

PERINATAL HEALTH REPORT 2018

IMPORTANT PERINATAL HEALTH INDICATORS CYPRUS PUBLIC AND PRIVATE MATERNITY UNITS 2014-2016

HEALTH MONITORING UNIT

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MINISTRY OF HEALTH OF THE REPUBLIC OF CYPRUS

Perinatal Health Indicators, Cyprus Public and Private Maternity Units 2014-2016

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Presentation of indicators and glossary¹

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*).

Crude birth rate: is the ratio of the number of births during the year to the average population in that year; the value is expressed per 1 000 inhabitants.

Distribution of mother's residence: is the distribution of the permanent residence of women delivering live or stillbirths. In this report, residency is classified as follows: Government Controlled Areas, Non-government Controlled Areas, countries in the European Union (EU), other countries not in the EU, and British Bases (Sovereign Base Areas of Akrotiri and Dhekelia).

Distribution of mother's country of origin²: 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 liveborn or stillborn baby. Data in this report is presented as follows: less than 20 years old, between 20-34 years and 35 years old or more (Euro-Peristat Indicator Definitions, C8).

Distribution of mother's educational level: is the distribution of education level of women delivering liveborn or stillborn babies, expressed as highest level of education of the mother. Data is collected using most detailed educational groupings in national systems and recoded by Euro-Peristat using the international standard classification of education (ISCED - UNESCO, 1997)³: primary not complete or none, primary complete, lower secondary (up to 3 or 4 years), upper secondary (up to 6 or 7 years), post-secondary

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://eurlex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2011:090:0022:0024:EN:PDF

c. EURO-PERISTAT: http://www.europeristat.com/our-indicators/indicators-of-perinatal-health.html#footer

² In this report, although we collect data by mother's country of birth, the categories presented are as follows: birth country Cyprus, birth country in the European Union (EU), birth country other than in the EU.

³ http://www.unesco.org/education/information/nfsunesco/doc/isced_1997.htm



non tertiary (6 months to 2 years), first stage of tertiary education (Bachelor), second stage of tertiary education (Master, Doctorate or more) (Euro-Peristat Indicator Definitions, R9).

Distribution of parity: is defined as the number of previous total live births and stillbirths (0, 1, 2, or 3+ births) of women delivering a live birth or stillbirth (*Euro-Peristat Indicator Definitions, C9*).

Percentage of women who smoked during pregnancy⁴: is the number of women who smoke during the first trimester or/and the third trimester of pregnancy expressed as a proportion of all women delivering liveborn or stillborn babies. When data are not available for the first trimester or/and third trimester of pregnancy, data are requested for another time point during pregnancy (Euro-Peristat Indicator Definitions, R8).

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 treatment⁵: 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*).

Distribution of timing of first antenatal visit: is the distribution of timing of first antenatal visit regardless of provider by trimester of pregnancy for all women delivering liveborn or stillborn babies. Trimesters are defined as follows (by completed weeks of gestation): the 1st trimester is the period up to 14 weeks (< 15 weeks), the 2nd trimester 15–27 weeks and the 3rd trimester from 28 weeks to delivery (*Euro-Peristat Indicator Definitions*, *R14*).

Mode of onset of labour: is the number of deliveries resulting in a live birth or stillbirth associated with each of the following modes of labour onset: Spontaneous onset, caesarean section prior to the onset of labour, labour induction (initiation of uterine contractions) by medical or surgical means prior to the onset of labour (Euro-Peristat Indicator Definitions, R15).

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

⁴ In this report, we present the number of women who smoke during the total duration of pregnancy expressed as a proportion of all women delivering liveborn or stillborn babies.

⁵ In this report we present only the following categories: In vitro fertilisation (IVF), intra uterine insemination (IUI), ovulation induction (intra cytoplasmatic sperm injection (ICSI) and in vitro maturation (IVM); including frozen embryo transfers are not presented).



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onset of labour/elective, caesarean during labour/emergency, as a proportion of all still and live births (*Euro-Peristat Indicator Definitions, C10*).

Episiotomy rate: is the number of women who delivered vaginally and had an episiotomy (*Euro-Peristat Indicator Definitions, R18*).

Incidence of tears to the perineum (perineal trauma): is the number of women who delivered vaginally and had a tear, by its degree of severity. Categories presented as follows (ICD10): 1st degree tear (ICD 070.0) involves the fourchette, perineal skin and vaginal membrane, 2nd degree tear (ICD 070.1) includes the skin and mucous membrane, and the fascia and muscles of the perineal body, 3rd degree tear (ICD 070.2) extends through skin, mucous membrane and perineal body and involves the muscle of the anal sphincter, 4th degree tear (ICD 070.3) extends through the rectal mucosa to expose the lumen of the rectum (*Euro- Peristat Indicator Definitions, R7*).

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*).

Birthweight (BW) distribution: is the number of births within each 500g weight interval expressed as a proportion of all live births and stillbirths. Birthweight distribution is presented as follows: less than 2500g (low BW), 2500g or more (normal BW). Low BW can be subdivided as: less than 1000g (extremely low BW), 1000-1499g (very low BW) and 1500-2499g (moderately low BW) (Euro-Peristat Indicator Definitions, C4).

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*).

5-minute Apgar score⁶ **distribution:** is the distribution of the Apgar score at 5 minutes (score ranges from 0-10) for live births (*Euro-Peristat Indicator Definitions, R2*).

Admission to Neonatal Intensive Care Unit (NICU⁷): is the number of live births admitted in NICU (Euro-Peristat Indicator Definitions, R17).

⁶ Apgar is a quick test performed on a baby at 1 and 5 minutes after birth. The 1-minute score determines how well the baby tolerated the birthing process. The 5-minute score tells the health care provider how well the baby is doing outside the mother's womb. In rare cases, the test will be done 10 minutes after birth. Virginia Apgar, MD (1909-1974) introduced the Apgar score in 1952.

⁷ In Cyprus, for the time these data are analyzed, there was only one NICU, at the Makarios Hospital in Nicosia. Due to the constantly increasing needs, a new NICU was set up in 2018 at the General Hospital of Limassol.



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

Fetal mortality rate⁸: is the number of fetal deaths (stillbirths) at or after 22 completed weeks of gestation in a given year, expressed per 1000 live births and stillbirths in the same year, calculated by plurality, gestational age and birthweight (*Euro- Peristat Indicator Definitions, C1*).

Neonatal mortality rate: is the number of neonatal deaths (day 0 through 27) after live birth in a given year, expressed per 1000 live births that year, calculated by plurality, gestational age and birthweight. This rate is presented for all live births and it is sub-divided by timing of death into early neonatal deaths (0-6 days of life), late neonatal deaths (7-27 days of life) and post neonatal deaths (28-365 days of life) (*Euro-Peristat Indicator Definitions, C2*).

Infant mortality rate: is defined as the number of infant deaths (days 0-364) after live birth in a given year, expressed per 1000 live births that same year, calculated by plurality, gestational age and birth weight (*Euro-Peristat Indicator Definitions, C3*).

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 $^{^8}$ Fetal deaths in this report are not differentiated by whether they are spontaneous fetal deaths or result from a termination of pregnancy.





About this report

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

This report presents four chapters with important perinatal health indicators for Cyprus private and public maternity units, the years 2014-2016. The first chapter deals with the number of live births and stillbirths and some general information of births. Chapters two, three and four are based on the categorisation of the indicators before pregnancy, during pregnancy and after childbirth. Chapter two is about the characteristics of childbearing women and it deals with demographic information and some other characteristics of mother before pregnancy. The third chapter refers to the care of women and babies during pregnancy and the fourth and last chapter presents indicators on the postpartum period and on babies' health.

Data for live births and stillbirths were collected by the midwifery staff of the maternity units of all public and private hospitals in Cyprus. 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 Report 2010 of the European Project Europeristat⁹.

For comparability reasons, some indicators, mostly the mortality indicators and the crude birth rate, are measured with the number of births by mothers with permanent residency in the Cyprus Government controlled areas. The reason that the numbers of live births under the Government controlled areas in this report differ from those published in the Demographic Report of the Statistical Service 2016¹⁰, is due to the different data source and the different periods of data processing of each department, HMU and Statistical Service.

Summary results for the years 2014-2016

In Cyprus the year 2014, the total number of births was 9552 (9499 live births and 53 stillbirths). The total number of childbearing women was 9301 of which 9252 delivered live births. Among these women, 219 delivered twins, 16 delivered triplets or more, while 9066 women had a single pregnancy.

During the year 2015, the total number of births was 9425 (9394 live births and 31 stillbirths). The total number of childbearing women was 9171 of which 9144 delivered live births. Among these women, 238 delivered twins, 8 delivered triplets or more, while 8925 women had a single pregnancy.

In the year 2016, the total number of births was 9722 (9670 live births and 52 stillbirths). The total number of childbearing women was 9477 of which 9428 delivered live births.

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⁹ http://www.europeristat.com/our-indicators/euro-peristat-perinatal-health-indicators-2010.html

http://www.mof.gov.cy/mof/cystat/statistics.nsf/populationcondition 21main en/populationcondition 21main en?OpenForm&sub=1& sel=4



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Among these women, 234 delivered twins, 5 delivered triplets or more, while 9238 women had a single pregnancy.

During the period 2014-2016, total births increased, multiplicity decreased and the age of mother delivering a baby increased over time. The percentage of women giving birth at 35 years or older was 19.0% in 2014 and reached 23.0% in 2016. The percentage of caesarean sections was very high, more than 55.0%. The percentage of babies delivered with a planned/elective caesarean section or because the onset of labor failed to progress was about 40.0% in 2016, while the one of an emergency caesarean was roughly 16.0%. The percentages of low birthweight and preterm births were high in all years, around 10.0% and around 12.0%, respectively. More than 90.0% of live babies each year were breastfed during the 48 hours after birth. Among these babies, almost 30.0% received exclusively breast milk. Fetal, neonatal and infant mortality rates are used as key measures of health of babies during pregnancy, delivery and first year of life. In Cyprus Government controlled areas during the period 2014-2016, fetal mortality rates were 5.5 per 1000 total births in 2014, 3.3 in 2015 and 5.2 in 2016. The most common causes of fetal deaths¹¹ were certain conditions originating in the perinatal period (ICD-10: P95: fetal death of unspecified cause, P02: fetus and newborn affected by complications of placenta, cord and membranes, P01: fetus and newborn affected by maternal complications of pregnancy, P00: fetus and newborn affected by maternal conditions that may be unrelated to present pregnancy, P70: transitory disorders of carbohydrate metabolism specific to fetus and newborn, P29: cardiovascular disorders originating in the perinatal period, P20: intrauterine hypoxia) and congenital malformations and chromosomal abnormalities (ICD-10: Q79: congenital malformations of the musculoskeletal system, not elsewhere classified, Q99: other chromosome abnormalities, not elsewhere classified, Q04: other congenital malformations of brain, Q05: spina bifida). Neonatal mortality rates ranged low through all years with an average of 1.8 per 1000 live births. Infant mortality rates ranged between 2.3 and 2.7 per 1000 live births. The most common causes of neonatal and infant deaths¹¹ were certain conditions originating in the perinatal period (ICD-10: P22: respiratory distress of newborn, P52: intracranial nontraumatic haemorrhage of fetus and newborn, P02: fetus and newborn affected by complications of placenta, cord and membranes,) and congenital malformations and chromosomal abnormalities (ICD-10: Q24: other congenital malformations of heart).

