization	2	184	260	0	189	302	2	211	268
Other or unspecified	1	29	22	9	27	23	5	24	22
Not stated	0	1	0	0	1	2	0	0	0
Total births	1085	5980	2371	1130	6038	2632	1133	6139	2765

Subfertility treatment by mother's age	2018			2019			2020		
	Less than 25	25-34	35 or more	Less than 24	25-34	35 or more	Less than 24	25-34	35 or more
None	99.7%	96.4%	88.1%	99.2%	96.4%	87.6%	99.4%	96.2%	89.5%
In vitro fertilization	0.1%	0.5%	0.9%	0.8%	0.4%	0.9%	0.4%	0.4%	0.8%
Other or unspecified	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%
% of total births	99.8%	96.9%	89.0%	100.0%	96.9%	88.5%	99.8%	96.6%	90.3%

* "Not stated" cases are distributed in each category by a weighting factor

Figure 5: Percentage of subfertility treatment by mother's age, Cyprus 2018-2020



Multiple births (plurality)

During years 2015 and 2020, 5% of live births or stillbirths were multiple births. The percentage, for both twins and triplets, is decreasing over the time. The older the mother is the more the possibility for a multiple pregnancy.

Table 6: Total births by plurality (number of fetuses) by year, Cyprus 2015-2020

Plurality by year	2015	2016	2017	2018	2019	2020
Single	8925	9238	9030	9038	9342	9590
Twins	476	468	451	392	452	432
Triplets or more	24	16	15	6	6	15
Total births	9425	9722	9496	9436	9800	10037

Plurality by year	2015	2016	2017	2018	2019	2020
Single	94.7%	95.0%	95.1%	95.8%	95.3%	95.5%
Twins	5.1%	4.8%	4.7%	4.2%	4.6%	4.3%
Triplets or more	0.3%	0.2%	0.2%	0.1%	0.1%	0.1%
% of total births	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Figure 6: Percentage of multiple births (number of fetuses) by year, Cyprus 2015-2020

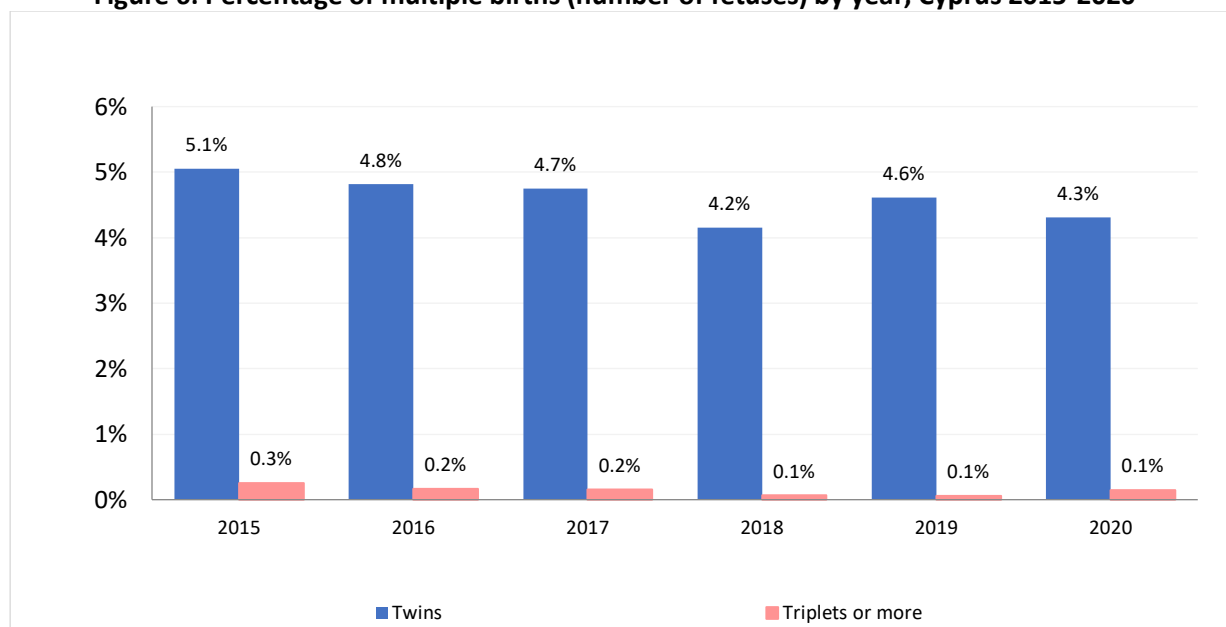
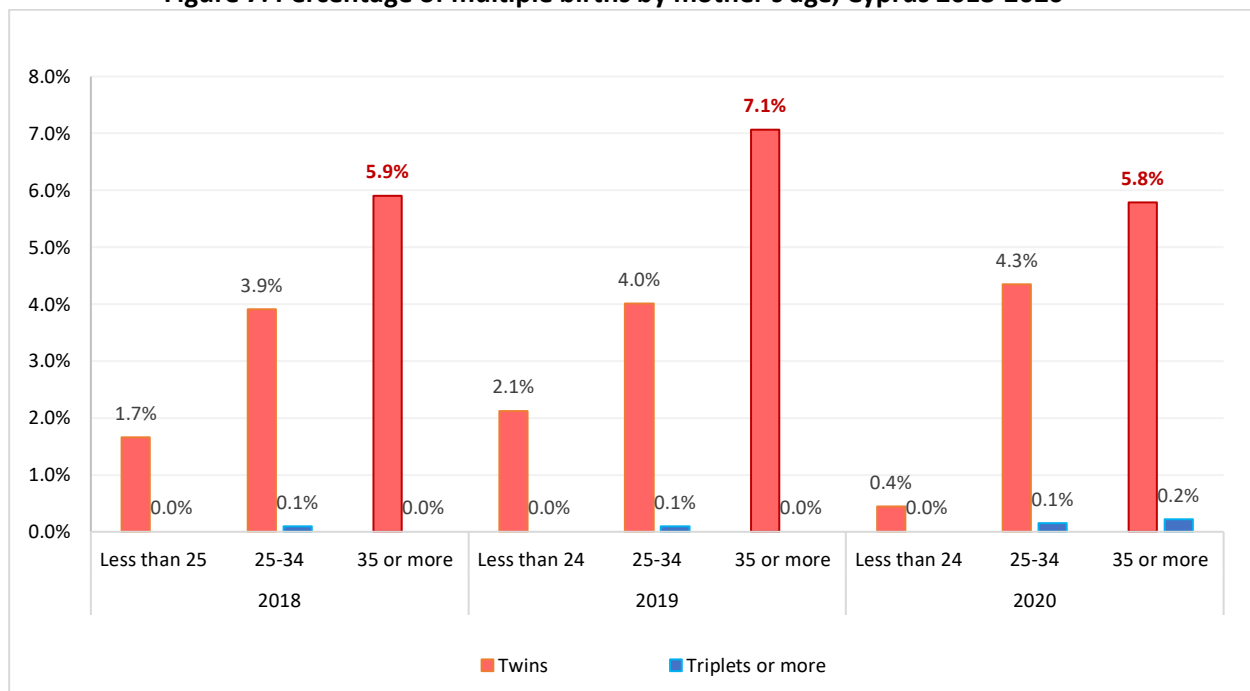


Table 7: Total births by plurality by mother's age and by year, Cyprus 2018-2020

Plurality by mother's age	2018			2019			2020		
	Less than 25	25-34	35 or more	Less than 24	25-34	35 or more	Less than 24	25-34	35 or more
Single	1067	5740	2231	1106	5790	2446	1128	5864	2598
Twins	18	234	140	24	242	186	5	267	160
Triplets or more	0	6	0	0	6	0	0	9	6
Total births	1085	5980	2371	1130	6038	2632	1133	6140	2764

Plurality by mother's age	2018			2019			2020		
	Less than 25	25-34	35 or more	Less than 24	25-34	35 or more	Less than 24	25-34	35 or more
Single	98.3%	96.0%	94.1%	97.9%	95.9%	92.9%	99.6%	95.5%	94.0%
Twins	1.7%	3.9%	5.9%	2.1%	4.0%	7.1%	0.4%	4.3%	5.8%
Triplets or more	0.0%	0.1%	0.0%	0.0%	0.1%	0.0%	0.0%	0.1%	0.2%
% of total births	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Figure 7: Percentage of multiple births by mother's age, Cyprus 2018-2020



Gestational age

The percentages of preterm births were high in all years, on average around 11.5%. This percentage is considered by Euro-Peristat the highest in Europe⁶.