¹¹ Causes of Death Registry of the Health Monitoring Unit, Cyprus Ministry of Health, https://www.moh.gov.cy/moh/moh.nsf/All/1027CF3C1A82C408C22579CA004186CA?OpenDocument

Live births and stillbirths

This chapter presents summary tables and graphs of four perinatal indicators regarding the distribution of live births and stillbirths in Cyprus the years 2014-2016. These indicators are presented below:

- **Birth distribution:** Total births in Public and Private Hospitals of Cyprus the year 2016, increased 1.8% from year 2014 and 3.2% from year 2015. The absolute number of live births also increased during the year 2016, compared to the previous years. The absolute number of stillbirths increased as well the year 2016 compare to the previous year, however the percentages remained low (*Table 1*, *Figure 1*). The percentages of stillbirths in the Public Sector were higher in all years 2014-2016 compared to the Private Sector (*Table 2*, *Figure 2*). In 2016 the number of births by mothers with permanent residency in the Cyprus Government controlled areas increased to 9501 from 9198 the year 2015 and 9268 the year 2014, giving a crude birth rate of 11,2 per 1.000 population (*Table 3*, *Figure 3*).
- **District distribution:** The percentage distribution of births by district, normally shows Nicosia with the higher percentages in all years due to the higher population (*Table 4*, *Figure 4*).
- **Sex distribution:** The percentage of males was higher than the females' in all three years 2014-2016 (*Table 5*). *Figure 5*).
- **Month distribution:** On average, the month with the higher percentage of births, was September for all three years 2014-2016 (*Table 6*, *Figure 6*).

Birth distribution

Table 1. Summary table of births, Cyprus 2014-2016

	2014	2015	2016	Total
Live births	9499	9394	9670	28563
Stillbirths	53	31	52	136
Total births	9552	9425	9722	28699
Total women	9301	9171	9477	27949
Total women with live births	9252	9144	9428	27823

	2014	2015	2016	Total
Live births	99.4%	99.7%	99.5%	99.5%
Stillbirths	0.6%	0.3%	0.5%	0.5%
% of total births	100.0%	100.0%	100.0%	100.0%

Figure 1. Percentage distribution of births, Cyprus 2014-2016

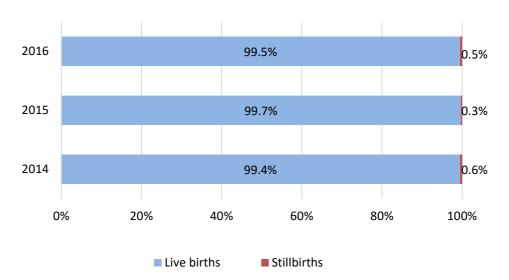


Table 2. Distribution of live births and stillbirths by Sector, Cyprus 2014-2016

Vasu		2014		2015			2016		
Year	Public	Private	Total	Public	Private	Total	Public	Private	Total
Live	3318	6181	9499	3265	6129	9394	3142	6528	9670
Stillbirths	29	24	53	15	16	31	24	28	52
Total births	3347	6205	9552	3280	6145	9425	3166	6556	9722

Year	2014		2015			2016			
Tear	Public	Private	Total	Public	Private	Total	Public	Private	Total
Live	99.1%	99.6%	99.4%	99.5%	99.7%	99.7%	99.2%	99.6%	99.5%
Stillbirths	0.9%	0.4%	0.6%	0.5%	0.3%	0.3%	0.8%	0.4%	0.5%
% of total births	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Figure 2. Percentage distribution of live births and stillbirths by Sector, Cyprus 2014-2016

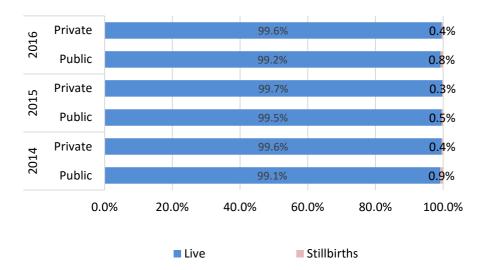


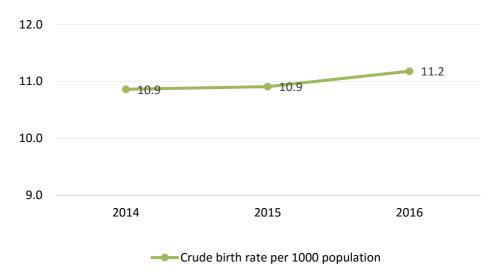
Table 3. Distribution of live births, births with mother's permanent residency the Cyprus Government controlled areas 2014-2016

Year	2014	2015	2016
Live births	9268	9198	9501
Population (mid-year)*	853200	853200 843100	
Crude birth rate per 1000 population	10.9	10.9	11.2

Denominator: Live births

<u>Notes</u>: Live births and stillbirths presented in the above table are only of mothers with permanent residency in the Government controlled areas (see details in table 7). The reason we exclude births of mothers with residence not under the Government Controlled areas is for the rates to be adjustable with the population of Cyprus.

Figure 3. Crude birth rate per 1000 population, births with mother's permanent residency the Cyprus Government controlled areas 2014-2016



^{*} Source: The data for the mid-year de jure population (de jure population: all the persons who have their usual residence in the Cyprus Government controlled areas. This concept was used in Censuses and population estimates after 1960) derived from the Demographic Report 2016 of the Statistical Service of Cyprus.

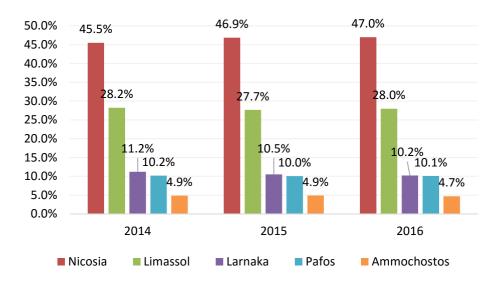
District distribution

Table 4.Distribution of total births by district, Cyprus 2014-2016

District	2014	2015	2016	Total
Nicosia	4347	4416	4568	13331
Limassol	2696	2608	2719	8023
Larnaka	1069	991	994	3054
Pafos	973	947	984	2904
Ammochostos	467	463	457	1387
Total births (live and stillbirths)	9552	9425	9722	28699

District	2014	2015	2016	Total
Nicosia	45.5%	46.9%	47.0%	46.5%
Limassol	28.2%	27.7%	28.0%	28.0%
Larnaka	11.2%	10.5%	10.2%	10.6%
Pafos	10.2%	10.0%	10.1%	10.1%
Ammochostos	4.9%	4.9%	4.7%	4.8%
% of total births (live and stillbirths)	100.0%	100.0%	100.0%	100.0%

Figure 4. Percentage distribution of total births by district, Cyprus 2014-2016



Sex distribution

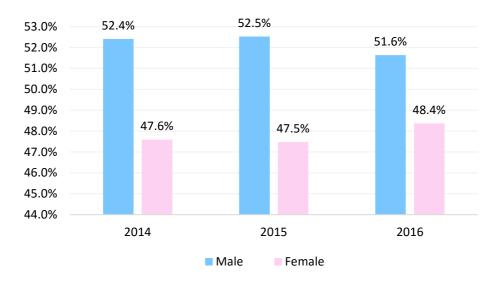
Table 5. Distribution of total births by sex, Cyprus 2014-2016

Sex	2014	2015	2016	Total
Male	4994	4945	5015	14954
Female	4535	4470	4698	13703
Not stated	23	10	9	42
Total births (live and stillbirths)	9552	9425	9722	28699

Sex	2014	2015	2016	Total
Male	52.4%	52.5%	51.6%	52.2%
Female	47.6%	47.5%	48.4%	47.8%
% of total births (live and stillbirths)*	100.0%	100.0%	100.0%	100.0%

^{* &}quot;Not stated" cases are distributed in each category by a weighting factor

Figure 5. Percentage distribution of total births by sex, Cyprus 2014-2016



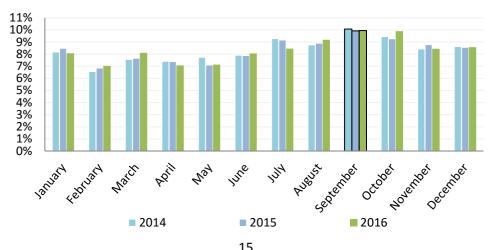
Month distribution

Table 6. Distribution of total births by month, Cyprus 2014-2016

Month	2014	2015	2016	Total
January	781	799	785	2365
February	627	646	684	1957
March	723	722	789	2234
April	708	696	687	2091
May	740	670	694	2104
June	756	744	784	2284
July	887	864	822	2573
August	837	840	893	2570
September	962	935	967	2864
October	902	874	962	2738
November	805	828	821	2454
December	824	807	834	2465
Total births (live and stillbirths)	9552	9425	9722	28699

Month	2014	2015	2016	Total
January	8.2%	8.5%	8.1%	8.2%
February	6.6%	6.9%	7.0%	6.8%
March	7.6%	7.7%	8.1%	7.8%
April	7.4%	7.4%	7.1%	7.3%
May	7.7%	7.1%	7.1%	7.3%
June	7.9%	7.9%	8.1%	8.0%
July	9.3%	9.2%	8.5%	9.0%
August	8.8%	8.9%	9.2%	9.0%
September	10.1%	9.9%	9.9%	10.0%
October	9.4%	9.3%	9.9%	9.5%
November	8.4%	8.8%	8.4%	8.6%
December	8.6%	8.6%	8.6%	8.6%
% of total births (live and stillbirths)	100.0%	100.0%	100.0%	100.0%

Figure 6. Percentage distribution of total births by month, Cyprus 2014-2016



Characteristics of childbearing women

There are five indicators in this chapter describing the characteristics of childbearing women before pregnancy, in Cyprus the years 2014-2016.

These indicators are as follows:

- Mother's residence: The percentage of live births in all Cyprus Maternity Units from mothers with residency in the Government Controlled Areas for the year 2014 was 97.6% and increased till the year 2016 to 98.3% (<u>Table 7</u>, <u>Figure 7</u>).
- Mother's country of origin: The percentage of women from the European Union (EU) or other foreign countries delivering babies in Cyprus Public and Private Hospitals was almost 30.0% for each year (<u>Table 8</u>, <u>Figure 8</u>).
- Mother's age: The percentage of mothers aged younger than 20 was 1.5% in 2014 and increased to 1.7% in 2016. The percentage of older mothers, women giving birth at 35 years or older, was 19.0% in 2014 and increased to 23.0% in 2016. The group of women aged between 20 and 34 years had 79.4% in 2014 and decreased to 75.3% in 2016 (*Table 9*, *Figure 9*).
- Mother's education: A very small proportion of women concerned primary education or none. 4 out of 10 mothers had completed secondary education and 6 out of 10 postsecondary education (<u>Table 10</u>, <u>Figure 10</u>).
- **Parity:** In all years, the percentages of women having their 2nd or higher order birth were higher than the percentages of women having their 1st child (<u>Table 11</u>, <u>Figure 11</u>).

Mother's residence

Table 7. Live births in all public and private maternity units by mother's residence,

Cyprus 2014-2016

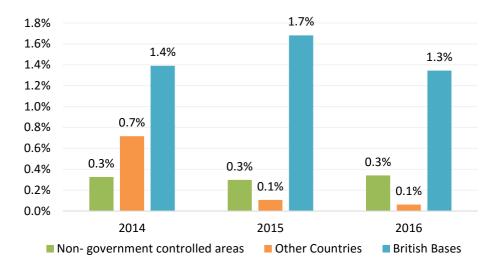
Mother's residence	2014	2015	2016	Total
Government controlled areas	9268	9198	9501	27967
Non- government controlled areas	31	28	33	92
Other Countries	68	10	6	84
British Bases	132	158	130	420
Live births*	9499	9394	9670	28563

Mother's residence	2014	2015	2016	Total
Government controlled areas	97.6%	97.9%	98.3%	97.9%
Non- government controlled areas	0.3%	0.3%	0.3%	0.3%
Other Countries	0.7%	0.1%	0.1%	0.3%
British Bases	1.4%	1.7%	1.3%	1.5%
% of live births	100.0%	100.0%	100.0%	100.0%

Denominator: Live births

<u>Notes:</u> Live births in the Demographic Report 2016 of the Statistical Service are only of mothers that are residents in the Government Controlled Areas. The data for live births used in the above table differ from these of the Cyprus Statistical Service's live births due to the different periods of data processing (http://www.mof.gov.cy/mof/cystat/statistics.nsf/All/6C25304C1E70C304C2257833003432B3/\$file/DEMO GRAPHIC_REPORT-2016-271117.pdf?OpenElement)

Figure 7. Percentage of live births in all public and private maternity units by mother's residence, Cyprus 2014-2016



Mother's country of origin

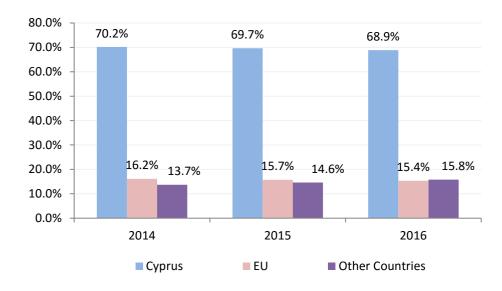
Table 8.Women by country of origin, Cyprus 2014-2016

Country of origin	2014	2015	2016	Total
Cyprus	6507	6387	6524	19418
EU	1498	1442	1455	4395
Other Countries	1269	1339	1494	4102
Not stated	27	3	4	34
Total women	9301	9171	9477	27949

Country of origin	2014	2015	2016	Total
Cyprus	70.2%	69.7%	68.9%	69.6%
EU	16.2%	15.7%	15.4%	15.7%
Other Countries	13.7%	14.6%	15.8%	14.7%
% of total women*	100.0%	100.0%	100.0%	100.0%

^{* &}quot;Not stated" cases are distributed in each category by a weighting factor

Figure 8. Percentage of women by country of origin, Cyprus 2014-2016



Mother's age

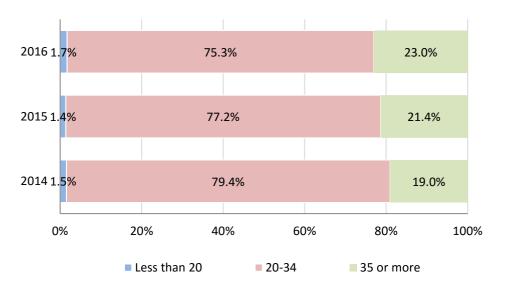
Table 9. Age distribution of women delivering live or stillbirths, Cyprus 2014-2016

Age of women	2014	2015	2016	Total
Less than 20	143	129	160	432
20-34	7345	7066	7135	21546
35 or more	1761	1958	2179	5898
Not stated	52	18	3	73
Total women	9301	9171	9477	27949

Age of Women	2014	2015	2016	Total
Less than 20	1.5%	1.4%	1.7%	1.5%
20-34	79.4%	77.2%	75.3%	77.3%
35 or more	19.0%	21.4%	23.0%	21.2%
% of total women*	100.0%	100.0%	100.0%	100.0%

^{* &}quot;Not stated" cases are distributed in each category by a weighting factor

Figure 9. Percentage age distribution of women delivering live or stillbirths, Cyprus 2014-2016



Mother's education

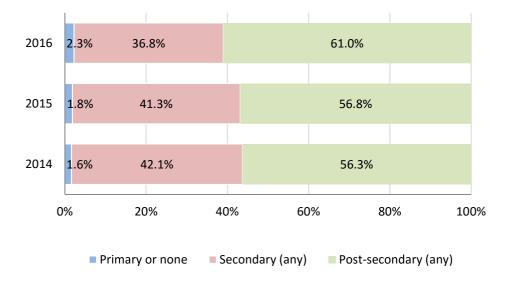
Table 10. Percentage of distribution of mother's education, Cyprus 2014-2016

Education*	2014	2015	2016	Total
Primary or none	141	163	213	517
Secondary (any)	3617	3649	3448	10713
Post-secondary (any)	4840	5017	5721	15577
Not stated	704	343	95	1142
Total women	9301	9171	9477	27949

Education	2014	2015	2016	Total
Primary or none	1.6%	1.8%	2.3%	1.9%
Secondary (any)	42.1%	41.3%	36.8%	40.0%
Post-secondary (any)	56.3%	56.8%	61.0%	58.1%
% of total women**	100.0%	100.0%	100.0%	100.0%

^{*&}quot;Primary or none" concerns pre-primary or none and primary education. "Secondary (any)" concerns lower and upper secondary education. "Post-secondary (any)" concerns post-secondary non-tertiary education, and the first and second stage of tertiary education.

Figure 10. Percentage distribution of mother's education, Cyprus 2014-2016



^{** &}quot;Not stated" cases are distributed in each category by a weighting factor

Parity

Table 11. Distribution of parity for women delivering live births or stillbirths, Cyprus 2014-2016

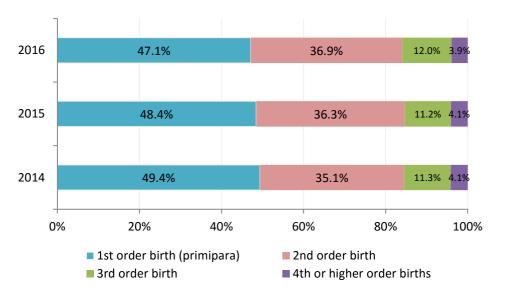
Parity	2014	2015	2016	Total
1st order birth (primipara)	4542	4440	4461	13443
2nd order birth	3230	3323	3497	10050
3rd order birth	1042	1028	1135	3205
4th or higher order births	381	375	373	1129
Not stated	106	5	11	122
Total women	9301	9171	9477	27949

Parity	2014	2015	2016	Total
1st order birth (primipara)	49.4%	48.4%	47.1%	48.3%
2nd order birth	35.1%	36.3%	36.9%	36.1%
3rd order birth	11.3%	11.2%	12.0%	11.5%
4th or higher order births	4.1%	4.1%	3.9%	4.1%
% of total women*	100.0%	100.0%	100.0%	100.0%

^{* &}quot;Not stated" cases are distributed in each category by a weighting factor

Figure 11. Percentage distribution of parity for women delivering live births or stillbirths,

Cyprus 2014-2016



The care of women and babies during pregnancy

There are seven indicators in this chapter describing the care of women and babies during pregnancy, in Cyprus the years 2014-2016.

These indicators are as follows:

- Smoking history: The percentage of women who smoked during pregnancy was 7.8% in year 2014 and decreased to 6.3% and 6.4% in years 2015 and 2016 respectively (<u>Table 12</u>, <u>Figure 12</u>). Maternal smoking during pregnancy increases the risk of low birthweight (<u>Table 13</u>, <u>Figure 13</u>) and preterm birth (<u>Table 14</u>, <u>Figure 14</u>).
- **Psychoprophylaxis:** The percentage of women who used psychoprophylaxis during pregnancy was 19.1% in year 2014 and increased to 20.1% in both years 2015 and 2016 (*Table 15*, *Figure 15*). Comparing Public and Private Sectors there was a big difference between the percentages of two sectors. In the Public Sector the percentage of women who used psychoprophylaxis during pregnancy was 39.2% in 2014, 39.3% in 2015 and decreased to 33.3% in 2016, while in the Private Sector the corresponding percentage was 8.2% in 2014, 9.9% in 2015 and increased to 13.7% in 2016 (*Table 16*, *Figure 16*).
- Assisted fertilization: On average, 3.9% of women giving birth became pregnant after some form of assisted reproductive technique. Particularly, the percentage of in vitro fertilization (IVF) was on average 3.2% (<u>Table 17</u>, <u>Figure 17</u>). Pregnancies following fertility treatment are more likely to result either in multiple births (<u>Table 18</u>, <u>Figure 18</u>) or in low birthweight births (<u>Table 19</u>, <u>Figure 19</u>) or in preterm births (<u>Table 20</u>, <u>Figure 20</u>).
- **First antenatal visit:** In 2016, more than 85.0% of pregnant women begun antenatal care during the 1st trimester. However, for the care that begins in the 2nd or 3rd trimester the percentages were about 7.0% and 5.0%, respectively. About 2.0% of women did not receive any antenatal care during pregnancy (<u>Table 21</u>, <u>Figure 21</u>).
- **Mode of onset:** On average, for all years, the percentage of babies born after spontaneous onset of labor was 43.0%, the percentage of induced labor was about 17.0%, while the one of caesarean section planned or undertaken before labor was about 40.0% (*Table 22*, *Figure 22*).
- Mode of delivery: The percentage of caesarean sections in Cyprus is among the highest in the world, more than 55.0%. From 53.4% in 2008 became 56.9% in 2014 and 2015 and in 2016 was 55.3% (39.5% in the Private and 15.9% in the Public Sector (<u>Table 23</u>, <u>Figure 23</u>). 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 baby¹². The percentage of women who had a planned/elective caesarean in 2016 was 38.7% (42.4% in the Private and

¹² http://www.who.int/mediacentre/news/releases/2015/caesarean-sections/en/



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Perinatal Health Indicators, Cyprus Public and Private Maternity Units 2014-2016

30.9% in the Public Sector) (*Table 24*, *Figure 24*). It is very likely for women who had previous caesareans to choose for their next birth the caesarean section again. Likewise, it is more likely for women who had previous vaginal delivery to choose for their next birth the vaginal delivery again (*Table 25*, *Figure 25*). The percentage of caesareans is higher in the case of low birthweight births (*Table 26*, *Figure 26*), as well as in the case of preterm births (*Table 27*, *Figure 27*). In fact, according to the World Health Organization (WHO), induction or caesarean birth should not be planned before 39 completed weeks unless medically indicated ¹³. Unfortunately, this is not the case for Cyprus. A very high percentage of planned caesareans, 77.1%, concerned births less than 39 weeks of gestation (43.1% concerned births of 38 weeks of gestation). In addition, a percentage of induction births, 32.4%, concerned births less than 39 weeks of gestation (22.3% concerned births of 38 weeks of gestation) (*Table 28*, *Figure 28*). Even more, it is more likely for births after caesarean section to be admitted in Neonatal Intensive Care Unit (NICU), compared with births after vaginal delivery (*Table 29*, *Figure 29*).