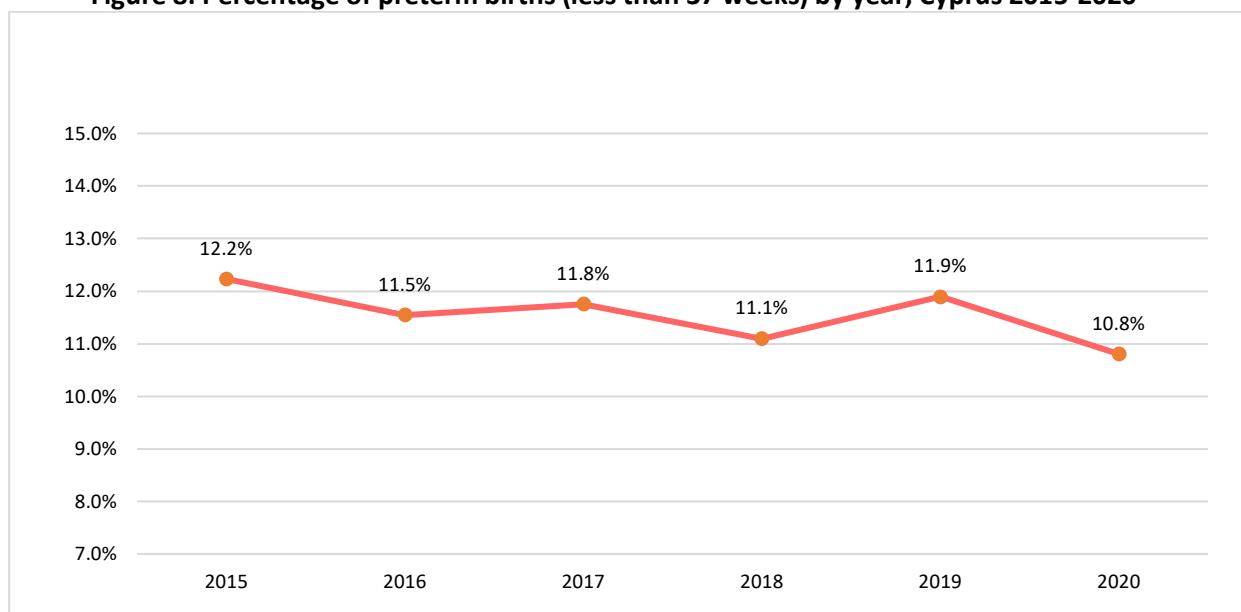
Table 8: Birth distribution by gestational age by year, Cyprus 2015-2020

Birth distribution by gestational age per year (complete weeks)	2015	2016	2017	2018	2019	2020
< 32 weeks (very preterm)	118	143	144	135	180	137
32-36 weeks (preterm)	1015	971	970	911	983	945
37 weeks or more	8130	8536	8366	8381	8614	8933
Not stated	162	72	16	9	23	22
Total births	9425	9722	9496	9436	9800	10037

Birth distribution by gestational age per year (complete weeks)	2015	2016	2017	2018	2019	2020
< 32 weeks (very preterm)	1.3%	1.5%	1.5%	1.4%	1.8%	1.4%
32-36 weeks (preterm)	11.0%	10.1%	10.2%	9.7%	10.1%	9.4%
37 weeks or more	87.8%	88.5%	88.2%	88.9%	88.1%	89.2%
% of total births*	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
<i>Preterm less than 37 weeks</i>	<i>12.2%</i>	<i>11.5%</i>	<i>11.8%</i>	<i>11.1%</i>	<i>11.9%</i>	<i>10.8%</i>

* "Not stated" cases are distributed in each category by a weighting factor

Figure 8: Percentage of preterm births (less than 37 weeks) by year, Cyprus 2015-2020



⁶ https://www.europeristat.com/images/EPHR2015_web_hyperlinked_Euro-Peristat.pdf (Figure C5.1)

Admission to Neonatal Intensive Care Unit (NICU)

The percentage of live births admitted to NICU in the year 2015 was 7.5%, while the corresponding percentage in the year 2020 was 6.0%.

Table 9: Live births by admission to Neonatal Intensive Care Unit (NICU*) by year, Cyprus 2015-2020

Neonatal Intensive Care Unit (NICU) admission by year	2015	2016	2017	2018	2019	2020
No admission in Neonatal Intensive Care Unit (NICU)	8688	8998	8807	8775	8972	9396
Admitted in Neonatal Intensive Care Unit (NICU)	706	672	635	631	764	599
Not stated	0	0	1	1	0	0
Live births	9394	9670	9443	9407	9736	9995

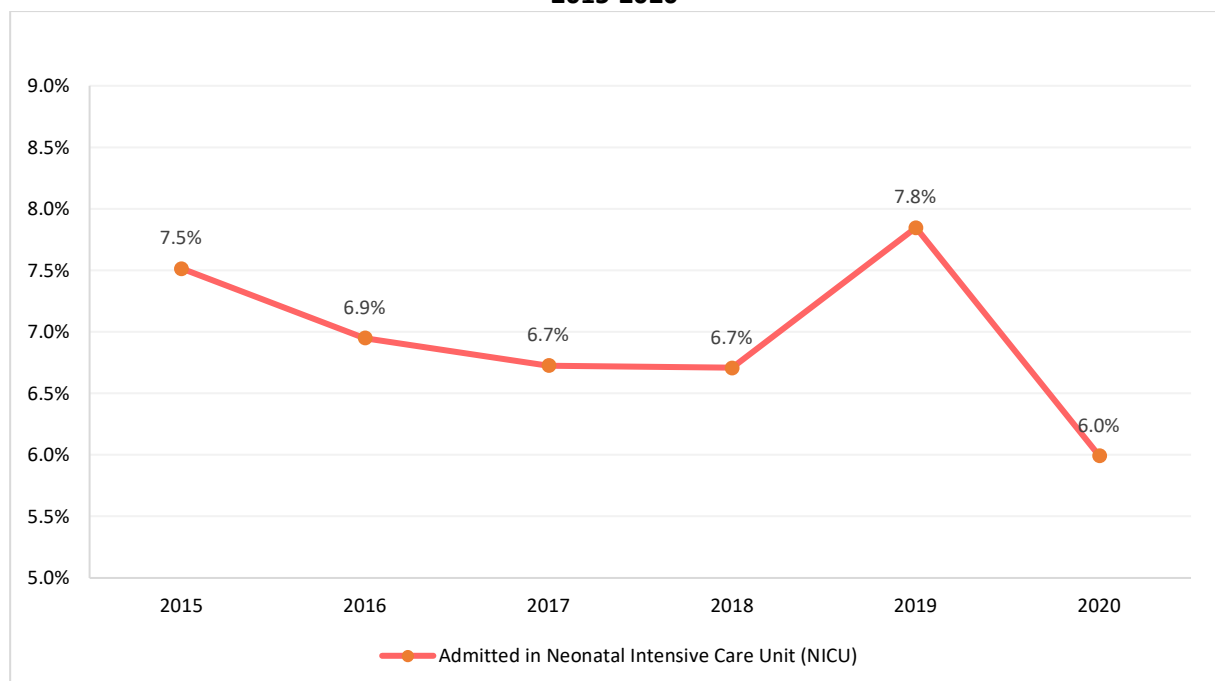
Neonatal Intensive Care Unit (NICU) admission by year	2015	2016	2017	2018	2019	2020
No admission in Neonatal Intensive Care Unit (NICU)	92.5%	93.1%	93.3%	93.3%	92.2%	94.0%
Admitted in Neonatal Intensive Care Unit (NICU)	7.5%	6.9%	6.7%	6.7%	7.8%	6.0%
Percentage of live births**	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Denominator: Live births

* NICU is available at Makarios Hospital (Nicosia District) for all the years and from 2018 at Limassol General Hospital as well

** "Not stated" cases are distributed in each category by a weighting factor

Figure 9: Percentage of live births admitted in Neonatal Intensive Care Unit (NICU) by year, Cyprus 2015-2020



Breastfeeding

More than 90.0% of live babies each year were breastfed (exclusively or mixed food) during the 48 hours after birth. Among these babies, around 38% received exclusively breast milk. The percentage of exclusive breastfeeding for the year 2019 was 44.6% and for the year 2020 was 37.6%.

Table 10: Live births by mode of breastfeeding during the first 48 hours after birth by year, Cyprus 2015-2020

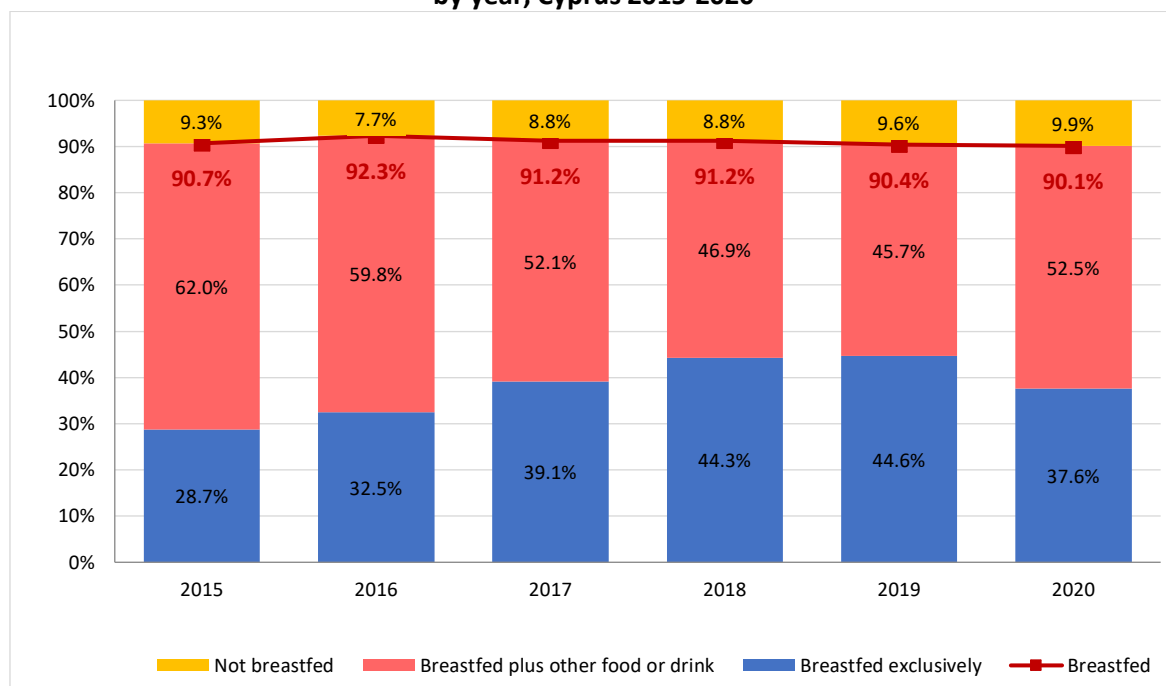
Breastfeeding during the first 48 hours after birth by year	2015	2016	2017	2018	2019	2020
Breastfed exclusively	2638	3143	3696	4166	4345	3761
Breastfed plus other food or drink	5687	5773	4918	4413	4451	5246
Not breastfed	851	741	828	825	936	985
Not stated	218	13	1	3	4	3
Live births	9394	9670	9443	9407	9736	9995

Breastfeeding during the first 48 hours after birth by year	2015	2016	2017	2018	2019	2020
Breastfed exclusively	28.7%	32.5%	39.1%	44.3%	44.6%	37.6%
Breastfed plus other food or drink	62.0%	59.8%	52.1%	46.9%	45.7%	52.5%
Not breastfed	9.3%	7.7%	8.8%	8.8%	9.6%	9.9%
% of live births*	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Breastfed	90.7%	92.3%	91.2%	91.2%	90.4%	90.1%

Denominator: Live births

* "Not stated" cases are distributed in each category by a weighting factor

Figure 10: Percentage of live births by mode of breastfeeding during the first 48 hours after birth by year, Cyprus 2015-2020



Correlation of important perinatal indicators with caesarean section

The tables and graphs that follow in this report, show the correlation of important perinatal indicators for the years 2015-2020 with the mode of delivery indicator, specifically with the caesarean sections.

Mode of delivery

The graph below shows the percentages of normal delivery, with or without vaginal instruments, and the percentages of caesarean sections, elective or emergency for the years 2015-2020. The percentage of caesarean sections in Cyprus in the year 2020 is among the highest in the world, more than 55.0%. From 53.1% in 2019 became 55.9% in 2020. The percentage of babies delivered with a planned/elective caesarean section or because the onset of labor failed to progress was 38.2%, while the one of an emergency caesarean section was 17.7%. In general, the percentage of caesarean sections is very high in relation to the percentage of the European Countries, as well as in comparison with the rates of the World. The World Health Organization (WHO), on its website, states that the "ideal rate" for caesarean section is between 10% and 15%, and that caesarean section should only be made when it is medically necessary, that is, when vaginal (normal) is risky to the mother or baby⁷. Euro-Peristat ranks Cyprus for the year 2015 first with a caesarean section percentage of 56.9% (40.5% elective and 16.4% emergency).⁸ The Organization for Economic Co-operation and Development (OECD)⁹ ranks Turkey first with 544 per 1000 live births, while Cyprus in 2019 has a rate of 532 per 1000 live births (we are not a member of this organization). In 2020 Cyprus reaches a rate of 559 per 1000 live births.

⁷ <http://www.who.int/mediacentre/news/releases/2015/caesarean-sections/en/>

⁸ https://www.europeristat.com/images/EPHR2015_web_hyperlinked_Euro-Peristat.pdf (Figure C10.1 and Figure C10.2 in the Euro-Peristat European Perinatal Health Report)

⁹ <https://www.statista.com/statistics/283123/cesarean-sections-in-oecd-countries/>