• **Episiotomy rate and perinatal trauma:** Through the years 2014-2016, roughly 70.0% of vaginal deliveries had an episiotomy (*Table 30*, *Figure 30*). The percentage of women with vaginal delivery and reported to have no perinatal trauma (tear) was about 78.0%. The corresponding percentage for 1st and 2nd degree trauma was about 21.0%, while the one for 3rd and 4th degree trauma was about 0.7% (*Table 31*, *Figure 31*).

¹³ http://www.who.int/news-room/fact-sheets/detail/preterm-birth

Smoking history

Table 12. Women by smoking history during pregnancy, Cyprus 2014-2016

Smoking	2014	2015	2016	Total
Smoke during pregnancy	680	559	605	1844
Did not smoke during pregnancy	8026	8299	8853	25178
Not stated	596	313	19	928
Total women	9301	9171	9477	27949

Smoking	2014	2015	2016	Total
Smoke during pregnancy	7.8%	6.3%	6.4%	6.8%
Did not smoke during pregnancy	92.2%	93.7%	93.6%	93.2%
% of total women*	100.0%	100.0%	100.0%	100.0%

^{* &}quot;Not stated" cases are distributed in each category by a weighting factor

Figure 12. Percentage of women by smoking history during pregnancy, Cyprus 2014-2016

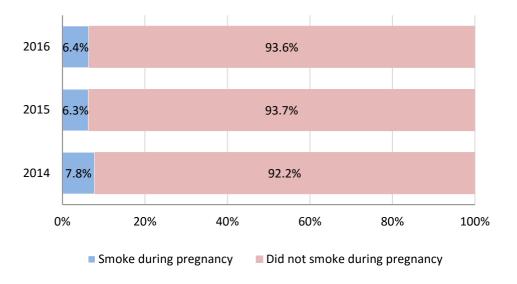


Table 13. Total births by mother's smoking history during pregnancy by birthweight,

Cyprus 2014-2016

Mother's smoking history by birthweight	2014	2015	2016	Total
Mother did not smoke during pregnancy	8808	8840	9112	26760
Less than 2500 g	897	912	916	2725
2500 g or more	7911	7928	8196	24035
Mother smoked during pregnancy	744	585	610	1939
Less than 2500 g	119	104	79	302
2500 g or more	625	481	531	1637
Total births (live and stillbirths)	9552	9425	9722	28699

Mother's smoking history by birthweight	2014	2015	2016	Total
Mother did not smoke during pregnancy	100.0%	100.0%	100.0%	100.0%
Less than 2500 g	10.2%	10.3%	10.1%	10.2%
2500 g or more	89.8%	89.7%	89.9%	89.8%
Mother smoked during pregnancy	100.0%	100.0%	100.0%	100.0%
Less than 2500 g	16.0%	17.7%	13.0%	15.6%
2500 g or more	84.0%	82.3%	87.0%	84.4%

Figure 13. Percentage of low birth weight births by mother's smoking history during pregnancy, Cyprus 2014-2016

Birthweight less than 2500 g

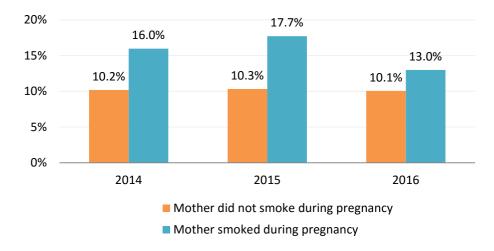


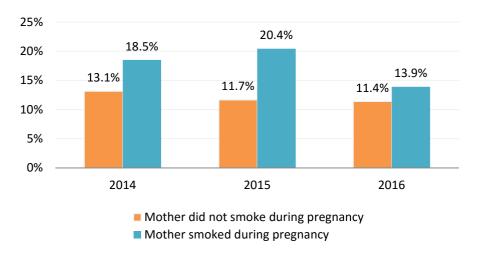
Table 14. Total births by mother's smoking history during pregnancy by gestational age, Cyprus 2014-2016

Mother's smoking history by gestational age	2014	2015	2016	Total
Mother did not smoke during pregnancy	8817	8841	9112	26770
Less than 37 weeks	1159	1031	1037	3228
37 weeks or more	7658	7809	8074	23542
Mother smoked during pregnancy	735	584	610	1929
Less than 37 weeks	136	119	85	340
37 weeks or more	599	465	525	1589
Total births (live and stillbirths)	9552	9425	9722	28699

Mother's smoking history by gestational age	2014	2015	2016	Total
Mother did not smoke during pregnancy	100.0%	100.0%	100.0%	100.0%
Less than 37 weeks	13.1%	11.7%	11.4%	12.1%
37 weeks or more	86.9%	88.3%	88.6%	87.9%
Mother smoked during pregnancy	100.0%	100.0%	100.0%	100.0%
Less than 37 weeks	18.5%	20.4%	13.9%	17.6%
37 weeks or more	81.5%	79.6%	86.1%	82.4%

Figure 14. Percentage of preterm births by mother's smoking history during pregnancy, Cyprus 2014-2016

Gestational age less than 37 wks (preterm births)



Psychoprophylaxis

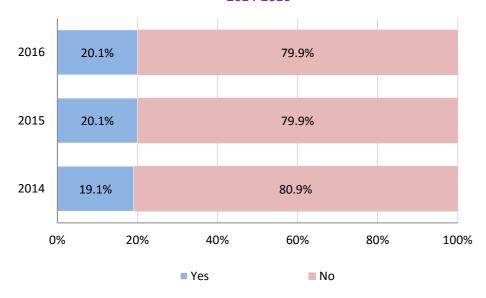
Table 15. Women who used psychoprophylaxis during pregnancy, Cyprus 2014-2016

Psychoprofylaxis*	2014	2015	2016	Total
Yes	1762	1839	1901	5502
No	7455	7328	7570	22353
Not stated	84	4	6	94
Total women	9301	9171	9477	27949

Psychoprofylaxis	2014	2015	2016	Total
Yes	19.1%	20.1%	20.1%	19.8%
No	80.9%	79.9%	79.9%	80.2%
% of total women**	100.0%	100.0%	100.0%	100.0%

^{* &}quot;Psychoprophylaxis" is a method of preparing women for natural childbirth by means of special breathing and relaxation

Figure 15. Percentage of women who used psychoprophylaxis during pregnancy, Cyprus 2014-2016



^{** &}quot;Not stated" cases are distributed in each category by a weighting factor

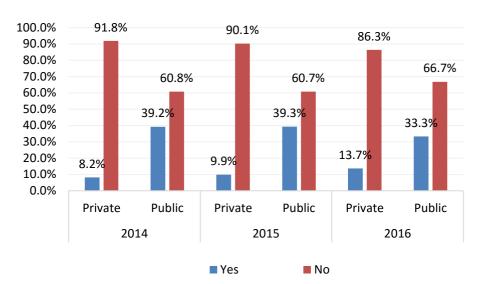
Table 16. Women who used psychoprophylaxis during pregnancy by Public and Private Sector, Cyprus 2014-2016

Davish annafi davia hu aastan	2014		2015		2016	
Psychoprofylaxis by sector	Private	Public	Private	Public	Private	Public
Yes	490	1272	590	1249	873	1028
No	5484	1971	5397	1931	5508	2062
Not stated	84	0	4	0	6	0
Total women	6058	3243	5991	3180	6387	3090

Davish samefulavia by asstan	2014		2015		2016	
Psychoprofylaxis by sector	Private	Public	Private	Public	Private	Public
Yes	8.2%	39.2%	9.9%	39.3%	13.7%	33.3%
No	91.8%	60.8%	90.1%	60.7%	86.3%	66.7%
% of total women*	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

^{* &}quot;Not stated" cases are distributed in each category by a weighting factor

Figure 16. Percentage of women who used psychoprophylaxis during pregnancy by Public and Private Sector, Cyprus 2014-2016



Assisted fertilization

Table 17. Women by mode of subfertility treatment, Cyprus 2014-2016

Subfertility treatment	2014	2015	2016	Total
None	8859	8860	9060	26779
In vitro fertilization (IVF)	275	260	350	884
Intrauterine insemination	15	27	25	67
Ovulation induction	17	15	13	45
Unspecified treatment	47	7	22	76
Not stated	89	3	7	99
Total women	9301	9171	9477	27949

Subfertility treatment	2014	2015	2016	Total
None	96.2%	96.6%	95.7%	96.2%
In vitro fertilization (IVF)	3.0%	2.8%	3.7%	3.2%
Intrauterine insemination	0.2%	0.3%	0.3%	0.2%
Ovulation induction	0.2%	0.2%	0.1%	0.2%
Unspecified treatment	0.5%	0.1%	0.2%	0.3%
% of total women*	100.0%	100.0%	100.0%	100.0%

^{* &}quot;Not stated" cases are distributed in each category by a weighting factor

Figure 17. Percentage of women by mode of subfertility treatment, Cyprus 2014-2016

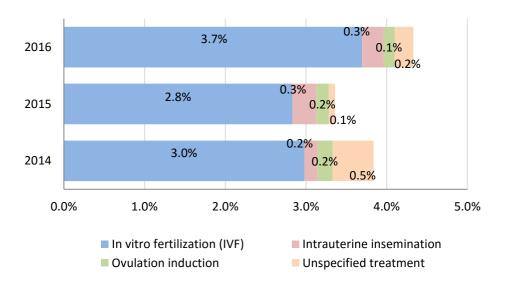


Table 18. Total births with or without subfertility treatment by plurality, Cyprus 2014-2016

Subfertility treatment by plurality	2014	2015	2016	Total
No Assisted fertilization	9064	9008	9193	27264
Singles	8823	8721	8942	26485
Multiples	241	287	251	779
Assisted fertilization	488	417	529	1435
Singles	243	204	296	744
Multiples	245	213	233	691
Total births (live and stillbirths)	9552	9425	9722	28699

Subfertility treatment by plurality	2014	2015	2016	Total
No Assisted fertilization	100.0%	100.0%	100.0%	100.0%
Singles	97.3%	96.8%	97.3%	97.1%
Multiples	2.7%	3.2%	2.7%	2.9%
Assisted fertilization	100.0%	100.0%	100.0%	100.0%
Singles	49.8%	48.9%	56.0%	51.8%
Multiples	50.2%	51.1%	44.0%	48.2%

Figure 18. Percentage of multiple births with or without subfertility treatment, Cyprus 2014-2016

Multiple births

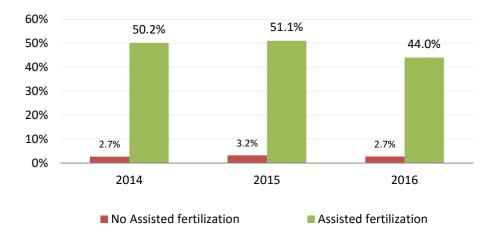


Table 19. Total births with or without subfertility treatment by birthweight, Cyprus 2014-2016

Subfertility treatment by birthweight	2014	2015	2016	Total
No Assisted fertilization	9067	9007	9193	27267
Less than 2500 g	806	852	794	2452
2500 g or more	8261	8155	8398	24815
Assisted fertilization	485	418	529	1432
Less than 2500 g	209	168	206	583
2500 g or more	276	250	323	849
Total births (live and stillbirths)	9552	9425	9722	28699