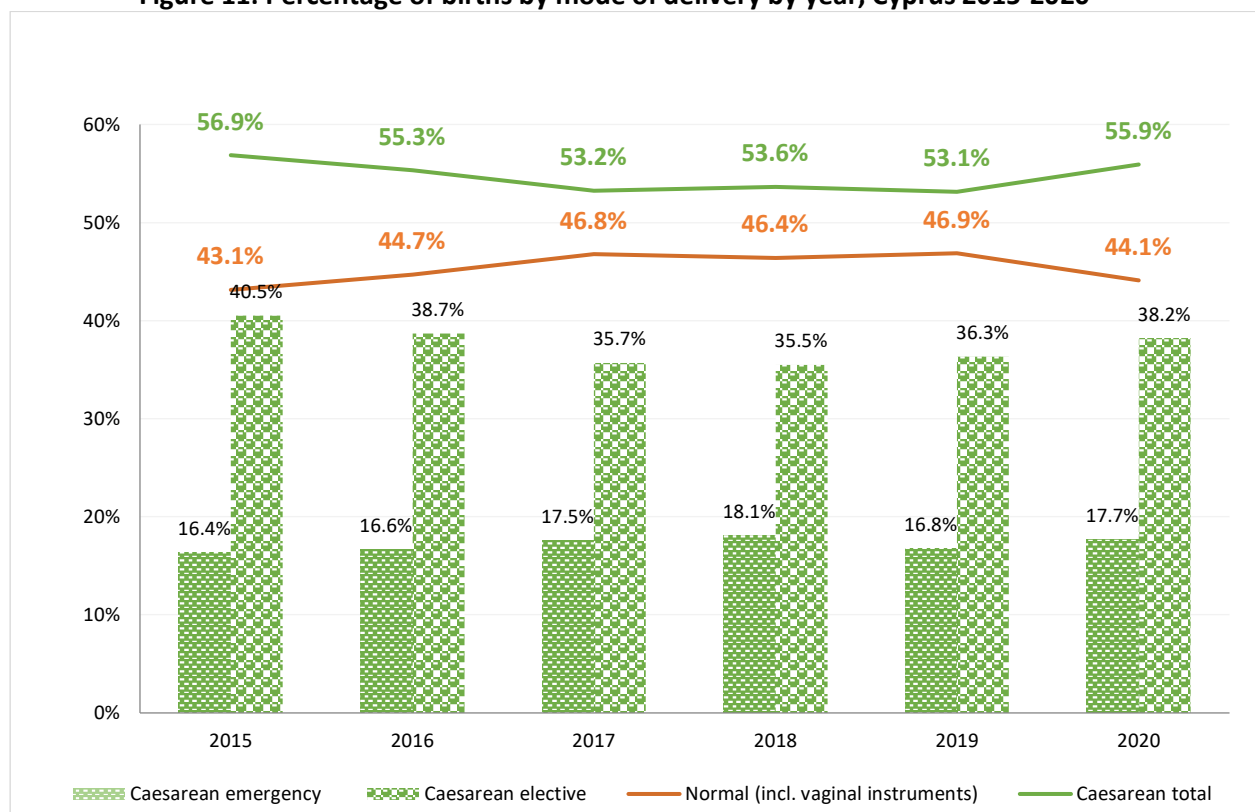
Table 11: Total births by mode of delivery by year, Cyprus 2015-2020

Mode of delivery by year	2015	2016	2017	2018	2019	2020
Normal (without vaginal instruments)	3714	3990	4035	3881	4075	3860
Normal (with vaginal instruments)	350	353	406	495	518	566
Forceps assisted vaginal	50	45	61	61	52	68
Ventouse assisted vaginal	300	308	329	425	462	488
Thierry's or other instrument	0	0	16	9	4	10
Caesarean sections	5358	5377	5055	5059	5207	5610
Caesarean after onset (emergency)	1542	1618	1665	1708	1646	1776
Caesarean before onset (elective)	3816	3759	3390	3351	3561	3834
Unknown mode of delivery	3	2	0	1	0	1
Total births	9425	9722	9496	9436	9800	10037

Mode of delivery	2015	2016	2017	2018	2019	2020
Normal (incl. vaginal instruments)	43.1%	44.7%	46.8%	46.4%	46.9%	44.1%
Caesarean emergency	16.4%	16.6%	17.5%	18.1%	16.8%	17.7%
Caesarean elective	40.5%	38.7%	35.7%	35.5%	36.3%	38.2%
% of total births*	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
<i>Caesarean total</i>	<i>56.9%</i>	<i>55.3%</i>	<i>53.2%</i>	<i>53.6%</i>	<i>53.1%</i>	<i>55.9%</i>

* "Not stated" cases are distributed in each category by a weighting factor

Figure 11: Percentage of births by mode of delivery by year, Cyprus 2015-2020



Mode of delivery by district

The highest percentage of caesarean sections in the year 2019 was for the maternity units of Larnaca district and in the year 2020 the highest was for the maternity units of Paphos district.

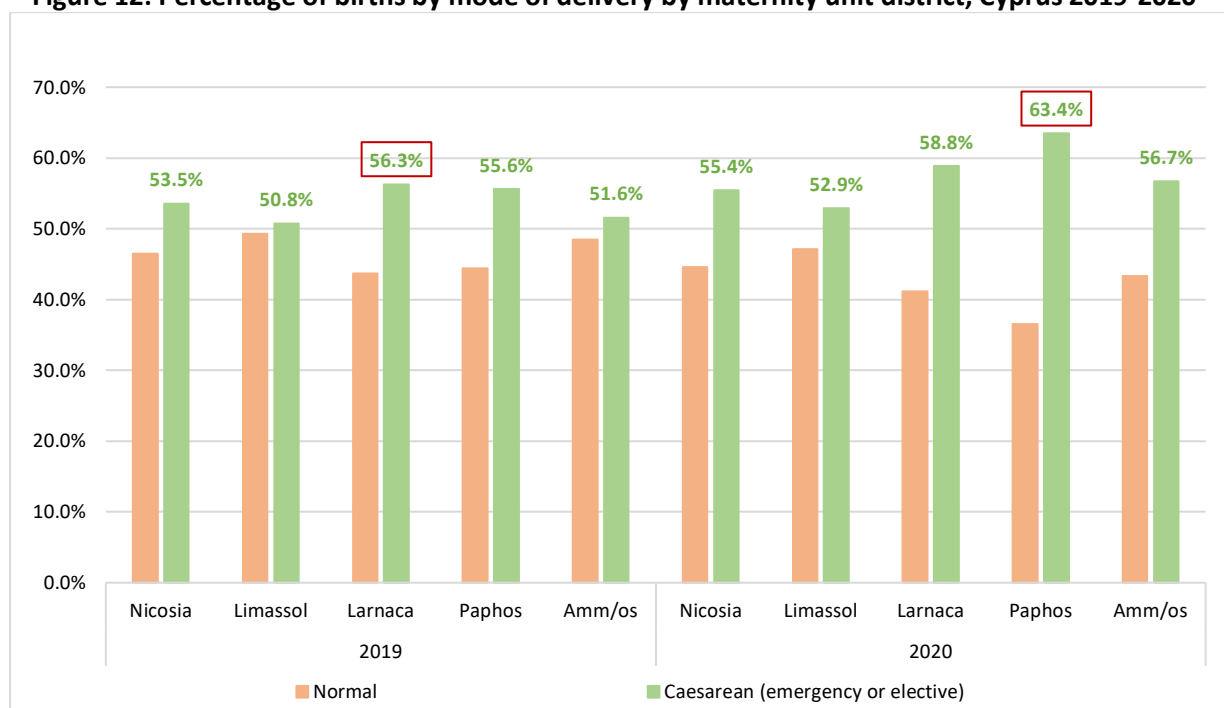
Table 12: Total births by mode of delivery by maternity unit district, Cyprus 2019-2020

Mode of delivery by maternity unit district	2019					2020				
	Nicosia	Limassol	Larnaca	Paphos	Ammochostos	Nicosia	Limassol	Larnaca	Paphos	Ammochostos
Normal (excl. vaginal instruments)	1826	1214	401	412	222	1742	1238	356	355	169
Normal (incl. vaginal instruments)	315	130	30	34	9	351	146	33	23	13
Caesarean after onset (emergency)	851	413	156	179	47	865	439	172	244	56
Caesarean before onset (elective)	1612	972	399	379	199	1740	1116	384	412	182
Unknown mode of delivery	0	0	0	0	0	0	1	0	0	0
Total births	4604	2729	986	1004	477	4698	2940	945	1034	420

Mode of delivery by maternity unit district	2019					2020				
	Nicosia	Limassol	Larnaca	Paphos	Ammochostos	Nicosia	Limassol	Larnaca	Paphos	Ammochostos
Normal	46.5%	49.2%	43.7%	44.4%	48.4%	44.6%	47.1%	41.2%	36.6%	43.3%
Caesarean (emergency or elective)	53.5%	50.8%	56.3%	55.6%	51.6%	55.4%	52.9%	58.8%	63.4%	56.7%
% of total births*	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

* "Not stated" cases are distributed in each category by a weighting factor

Figure 12: Percentage of births by mode of delivery by maternity unit district, Cyprus 2019-2020



Mode of delivery by mother's country of origin

The percentage of births of women from the European Union (EU) or other foreign countries delivering babies in Cyprus maternity units in the year 2020 was roughly 33% (percentage of row). The percentage of normal vaginal delivery, among the total births of mothers with country of origin the Cyprus Government Controlled Areas, in the year 2020 was 42.1%. The corresponding percentage for caesarean sections was 57.9%, while for the mothers of other countries other than the Cyprus Government Controlled Areas was 52,3%.