Subfertility treatment by birthweight	2014	2015	2016	Total
No Assisted fertilization	100.0%	100.0%	100.0%	100.0%
Less than 2500 g	8.9%	9.5%	8.6%	9.0%
2500 g or more	91.1%	90.5%	91.4%	91.0%
Assisted fertilization	100.0%	100.0%	100.0%	100.0%
Less than 2500 g	43.1%	40.1%	39.0%	40.7%
2500 g or more	56.9%	59.9%	61.0%	59.3%

Figure 19. Percentage of low birthweight births with or without subfertility treatment,

Cyprus 2014-2016

Birthweight less than 2500 g

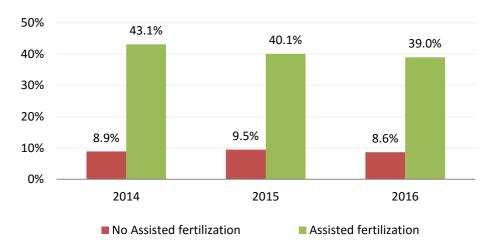


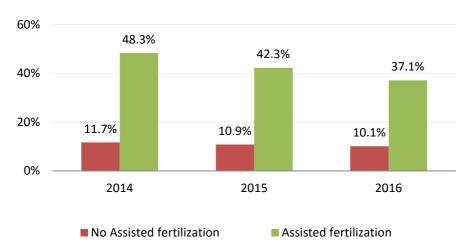
Table 20. Total births with or without subfertility treatment by gestational age, Cyprus 2014-2016

Subfertility treatment by gestational age	2014	2015	2016	Total
No Assisted fertilization	9069	9008	9192	27269
Less than 37 weeks	1059	978	927	2964
37 weeks or more	8009	8030	8265	24304
Assisted fertilization	483	417	530	1430
Less than 37 weeks	234	176	197	607
37 weeks or more	250	241	333	824
Total births (live and stillbirths)	9552	9425	9722	28699

Subfertility treatment by gestational age	2014	2015	2016	Total
No Assisted fertilization	100.0%	100.0%	100.0%	100.0%
Less than 37 weeks	11.7%	10.9%	10.1%	10.9%
37 weeks or more	88.3%	89.1%	89.9%	89.1%
Assisted fertilization	100.0%	100.0%	100.0%	100.0%
Less than 37 weeks	48.3%	42.3%	37.1%	42.4%
37 weeks or more	51.7%	57.8%	62.9%	57.6%

Figure 20. Percentage of preterm births with or without subfertility treatment, Cyprus 2014-2016

Gestational age less than 37 wks (preterm births)



First antenatal visit

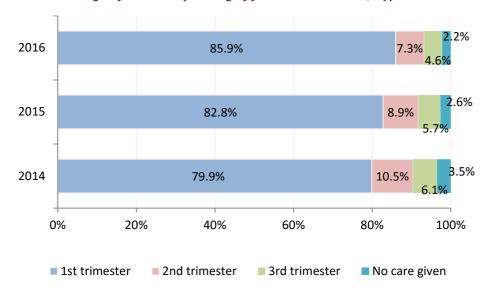
Table 21. Women by timing of first antenatal visit, Cyprus 2014-2016

First Antenatal Visit	2014	2015	2016	Total
1st trimester (<15 weeks)	5414	6581	7978	19972
2nd trimester (15-27 weeks)	711	708	680	2099
3rd trimester (28 weeks or more)	413	449	425	1287
No care given*	235	207	200	642
Not stated**	2529	1227	194	3950
Total women	9301	9171	9477	27949

First Antenatal Visit	2014	2015	2016	Total
1st trimester	79.9%	82.8%	85.9%	83.2%
2nd trimester	10.5%	8.9%	7.3%	8.7%
3rd trimester	6.1%	5.7%	4.6%	5.4%
No care given	3.5%	2.6%	2.2%	2.7%
% of total women*	100.0%	100.0%	100.0%	100.0%

^{* &}quot;No care given" cases are the ones whose mothers' first visit occurred the date of childbirth

Figure 21. Percentage of women by timing of first antenatal visit, Cyprus 2014-2016



^{** &}quot;Not stated" cases are distributed in each category by a weighting factor

Mode of onset

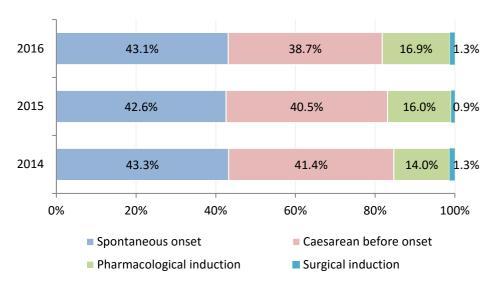
Table 22. Total births by mode of onset, Cyprus 2014-2016

Mode of Onset	2014	2015	2016	Total
Spontaneous onset	4111	4014	4192	12317
Caesarean before onset	3939	3816	3759	11514
Pharmacological induction	1328	1505	1644	4477
Surgical induction	127	87	124	338
Not stated	47	3	3	53
Total births (live and stillbirths)	9552	9425	9722	28699

Mode of Onset	2014	2015	2016	Total
Spontaneous onset	43.3%	42.6%	43.1%	43.0%
Caesarean before onset	41.4%	40.5%	38.7%	40.2%
Pharmacological induction	14.0%	16.0%	16.9%	15.6%
Surgical induction	1.3%	0.9%	1.3%	1.2%
% of total births (live and stillbirths)*	100.0%	100.0%	100.0%	100.0%

^{* &}quot;Not stated" cases are distributed in each category by a weighting factor

Figure 22. Percentage of total births by mode of onset, Cyprus 2014-2016



Mode of delivery

Table 23. Total births by mode of delivery by sector, Cyprus 2008-2016

Mode of	delivery by sector	2008	2009	2010	2011	2012	2013	2014	2015	2016
Private Sector*		6509	6420	6714	6233	6064	5698	6205	6145	6556
	Caesarean (any)	3914	3753	3992	3690	3476	3510	3869	3748	3836
	Normal (incl. vaginal instrumental)	2595	2667	2722	2543	2588	2188	2336	2397	2720
Public Sector		2442	2940	3316	3527	4076	3681	3347	3280	3166
	Caesarean (any)	862	1131	1392	1511	1852	1672	1571	1612	1542
	Normal (incl. vaginal instrumental)	1580	1809	1924	2016	2224	2009	1776	1668	1624
Private and Pu	ublic Sector	8951	9360	10030	9760	10140	9379	9552	9425	9722
	Caesarean (any)	4776	4884	5384	5201	5328	5182	5440	5360	5378
	Normal (incl. vaginal instrumental)	4175	4476	4646	4559	4812	4197	4112	4065	4344

Mode of	delivery by sector	2008	2009	2010	2011	2012	2013	2014	2015	2016
Private and	Caesarean (any)	53.4%	52.2%	53.7%	53.3%	52.5%	55.3%	56.9%	56.9%	55.3%
Public Sector	Normal (incl. vaginal instrumental)	46.6%	47.8%	46.3%	46.7%	47.5%	44.7%	43.1%	43.1%	44.7%
Private	Caesarean (any)	43.7%	40.1%	39.8%	37.8%	34.3%	37.4%	40.5%	39.8%	39.5%
	Normal (incl. vaginal instrumental)	29.0%	28.5%	27.1%	26.1%	25.5%	23.3%	24.5%	25.4%	28.0%
Public	Caesarean (any)	9.6%	12.1%	13.9%	15.5%	18.3%	17.8%	16.4%	17.1%	15.9%
	Normal (incl. vaginal instrumental)	17.6%	19.3%	19.2%	20.7%	21.9%	21.4%	18.6%	17.7%	16.7%

^{*} Births for the Cyprus Private Sector that presented in this table for the years 2008-2013 are data collected by the Private Clinics Inspectors of the Medical and Public Health Services. These data are categorized only by mode of delivery. For the years 2014-2016 the data are derived from the Birth Registry of Health Monitoring Unit.

Figure 23. Percentage of Caesareans in total births by sector, Cyprus 2008-2016

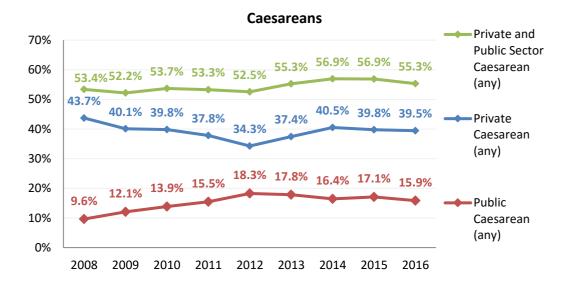


Table 24. Distribution of mode of delivery of total births by sector, Cyprus 2014-2016

Mode of Delivery by		2014			2015			2016	
sector	Private	Public	Total	Private	Public	Total	Private	Public	Total
Caesarean after onset / Emergency	881	598	1479	922	620	1542	1053	565	1618
Caesarean before onset / Elective	2966	973	3939	2824	992	3816	2782	977	3759
Normal (non- instrumental)	2116	1668	3784	2162	1552	3714	2442	1548	3990
Ventouse assisted vaginal	159	85	244	196	104	300	238	70	308
Forceps assisted vaginal	48	23	71	38	12	50	39	6	45
Not stated	35	0	35	3	0	3	2	0	2
Total births (live and stillbirths)	6205	3347	9552	6145	3280	9425	6556	3166	9722

Mode of Delivery by		2014	014		2015		2016		
sector	Private	Public	Total	Private	Public	Total	Private	Public	Total
Caesarean after onset / Emergency	14.3%	17.9%	15.5%	15.0%	18.9%	16.4%	16.1%	17.8%	16.6%
Caesarean before onset / Elective	48.1%	29.1%	41.4%	46.0%	30.2%	40.5%	42.4%	30.9%	38.7%
Normal (incl. vaginal instrumental)	37.6%	53.1%	43.1%	39.0%	50.9%	43.1%	41.5%	51.3%	44.7%
% of total births (live and stillbirths)*	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

^{* &}quot;Not stated" cases are distributed in each category by a weighting factor

Figure 24. Percentage distribution of caesareans of total births by sector, Cyprus 2014-2016

Caesareans before or after onset

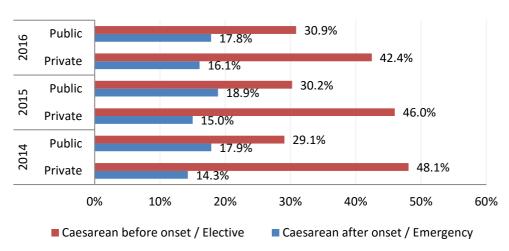


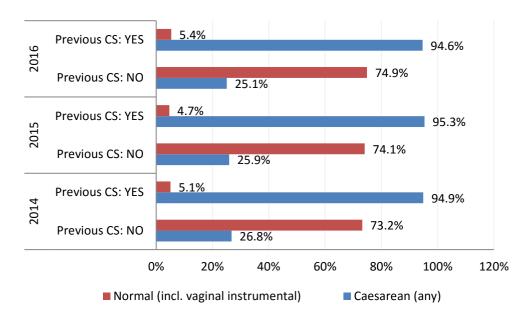
Table 25. Distribution of mode of delivery of total births by mother's previous caesarean sections, Cyprus 2014-2016

Mode of Delivery by mother's	2014		20	15	2016	
previous caesarean sections (Previous CS)	Previous CS: NO	Previous CS: YES	Previous CS: NO	Previous CS: YES	Previous CS: NO	Previous CS: YES
Caesarean (any)	736	1971	698	2029	711	2154
Normal (incl. vaginal instrumental)	2011	106	1992	99	2122	122
Not stated	6	13	0	0	0	0
Total births (live and stillbirths)	2753	2090	2689	2129	2833	2276

Mode of Delivery by mother's	2014		2015		2016	
previous caesarean sections (Previous CS)	Previous CS: NO	Previous CS: YES	Previous CS: NO	Previous CS: YES	Previous CS: NO	Previous CS: YES
Caesarean (any)	26.8%	94.9%	25.9%	95.3%	25.1%	94.6%
Normal (incl. vaginal instrumental)	73.2%	5.1%	74.1%	4.7%	74.9%	5.4%
% of total births (live and stillbirths)*	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Denominator: Number of births from multiparous (parity>0) women

Figure 25. Percentage distribution of mode of delivery of total births by mother's previous caesarean sections, Cyprus 2014-2016



^{* &}quot;Not stated" cases are distributed in each category by a weighting factor

Table 26. Total births by mode of delivery by birthweight, Cyprus 2014-2016

Mode of delivery by birthweight	2014	2015	2016	Total
Caesarean (any)	5437	5359	5378	16175
Less than 2500 g	816	788	777	2381
2500 g or more	4621	4571	4601	13794
Normal (incl. vaginal instrumental)	4115	4066	4344	12524
Less than 2500 g	200	227	219	646
2500 g or more	3915	3838	4125	11878
Total births (live and stillbirths)	9552	9425	9722	28699

Mode of delivery by birthweight	2014	2015	2016	Total
Caesarean (any)	100.0%	100.0%	100.0%	100.0%
Less than 2500 g	15.0%	14.7%	14.4%	14.7%
2500 g or more	85.0%	85.3%	85.6%	85.3%
Normal (incl. vaginal instrumental)	100.0%	100.0%	100.0%	100.0%
Less than 2500 g	4.9%	5.6%	5.0%	5.2%
2500 g or more	95.1%	94.4%	95.0%	94.8%

Figure 26. Percentage of low birthweight births by mode of delivery, Cyprus 2014-2016

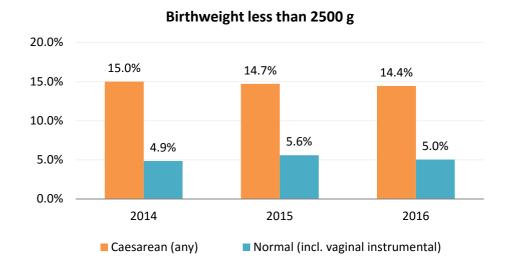


Table 27. Total births by mode of delivery by gestational age, Cyprus 2014-2016

Mode of delivery by gestational age	2014	2015	2016	Total
Caesarean (any)	5438	5360	5378	16176
Less than 37 weeks	1019	903	852	2774
37 weeks or more	4420	4457	4526	13402
Normal (incl. vaginal instrumental)	4114	4065	4344	12523
Less than 37 weeks	285	248	269	803
37 weeks or more	3829	3817	4074	11720
Total births (live and stillbirths)	9552	9425	9722	28699

Mode of delivery by gestational age	2014	2015	2016	Total
Caesarean (any)	100.0%	100.0%	100.0%	100.0%
Less than 37 weeks	18.7%	16.9%	15.9%	17.1%
37 weeks or more	81.3%	83.1%	84.1%	82.9%
Normal (incl. vaginal instrumental)	100.0%	100.0%	100.0%	100.0%
Less than 37 weeks	6.9%	6.1%	6.2%	6.4%
37 weeks or more	93.1%	93.9%	93.8%	93.6%

Figure 27. Percentage of preterm births by mode of delivery, Cyprus 2014-2016

Gestational age less than 37 wks (preterm births)

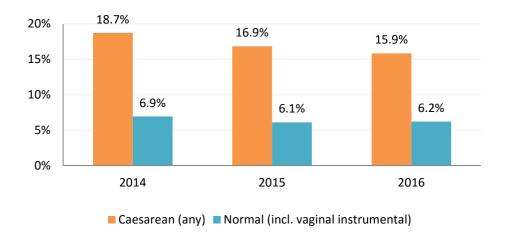


Table 28. Total births by mode of delivery by gestational age, Cyprus 2016

Mode of delivery by gestational age	Caesarean before onset / Elective	Caesarean after onset / Emergency	Normal (non- instrumental)	Vaginal instrumental (induction)	2016
Less than 37 weeks	529	317	255	12	1114
More than 37 weeks					
37 weeks	742	211	345	23	1321
38 weeks	1612	318	886	77	2893
39 weeks or more	858	755	2475	234	4322
Not stated	19	17	29	7	72
Total births (live and stillbirths)	3760	1618	3991	353	9722

Mode of delivery by gestational age	Caesarean before onset	Caesarean after onset	Normal	Assisted vaginal (induction)	2016
Less than 37 weeks	14.2%	19.8%	6.4%	3.5%	11.5%
More than 37 weeks					
37 weeks	19.8%	13.2%	8.7%	6.6%	13.7%
38 weeks	43.1%	19.9%	22.4%	22.3%	30.0%
39 weeks or more	22.9%	47.1%	62.5%	67.6%	44.8%
% of total births (live and stillbirths)*	100.0%	100.0%	100.0%	100.0%	100.0%

^{* &}quot;Not stated" cases are distributed in each category by a weighting factor

Figure 28. Percentage distribution of total births by caesarean before onset / elective by gestational age, Cyprus 2016

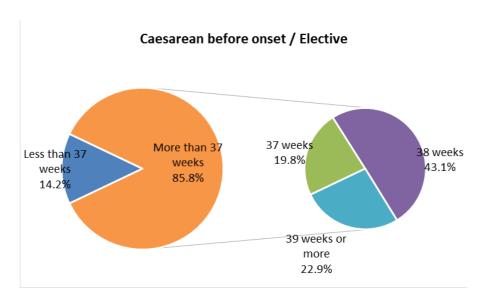


Table 29. Live births by mode of delivery by admission to Neonatal Intensive Care Unit (NICU), Cyprus 2014-2016

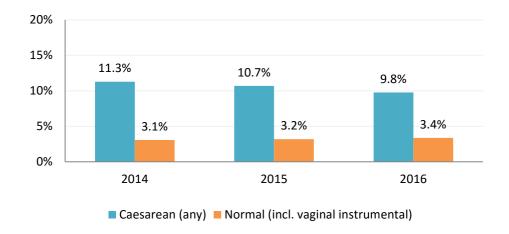
Mode of delivery by admission to NICU	2014	2015	2016	Total
Caesarean (any)	5439	5360	5378	16177
Admitted in NICU	614	573	526	1713
No NICU admission	4825	4787	4852	14464
Normal (incl. vaginal instrumental)	4113	4065	4344	12522
Admitted in NICU	127	130	146	403
No NICU admission	3986	3935	4198	12119
Live births	9552	9425	9722	28699

Mode of delivery by admission to NICU	2014	2015	2016	Total
Caesarean (any)	100.0%	100.0%	100.0%	100.0%
Admitted in NICU	11.3%	10.7%	9.8%	10.6%
No NICU admission	88.7%	89.3%	90.2%	89.4%
Normal (incl. vaginal instrumental)	100.0%	100.0%	100.0%	100.0%
Admitted in NICU	3.1%	3.2%	3.4%	3.2%
No NICU admission	96.9%	96.8%	96.6%	96.8%

Denominator: Live births

Figure 29. Percentage of live births admitted to Neonatal Intensive Care Unit (NICU) by mode of delivery, Cyprus 2014-2016

Live births admitted to NICU



Episiotomy rate and perinatal trauma

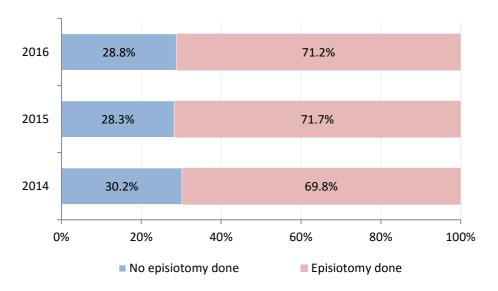
Table 30. Women delivered vaginally and had or not an episiotomy, Cyprus 2014-2016

Episiotomy	2014	2015	2016	Total
No episiotomy done	1188	1141	1247	3576
Episiotomy done	2740	2892	3077	8709
Not stated	160	14	5	179
Total women	4088	4047	4329	12464

Episiotomy	2014	2015	2016	Total
No episiotomy done	30.2%	28.3%	28.8%	29.1%
Episiotomy done	69.8%	71.7%	71.2%	70.9%
% of total women*	100.0%	100.0%	100.0%	100.0%

<u>Denominator</u>: Number of women with vaginal deliveries

Figure 30. Percentage of women delivered vaginally and had or not an episiotomy, Cyprus 2014-2016



^{* &}quot;Not stated" cases are distributed in each category by a weighting factor

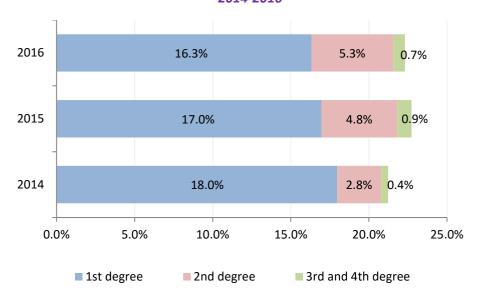
Table 31. Women delivered vaginally and had perinatal trauma, Cyprus 2014-2016

Perineal trauma	2014	2015	2016	Total
None	3039	3107	3357	9503
1st degree*	693	682	705	2080
2nd degree	109	195	227	531
3rd and 4th degree	17	37	32	86
Not stated	230	26	8	264
Total women	4088	4047	4329	12464

Perineal trauma	2014	2015	2016	Total
None	78.8%	77.3%	77.7%	77.9%
1st degree	18.0%	17.0%	16.3%	17.0%
2nd degree	2.8%	4.8%	5.3%	4.4%
3rd and 4th degree	0.4%	0.9%	0.7%	0.7%
% of total women**	100.0%	100.0%	100.0%	100.0%

<u>Denominator</u>: Number of women with vaginal deliveries

Figure 31. Percentage of women delivered vaginally and had perinatal trauma, Cyprus 2014-2016



^{*} First degree perinatal trauma is lighter than 2nd and cetera

^{** &}quot;Not stated" cases are distributed in each category by a weighting factor



The postpartum period and babies' health

In this chapter nine indicators describe the postpartum period and the babies' health, in Cyprus the years 2014-2016.