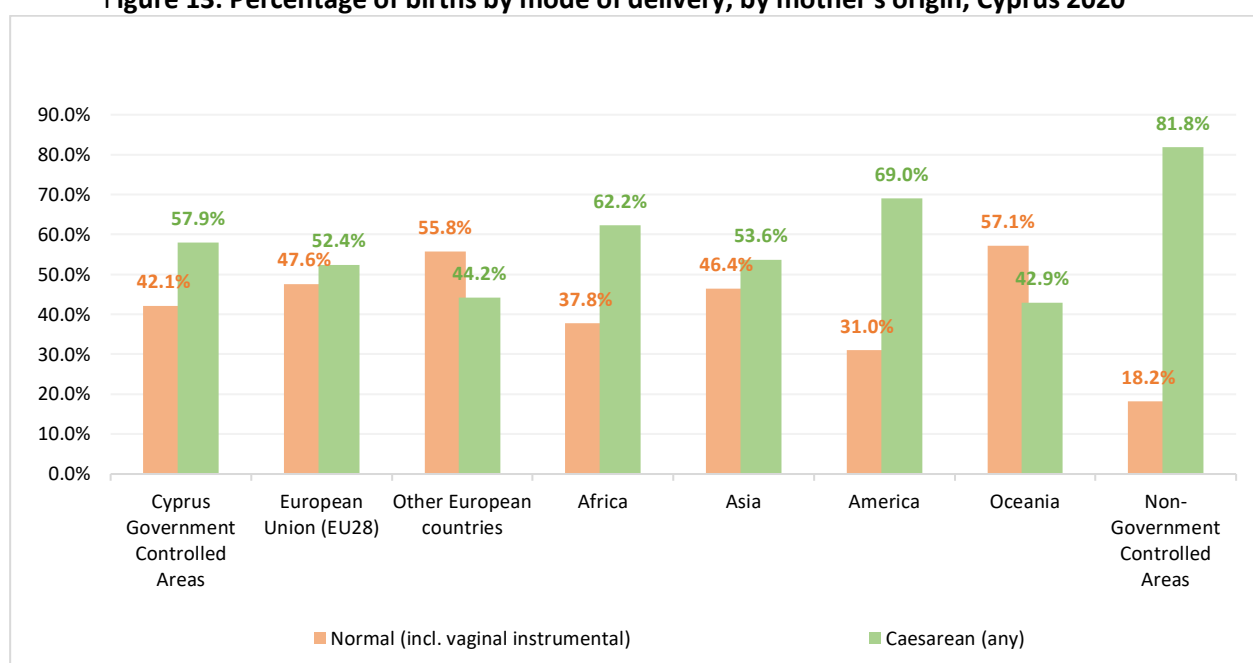
Table 13: Total births by mode of delivery by mother's origin, Cyprus 2020

Mode of delivery by mother's origin	Cyprus Government Controlled Areas	Other countries than Cyprus Government Controlled Areas							Total other countries
		European Union (EU28)	Other European countries	Africa	Asia	America	Oceania	Non-Government Controlled Areas	
Normal (incl. vaginal instrumental)	2723 (61.5%)	700	348	94	546	9	4	2	1703 (38.5%)
Caesarean (any)	3746 (66.8%)	770	276	155	631	20	3	9	1864 (33.2%)
Not stated	1	0	0	0	0	0	0	0	0
Total births	6470	1470	624	249	1177	29	7	11	3567

Mode of delivery by mother's origin	Cyprus Government Controlled Areas	European Union (EU28)	Other European countries	Africa	Asia	America	Oceania	Non-Government Controlled Areas	Total other countries
Normal (incl. vaginal instrumental)	42.1%	47.6%	55.8%	37.8%	46.4%	31.0%	57.1%	18.2%	47.7%
Caesarean (any)	57.9%	52.4%	44.2%	62.2%	53.6%	69.0%	42.9%	81.8%	52.3%
% of total births*	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

* "Not stated" cases are distributed in each category by a weighting factor

Figure 13: Percentage of births by mode of delivery, by mother's origin, Cyprus 2020



Mode of delivery by mother's age

The percentage of total births of mothers aged less than 20 years old and had a caesarean section in the year 2019 was 35.1%, while the corresponding percentage of mothers aged 35 years old or more was 61.9%. In the year 2020, both percentages were increased, 43.0% and 62.7%, respectively. The older the mother is, the more the possibility for a caesarean section.

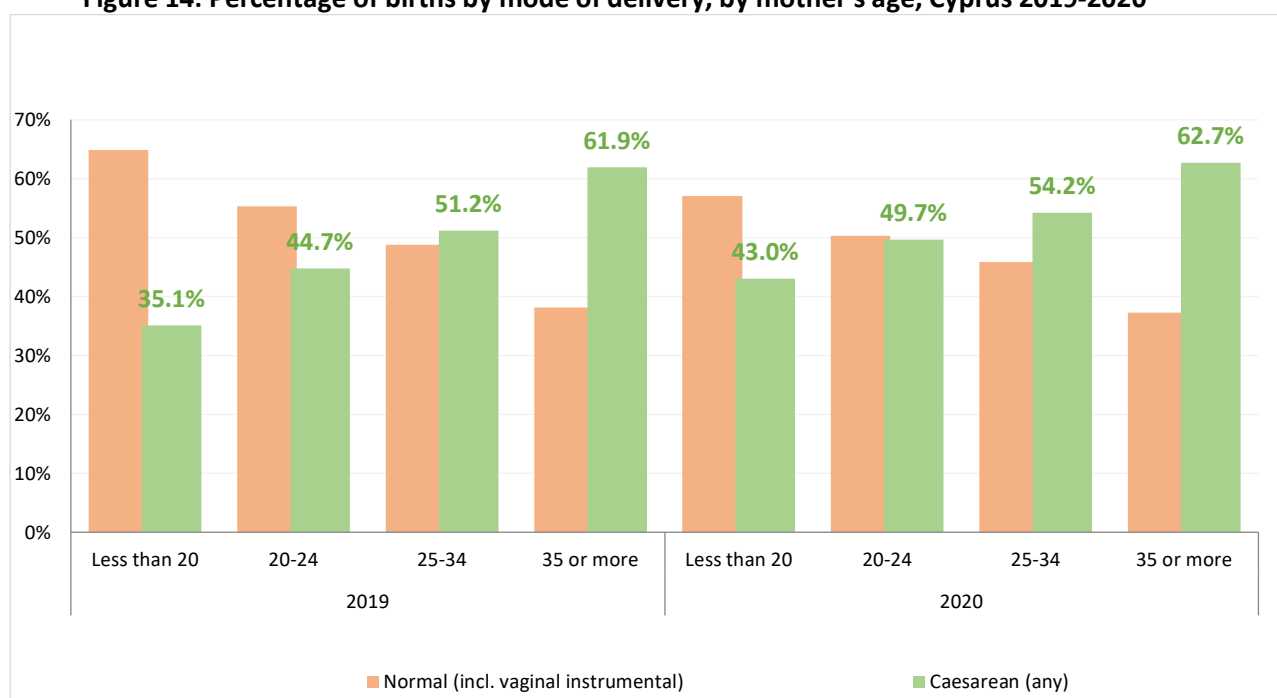
Table 14: Total births by mode of delivery, by mother's age, Cyprus 2019-2020

Mode of delivery by mother's age	2019				2020			
	Less than 20	20-24	25-34	35 or more	Less than 20	20-24	25-34	35 or more
Normal (incl. vaginal instrumental)	111	530	2949	1003	110	473	2813	1030
Caesarean (any)	60	429	3089	1629	83	467	3325	1735
Not stated	0	0	0	0	0	0	1	0
Total births	171	959	6038	2632	193	940	6139	2765

Mode of delivery by mother's age	2019				2020			
	Less than 20	20-24	25-34	35 or more	Less than 20	20-24	25-34	35 or more
Normal (incl. vaginal instrumental)	64.9%	55.3%	48.8%	38.1%	57.0%	50.3%	45.8%	37.3%
Caesarean (any)	35.1%	44.7%	51.2%	61.9%	43.0%	49.7%	54.2%	62.7%
% of total births*	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

* "Not stated" cases are distributed in each category by a weighting factor

Figure 14: Percentage of births by mode of delivery, by mother's age, Cyprus 2019-2020



Mode of delivery by psychoprophylaxis

The percentage of caesarean section of total births of women who used psychoprophylaxis during pregnancy was less than the one of births of women who did not use psychoprophylaxis during pregnancy, for both years 2019 and 2020.

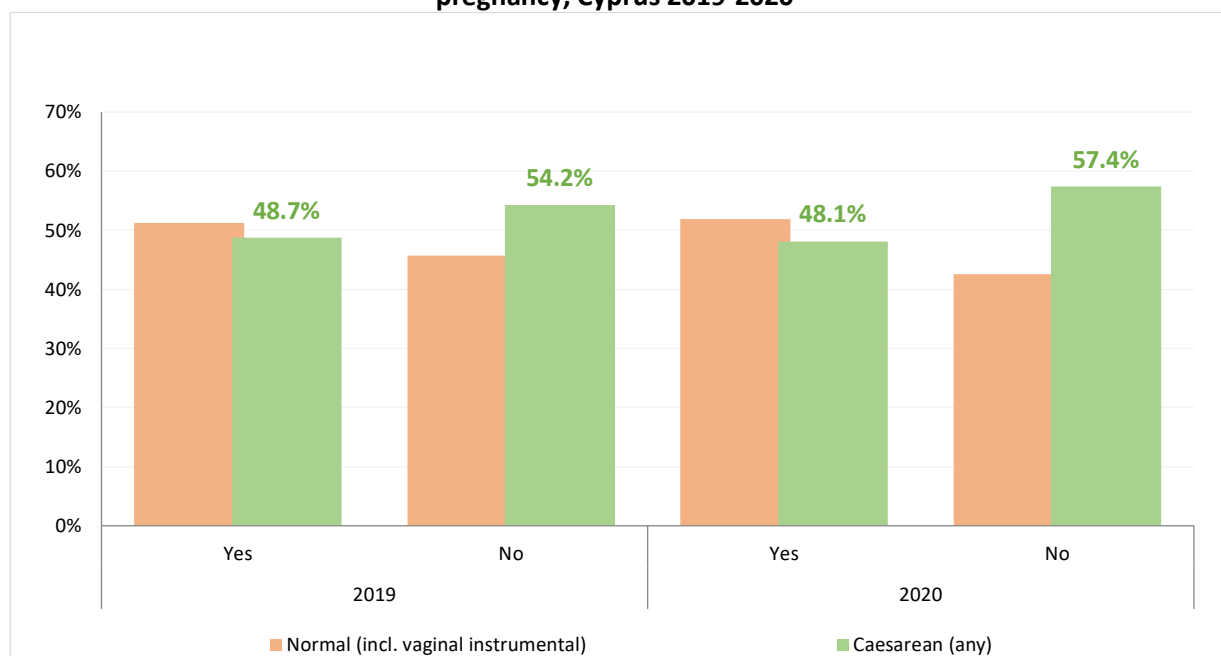
Table 15: Total births by mode of delivery, by mother's use of psychoprophylaxis during pregnancy, Cyprus 2019-2020

Mode of delivery by psychoprophylaxis	2019		2020	
	Yes	No	Yes	No
Normal (incl. vaginal instrumental)	1015	3578	852	3574
Caesarean (any)	965	4242	791	4819
Not stated	0	0	0	1
Total births	1980	7820	1643	8394

Mode of delivery by psychoprophylaxis	2019		2020	
	Yes	No	Yes	No
Normal (incl. vaginal instrumental)	51.3%	45.8%	51.9%	42.6%
Caesarean (any)	48.7%	54.2%	48.1%	57.4%
% of total births*	100.0%	100.0%	100.0%	100.0%

* "Not stated" cases are distributed in each category by a weighting factor

Figure 15: Percentage of births by mode of delivery, by mother's use of psychoprophylaxis during pregnancy, Cyprus 2019-2020



Mode of delivery by subfertility treatment

The percentage of caesarean section of births of women that became pregnant after some form of assisted reproductive technique was higher than the one of births of women who did not have any reproductive assistance, for both years 2019 and 2020.

The percentage of caesarean section of births of women that became pregnant after IVF was 76.2% in the year 2019 and 79.2% in the year 2020, while the percentage of caesarean section of births of women that became pregnant after other treatment was 74.0% in the year 2019 and 58.8% in the year 2020.

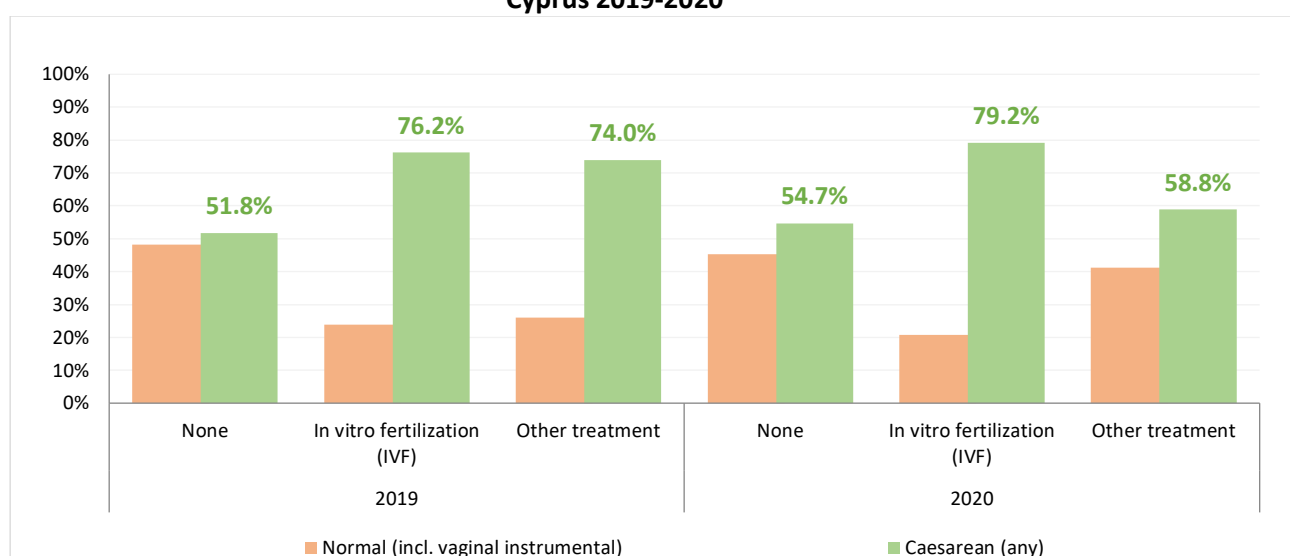
Table 16: Total births by mode of delivery, by mother's mode of subfertility treatment, Cyprus 2019-2020

Mode of delivery by subfertility treatment	2019			2020		
	None	In vitro fertilization (IVF)	Other treatment	None	In vitro fertilization (IVF)	Other treatment
Normal (incl. vaginal instrumental)	4461	119	13	4305	100	21
Caesarean (any)	4789	381	37	5199	381	30
Not stated	0	0	0	1	0	0
Total births	9250	500	50	9505	481	51

Mode of delivery by subfertility treatment	2019			2020		
	None	In vitro fertilization (IVF)	Other treatment	None	In vitro fertilization (IVF)	Other treatment
Normal (incl. vaginal instrumental)	48.2%	23.8%	26.0%	45.3%	20.8%	41.2%
Caesarean (any)	51.8%	76.2%	74.0%	54.7%	79.2%	58.8%
% of total births*	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

* "Not stated" cases are distributed in each category by a weighting factor

Figure 16: Percentage of births by mode of delivery by mother's mode of subfertility treatment, Cyprus 2019-2020



Mode of delivery by gestational age

The percentage of caesarean section was higher in the case of preterm births for both years 2019 and 2020. In fact, according to the World Health Organization (WHO), induction or caesarean birth should not be planned before 39 completed weeks unless medically indicated¹⁰. Unfortunately, this is not the case for Cyprus. A very high percentage of planned caesareans, 76.5%, concerned births less than 39 weeks of gestation (44.4% concerned births of 38 weeks of gestation).