These indicators are presented below:

- Plurality: During years 2014 and 2016, 25 out of 1000 women with live births or stillbirths had multiple pregnancy, while the rate in year 2015 was a little bit higher, almost 27. The rate for triplets is decreasing overtime (*Table 32*, *Figure 32*).
- Birthweight and gestational age: The percentage of live babies with low birthweight was around 10.0% in each year (around 8.5% in Private and around 13.0% in Public Sector) (*Table 33*, *Figure 33*). The percentage of preterm live babies was around 12.0% in each year (around 10.0% in Private and around 16.0% in Public Sector) (*Table 34*, *Figure 34*). The rates of birthweight and gestational age, have positive correlation, the more the gestational age, the more the birthweight and the less the gestational age, the less the birthweight (<u>Table 35</u>, <u>Figure 35</u>).
- **Apgar score at 5-minute:** Fortunately, the Apgar score at 5-minute with scores less than 7, kept a low percentage of about 0.3% (Table 36, Figure 36).
- Admission to Neonatal Intensive Care Unit (NICU): During the period 2014-2016, in Public Maternity Units around 13.0% of live births were admitted to NICU, while the corresponding percentage in the Private Maternity Units were around 4.5% (Table 37, Figure 37). The percentage of preterm live births admitted to NICU was on average 74.0% for Public Sector and 64.0% for Private Sector, while the percentage of term live births admitted to NICU was on average 26.0% for Public Sector and 36.0% for Private Sector (*Table 38*, *Figure 38*).
- Breastfeeding during the first 48 hours after birth: On average, more than 90.0% of live babies received breast milk during the first 48 hours after birth. The rate of exclusive breastfeeding for 2016 was 32.5% (26.5% for the Private and 45.0% for the Public Sector) 34.6% (*Table 39*, *Figure 39*). The rates of exclusive breastfeeding after caesarean section was less than the one in vaginal delivery, however both are increasing overtime (Table 40, Figure 40).
- Fetal, neonatal and infant mortality rates: In 2014, 5.5 out of 1000 births were stillborn. Fetal mortality rate in 2015 decreased since 3.3 out of 1000 births were stillborn and it increased again in 2016 with a rate of 5.2 per 1000 total births. Neonatal mortality rates ranged low through all years. Infant mortality rates for 2014-2016 ranged between 2.3 and 2.7 per 1000 live births (Table 41, Figure 41). Countries have different gestational age criteria for registration of stillbirths. For Cyprus the registration limits for stillbirths is 22 weeks of gestation. For comparability between countries sometimes the data for stillbirths are presented with a cut-off of 28 weeks of gestation. Thus, for Cyprus for the years 2014-2016, the fetal mortality rates at a cut-off of 22 weeks were 5.5, 3.3 and 5.2 respectively per 1000 total births, and at a cut-off of 28 weeks were 3.5, 1.8 and 3.1 (Table 42, Figure 42). The fetal mortality rate for singletons during 2014-2016 was on average 4.0 per 1000 total births and for multiples was 0.7 (Table 43, Figure 43). In 2014-2016, the percentage of fetal deaths for pregnancies with gestational age less than



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Perinatal Health Indicators, Cyprus Public and Private Maternity Units 2014-2016

32 weeks was on average 55.0%, while for all preterms (less than 37 weeks) was about 81.0% (Table 44, Figure 44). The corresponding percentage for pregnancies with birthweight under 1500 grams was on average 60.0%, and for all low birthweight pregnancies (less than 2500 grams) was about 82.0% (Table 45, Figure 45). The percentage of neonatal deaths (0-27 days) for singletons was 75.0% while for multiples 25.0% in 2014. It decreased for singletons to 44.4% and increased for multiples to 55.6% in 2015. In 2016 the percentage for singletons increased again to 76.2% and for multiples decreased to 23.8% (Table 46, Figure 46). The percentage of neonatal deaths for babies with gestational age less than 32 weeks was 58.3% in 2014, 77.8% in 2015 and 61.9% in 2016. In general, the percentages of neonatal deaths for preterm births were higher than those of fetal deaths (Table 47, Figure 47). The percentage of neonatal deaths for babies with birthweight under 1500 grams was 66.7% in 2014, 77.8% in 2015 and 61.9% in 2016. Again these rates were higher when compared with fetal deaths for low birthweight pregnancies (Table 48, Figure 48). In the case of infant deaths (0-364 days), during 2014-2016, on average, the percentage for singletons was 69.0% while for multiples 31.0% (Table 49, Figure 49). The percentage of infant deaths for babies with gestational age less than 32 weeks was 71.5% in 2014, 81.0% in 2015 and 61.5% in 2016 (Table 50, Figure 50). The percentage of infant deaths for babies with birthweight under 1500 grams was 61.9% in 2014, 85.7% in 2015 and 73.0% in 2016 (<u>Table 51</u>, <u>Figure 51</u>).

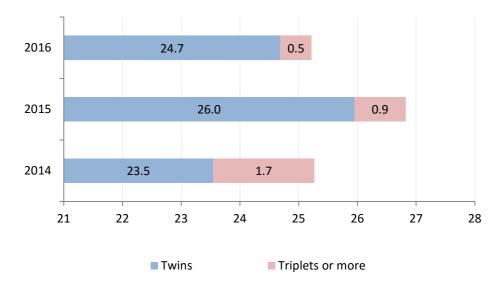
Plurality

Table 32. Multiple births of women with live births or stillbirths, by number of fetuses, Cyprus 2014-2016

Plurality	2014	2015	2016	Total
Singles	9066	8925	9238	27229
Twins	219	238	234	691
Triplets or more	16	8	5	29
Total women	9301	9171	9477	27949

Plurality per 1000 women	2014	2015	2016	Total
Singles	974.7	973.2	974.8	974.2
Twins	23.5	26.0	24.7	24.7
Triplets or more	1.7	0.9	0.5	1.0

Figure 32. Multiple birth rate per 1000 women with live births or stillbirths, by number of fetuses, Cyprus 2014-2016



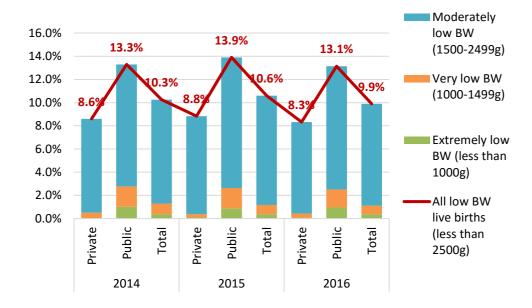
Birthweight and gestational age

Table 33. Live births by birthweight by sector, Cyprus 2014-2016

Birthweight (BW) by sector		2014			2015			2016		
birtiiweigiit (bw) by sector	Private	Public	Total	Private	Public	Total	Private	Public	Total	
Extremely low BW (less than 1000g)	2	34	36	6	29	35	6	30	36	
Very low BW (1000-1499g)	29	58	87	18	57	75	23	49	72	
Moderately low BW (1500-2499g)	494	349	843	514	368	882	512	334	846	
Normal BW (2500g or more)	5576	2877	8453	5555	2811	8366	5958	2729	8687	
Not stated	80	0	80	36	0	36	29	0	29	
Live births	6181	3318	9499	6129	3265	9394	6528	3142	9670	

Birthweight (BW) by sector	2014				2015			2016		
Birtiiweight (BW) by Sector	Private	Public	Total	Private	Public	Total	Private	Public	Total	
Extremely low BW (less than 1000g)	0.0%	1.0%	0.4%	0.1%	0.9%	0.4%	0.1%	1.0%	0.4%	
Very low BW (1000-1499g)	0.5%	1.7%	0.9%	0.3%	1.7%	0.8%	0.4%	1.6%	0.7%	
Moderately low BW (1500-2499g)	8.1%	10.5%	8.9%	8.4%	11.3%	9.4%	7.9%	10.6%	8.8%	
Normal weight BW (2500g or more)	91.4%	86.7%	89.7%	91.2%	86.1%	89.4%	91.7%	86.9%	90.1%	
% of live births*	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	
All low BW live births (less than 2500g)	8.6%	13.3%	10.3%	8.8%	13.9%	10.6%	8.3%	13.1%	9.9%	

Figure 33. Percentage distribution of live births less than 2500 gr birthweight by sector, Cyprus 2014-2016



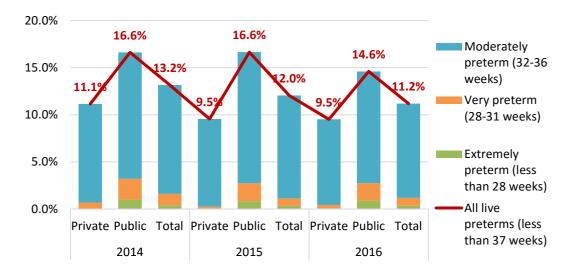
 $[\]ensuremath{^{*}}$ "Not stated" cases are distributed in each category by a weighting factor

Table 34. Live births by gestational age by sector, Cyprus 2014-2016

Costational and by south		2014			2015			2016		
Gestational age by sector	Private	Public	Total	Private	Public	Total	Private	Public	Total	
Extremely preterm (less than 28 weeks)	3	33	36	4	27	31	5	28	33	
Very preterm (28-31 weeks)	36	73	109	11	62	73	23	58	81	
Moderately preterm (32-36 weeks)	597	444	1041	556	453	1009	587	372	959	
Term (37-40 weeks)	5008	2632	7640	5333	2597	7930	5783	2572	8355	
Post-term (more than 40 weeks)	63	128	191	77	117	194	64	107	171	
Not stated	474	8	482	148	9	157	66	5	71	
Live births	6181	3318	9499	6129	3265	9394	6528	3142	9670	

Costational age by sector		2014			2015			2016	
Gestational age by sector	Private	Public	Total	Private	Public	Total	Private	Public	Total
Extremely preterm (less than 28 weeks)	0.1%	1.0%	0.4%	0.1%	0.8%	0.3%	0.1%	0.9%	0.3%
Very preterm (28-31 weeks)	0.6%	2.2%	1.2%	0.2%	1.9%	0.8%	0.4%	1.8%	0.8%
Moderately preterm (32-36 weeks)	10.5%	13.4%	11.5%	9.3%	13.9%	10.9%	9.1%	11.9%	10.0%
Term (37-40 weeks)	87.8%	79.5%	84.7%	89.2%	79.8%	85.9%	89.5%	82.0%	87.0%
Post-term (more than 40 weeks)	1.1%	3.9%	2.1%	1.3%	3.6%	2.1%	1.0%	3.4%	1.8%
% of live births*	98.9%	96.1%	97.9%	98.7%	96.4%	97.9%	99.0%	96.6%	98.2%
All live preterms (less than 37 weeks)	11.1%	16.6%	13.2%	9.5%	16.6%	12.0%	9.5%	14.6%	11.2%

Figure 34. Percentage distribution of live births less than 37 weeks of gestational age by sector, Cyprus 2014-2016



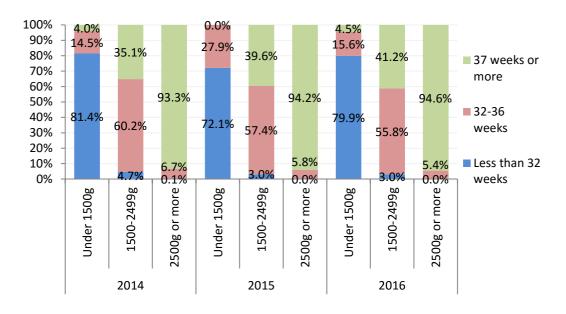
^{* &}quot;Not stated" cases are distributed in each category by a weighting factor

Table 35. Distribution of live births by birthweight and gestational age, Cyprus 2014-2016