Table 17: Total births by mode of delivery, by gestational age, Cyprus 2019–2020

Mode of delivery by gestational age	2019		2020	
	< 37 weeks	37 weeks or more	< 37 weeks	37 weeks or more
Normal (excl. vaginal instruments)	252	3823	214	3646
Normal (incl. vaginal instruments)	25	493	28	538
Caesarean emergency	347	1299	333	1443
Caesarean elective	542	3019	509	3325
Not stated	0	0	0	1
Total births	1165	8635	1085	8952

Mode of delivery by gestational age	2019		2020	
	< 37 weeks	37 weeks or more	< 37 weeks	37 weeks or more
Normal (incl. vaginal instrumental)	23.8%	50.0%	22.4%	46.7%
<i>Caesarean (any)</i>	76.2%	50.0%	77.6%	53.3%
% of total births*	100.0%	100.0%	100.0%	100.0%

* "Not stated" cases are distributed in each category by a weighting factor

Figure 17: Percentage of births by mode of delivery, by gestational age, Cyprus 2019 - 2020



¹⁰ <http://www.who.int/news-room/fact-sheets/detail/preterm-birth>

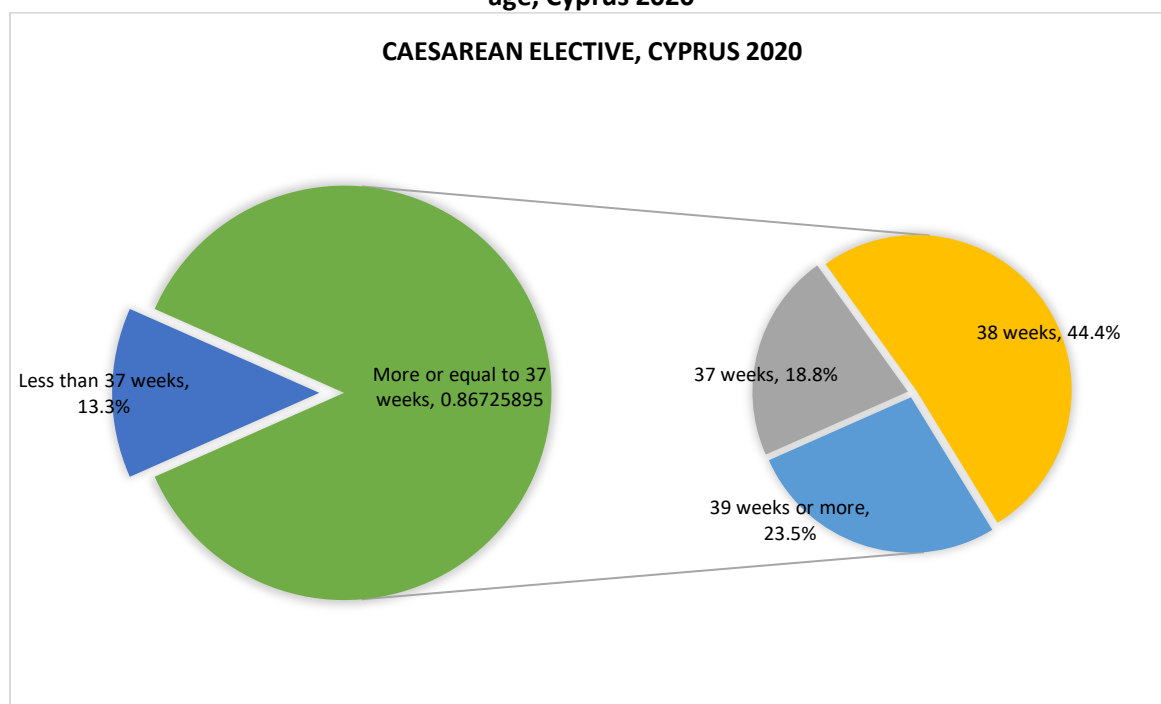
Table 18: Total births by mode of delivery by gestational age, Cyprus 2020

Mode of delivery by gestational age	Caesarean Elective	Caesarean Emergency	Normal (incl. instruments)	2020
Less than 37 weeks	508	332	242	1082
More or equal to 37 weeks				
37 weeks	721	226	354	1301
38 weeks	1698	371	1020	3089
39 weeks or more	900	840	2803	4543
Not stated	7	7	8	22
Total births (live and stillbirths)	3834	1776	4427	10037

Mode of delivery by gestational age	Caesarean Elective	Caesarean Emergency	Normal (incl. instrumental)	2020
Less than 37 weeks	13.3%	18.8%	5.5%	10.8%
More or equal to 37 weeks				
37 weeks	18.8%	12.8%	8.0%	13.0%
38 weeks	44.4%	21.0%	23.1%	30.8%
39 weeks or more	23.5%	47.5%	63.4%	45.4%
% of total births (live and stillbirths)*	100.0%	100.0%	100.0%	100.0%

* "Not stated" cases are distributed in each category by a weighting factor

Figure 18: Percentage distribution of total births by caesarean before onset/elective by gestational age, Cyprus 2020



Mode of delivery by admission to NICU

It is more likely for births after caesarean section to be admitted in Neonatal Intensive Care Unit (NICU), compared with births after normal vaginal delivery.

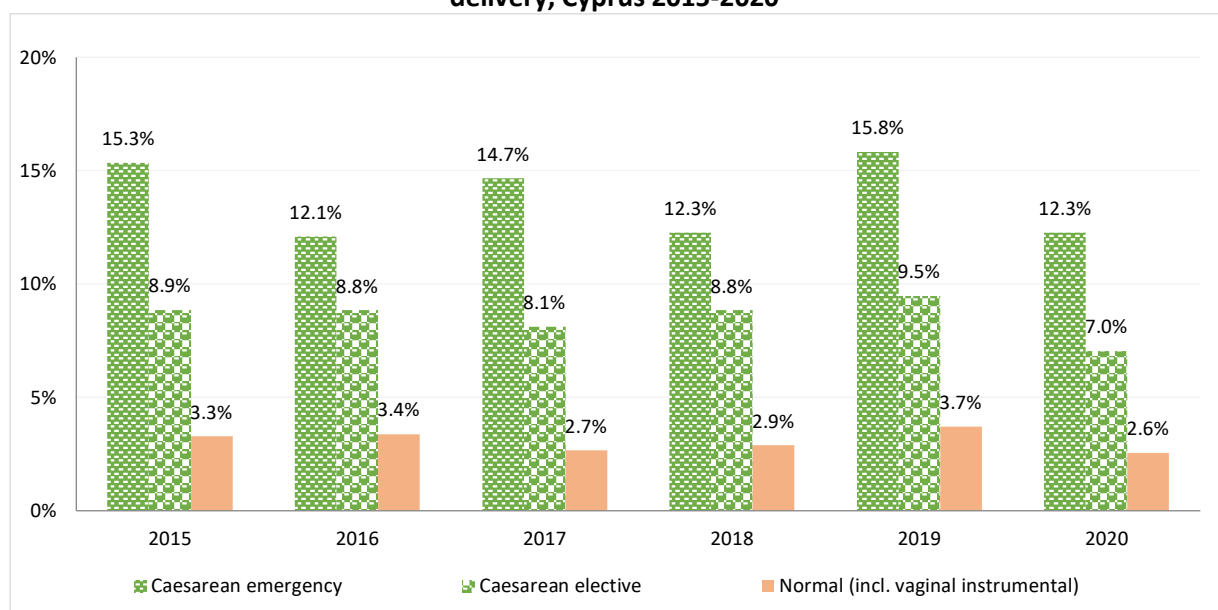
Table 19: Live births by mode of delivery by admission to Neonatal Intensive Care Unit (NICU), Cyprus 2015-2020

Mode of delivery by admission to NICU	2015	2016	2017	2018	2019	2020
Caesarean (any)	5346	5357	5037	5050	5179	5589
Admitted in NICU	573	526	518	505	595	486
No NICU admission	4773	4831	4519	4545	4584	5103
Normal (incl. vaginal instrumental)	4048	4313	4406	4357	4557	4406
Admitted in NICU	133	146	117	126	169	113
No NICU admission	3915	4167	4289	4231	4388	4293
Live births	9394	9670	9443	9407	9736	9995

Mode of delivery by admission to NICU	2015	2016	2017	2018	2019	2020
Caesarean (any)	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Admitted in NICU	10.7%	9.8%	10.3%	10.0%	11.5%	8.7%
No NICU admission	89.3%	90.2%	89.7%	90.0%	88.5%	91.3%
Normal (incl. vaginal instrumental)	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Admitted in NICU	3.3%	3.4%	2.7%	2.9%	3.7%	2.6%
No NICU admission	96.7%	96.6%	97.3%	97.1%	96.3%	97.4%

Denominator: Live births

Figure 19: Percentage of live births admitted to Neonatal Intensive Care Unit (NICU) by mode of delivery, Cyprus 2015-2020



Mode of delivery by breastfeeding

The percentage of exclusive breastfeeding after caesarean section was less than the one in the normal vaginal delivery, for both years 2019 and 2020. The percentage of mixed breastfeeding after caesarean section was very high than the one in the normal vaginal delivery, for both years 2019 and 2020. Even more, the percentage of not breastfeeding after caesarean section was very high than the one in the normal vaginal delivery, for both years 2019 and 2020, as well.

Table 20: Live births by mode of delivering, by breastfeeding during the first 48 hours after birth, Cyprus 2019-2020

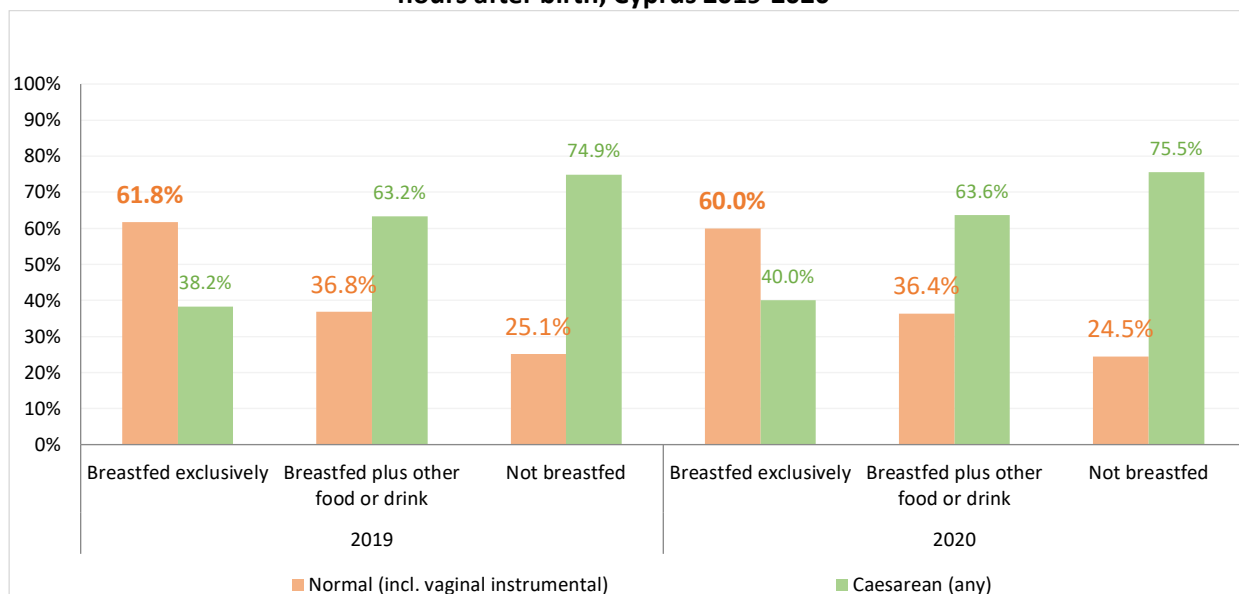
Mode of delivery by breastfeeding	2019			2020		
	Breastfed exclusively	Breastfed plus other food or drink	Not breastfed	Breastfed exclusively	Breastfed plus other food or drink	Not breastfed
Normal (incl. vaginal instrumental)	2685	1637	235	2256	1909	241
Caesarean (any)	1662	2816	701	1506	3338	744
Not stated	0	0	0	0	1	0
Live births	4347	4453	936	3762	5248	985

Mode of delivery by breastfeeding	2019			2020		
	Breastfed exclusively	Breastfed plus other food or drink	Not breastfed	Breastfed exclusively	Breastfed plus other food or drink	Not breastfed
Normal (incl. vaginal instrumental)	61.8%	36.8%	25.1%	60.0%	36.4%	24.5%
Caesarean (any)	38.2%	63.2%	74.9%	40.0%	63.6%	75.5%
% of live births*	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Denominator: Live births

* "Not stated" cases are distributed in each category by a weighting factor

Figure 20: Percentage of live births by mode of delivering, by breastfeeding during the first 48 hours after birth, Cyprus 2019-2020



Mode of delivery and previous caesarean sections

It is very likely for women who had previous caesareans to deliver their next birth the caesarean section again. However, the percentage of normal vaginal delivery after a previous caesarean section was increased from 4.7% in the year 2015 to 7.5% in the year 2020.

Table 21: Total births by mode of delivery and previous caesarean section, Cyprus 2015-2020

Mode of delivery and previous caesarean section	2015	2016	2017	2018	2019	2020
No previous caesarean section	7294	7451	7286	7210	7473	7777
Normal (incl. vaginal instruments)	3965	4221.4	4275	4221	4419	4292
Caesarean (any)	3329	3230	3011	2990	3054	3485
Previous caesarean section	2131	2271	2210	2226	2327	2260
Normal (incl. vaginal instruments)	101	122	166	156	174	135
Caesarean (any)	2030	2149	2044	2070	2153	2125
Total births (live and stillbirths)	9425	9722	9496	9436	9800	10037

Mode of delivery and previous caesarean section	2015	2016	2017	2018	2019	2020
No previous caesarean section	77.4%	76.6%	76.7%	76.4%	76.3%	77.5%
Normal (incl. vaginal instruments)	54.4%	56.7%	58.7%	58.5%	59.1%	55.2%
Caesarean (any)	45.6%	43.3%	41.3%	41.5%	40.9%	44.8%
Previous caesarean section	22.6%	23.4%	23.3%	23.6%	23.7%	22.5%
<i>Normal (incl. vaginal instruments)</i>	<i>4.7%</i>	<i>5.4%</i>	<i>7.5%</i>	<i>7.0%</i>	<i>7.5%</i>	<i>6.0%</i>
Caesarean (any)	95.3%	94.6%	92.5%	93.0%	92.5%	94.0%
% of total births (live and stillbirths)*	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

* "Not stated" cases are distributed in each category by a weighting factor

Figure 21: Percentage of vaginal delivery (normal mode) by previous caesarean section, Cyprus 2015-2020