Disthusiaht (DM) and	2014				2015		2016			
Birthweight (BW) and Gestational age (GA)	Under	1500-	2500g	Under	1500-	2500g	Under	1500-	2500g	
5 , ,	1500g	2499g	or more	1500g	2499g	or more	1500g	2499g	or more	
Less than 32 weeks	101	40	6	79	27	0	88	26	0	
32-36 weeks	18	512	567	31	509	490	17	476	473	
37 weeks or more	5	299	7951	0	352	7906	5	351	8234	
Live births	125	850	8524	110	888	8396	111	853	8706	

Pirthusiaht (PM) and	2014				2015		2016		
Birthweight (BW) and Gestational age (GA)	Under	1500-	2500g	Under	1500-	2500g	Under	1500-	2500g
destational age (GA)	1500g	2499g	or more	1500g	2499g	or more	1500g	2499g	or more
Less than 32 weeks	81.4%	4.7%	0.1%	72.1%	3.0%	0.0%	79.9%	3.0%	0.0%
32-36 weeks	14.5%	60.2%	6.7%	27.9%	57.4%	5.8%	15.6%	55.8%	5.4%
37 weeks or more	4.0%	35.1%	93.3%	0.0%	39.6%	94.2%	4.5%	41.2%	94.6%
% of live births*	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Figure 35. Percentage distribution of live births by birthweight and gestational age, Cyprus 2014-2016



^{* &}quot;Not stated" cases are distributed in each category by a weighting factor

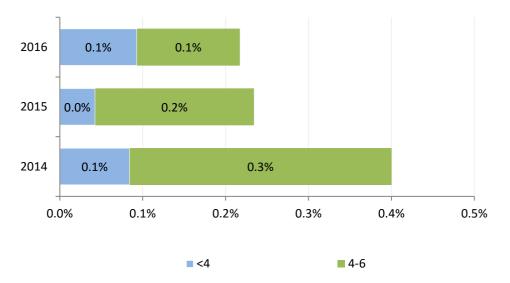
Apgar scores at 5-minute

 Table 36.
 Distribution of 5-minute Apgar score among live births, Cyprus 2014-2016

Apgar score at 5-min	2014	2015	2016	Total
<4	8	4	9	21
4-6	30	18	12	60
>6	9293	9281	9537	28111
Not applicable*	168	91	112	371
Live Births	9499	9394	9670	28563

Apgar score at 5-min	2014	2015	2016	Total
<4	0.1%	0.0%	0.1%	0.1%
4-6	0.3%	0.2%	0.1%	0.2%
>6	97.8%	98.8%	98.6%	98.4%
Not applicable	1.8%	1.0%	1.2%	1.3%
% of live births	100.0%	100.0%	100.0%	100.0%

Figure 36. Percentage of live births with 5-minute Apgar score less than 4 and less than 7, Cyprus 2014-2016



^{*&}quot;Not applicable" cases represent either cases where births occurred at home/in the road/other place other than the maternity unit (0.05% average), either cases where infant is intubated (0.7% average), or just missing values



Admission to Neonatal Intensive Care Unit (NICU)

Table 37. Live births by admission to neonatal intensive care unit (NICU)* by sector,

Cyprus 2014-2016

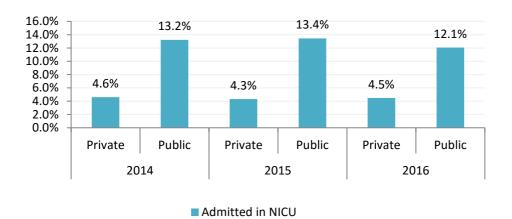
NICU* admission by		2014			2015		2016			
year and sector	Private	Public	Total	Private	Public	Total	Private	Public	Total	
No NICU Admission	5525	2879	8404	5865	2826	8691	6235	2763	8998	
Admitted in NICU	267	439	706	264	439	703	293	379	672	
Not stated	389	0	389	0	0	0	0	0	0	
Live births	6181	3318	9499	6129	3265	9394	6528	3142	9670	

NICU admission by		2014			2015		2016			
year and sector	Private	Public	Total	Private	Public	Total	Private	Public	Total	
No NICU Admission	95.4%	86.8%	92.3%	95.7%	86.6%	92.5%	95.5%	87.9%	93.1%	
Admitted in NICU	4.6%	13.2%	7.7%	4.3%	13.4%	7.5%	4.5%	12.1%	6.9%	
% of live births	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	

Denominator: Live births

Figure 37. Percentage of live births by admission to NICU by sector, Cyprus 2014-2016

Live births admitted in NICU



^{*} NICU is only available at Makario Hospital

Table 38. Live births by admission to NICU by gestational age by sector, Cyprus 2014-2016

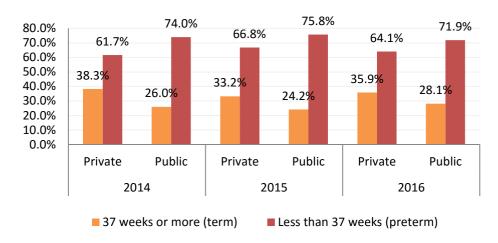
NICU admission by gestational		2014			2015		2016			
age and sector	Private	Public	Total	Private	Public	Total	Private	Public	Total	
No NICU Admission	5899	2879	8778	5865	2826	8691	6235	2763	8998	
37 weeks or more (term)	5380	2653	8033	5453	2615	8069	5800	2576	8376	
Less than 37 weeks (preterm)	519	226	745	412	211	622	435	187	622	
Admitted in NICU	282	439	721	264	439	703	293	379	672	
37 weeks or more (term)	108	114	222	88	106	194	105	107	212	
Less than 37 weeks (preterm)	174	325	499	176	333	509	188	272	460	
Live births	6181	3318	9499	6129	3265	9394	6528	3142	9670	

NICU admission by gestational		2014			2015		2016			
age and sector	Private	Public	Total	Private	Public	Total	Private	Public	Total	
No NICU Admission	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	
37 weeks or more (term)	91.2%	92.2%	91.5%	93.0%	92.5%	92.8%	93.0%	93.2%	93.1%	
Less than 37 weeks (preterm)	8.8%	7.8%	8.5%	7.0%	7.5%	7.2%	7.0%	6.8%	6.9%	
Admitted in NICU	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	
37 weeks or more (term)	38.3%	26.0%	30.8%	33.2%	24.2%	27.6%	35.9%	28.1%	31.5%	
Less than 37 weeks (preterm)	61.7%	74.0%	69.2%	66.8%	75.8%	72.4%	64.1%	71.9%	68.5%	

Denominator: Live births

Figure 38. Percentage of live births admitted in NICU by gestational age and sector, Cyprus 2014-2016

Live births admitted in NICU by gestational age and sector



Breast feeding (first 48 hours after birth)

Table 39. Live births by mode of breastfeeding during the first 48 hours after birth by sector, Cyprus 2014-2016

Breastfeeding by		2014			2015			2016	
sector	Private	Public	Total	Private	Public	Total	Private	Public	Total
Breastfed exclusively	1133	1147	2280	1375	1263	2638	1729	1414	3143
Breastfed plus other food or drink	4122	1921	6043	3938	1749	5687	4249	1524	5773
Not breastfed	585	250	835	598	253	851	537	204	741
Not stated	341	0	341	218	0	218	13	0	13
Live births	6181	3318	9499	6129	3265	9394	6528	3142	9670

Breastfeeding by		2014			2015		2016			
sector	Private	Public	Total	Private	Public	Total	Private	Public	Total	
Breastfed exclusively	19.4%	34.6%	24.9%	23.3%	38.7%	28.7%	26.5%	45.0%	32.5%	
Breastfed plus other	70.6%	57.9%	66.0%	66.6%	53.6%	62.0%	65.2%	48.5%	59.8%	
food or drink	70.6%	37.370	00.076	00.076	J3.070	02.076	03.270	40.570	33.670	
Not breastfed	10.0%	7.5%	9.1%	10.1%	7.7%	9.3%	8.2%	6.5%	7.7%	
% of live births*	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	
Breastfed	90.0%	92.5%	90.9%	89.9%	92.3%	90.7%	91.8%	93.5%	92.3%	

Figure 39. Percentage of live births by mode of breastfeeding during the first 48 hours after birth by sector, Cyprus 2014-2016



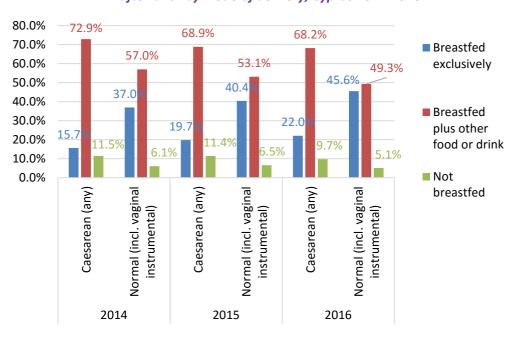
^{* &}quot;Not stated" cases are distributed in each category by a weighting factor

Table 40. Live births by mode of breastfeeding during the first 48 hours after birth by mode of delivery, Cyprus 2014-2016

	2	014	2	2015	2016			
Breastfeeding by mode of delivery	Caesarean (any)	Normal (incl. vaginal instrumental)	Caesarean (any)	Normal (incl. vaginal instrumental)	Caesarean (any)	Normal (incl. vaginal instrumental)		
Breastfed exclusively	812	1468	1020	1618	1178	1965		
Breastfed plus other food or drink	3779	2264	3559	2128	3646	2127		
Not breastfed	595	240	590	261	521	220		
Not stated	231	110	177	41	12	1		
Live births	5418	4081	5346	4048	5357	4313		

	2	014	2	2015	2016		
Breastfeeding by mode of delivery	Caesarean (any)	Normal (incl. vaginal instrumental)	Caesarean (any)	Normal (incl. vaginal instrumental)	Caesarean (any)	Normal (incl. vaginal instrumental)	
Breastfed exclusively	15.7%	37.0%	19.7%	40.4%	22.0%	45.6%	
Breastfed plus other food or drink	72.9%	57.0%	68.9%	53.1%	68.2%	49.3%	
Not breastfed	11.5%	6.1%	11.4%	6.5%	9.7%	5.1%	
% of live births*	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	

Figure 40. Percentage of live births by mode of breastfeeding during the first 48 hours after birth by mode of delivery, Cyprus 2014-2016



MINISTRY OF HEALTH OF THE REPUBLIC OF CYPRUS

Perinatal Health Indicators, Cyprus Public and Private Maternity Units 2014-2016

Mortality rates

Table 41. Summary table of fetal, neonatal and infant mortality rates, Cyprus
Government controlled areas 2014-2016

Fetal, neonatal and infant deaths*	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Fetal (stillborn fetus of 22 or more completed weeks of gestation)	-	-	-	-	-	-	-	34	42	47	51	30	50
Early neonatal (0-6 days)	9	24	13	9	18	10	16	13	24	5	10	15	17
Late neonatal (7-27 days)	3	4	4	5	6	5	2	3	4	4	2	3	4
Post neonatal (28-365 days)	18	10	10	9	9	14	10	7	6	5	9	3	5
Infant deaths (<1 year) (0- 365 days)	30	38	27	23	33	29	28	23	34	14	21	21	26

Year	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Live births Cyprus**	8309	8243	8731	8575	9205	9608	9801	9622	10161	9341	9268	9198	9501
Total births Cyprus (live and stillbirths)	-	-	-	-	-	-	-	9656	10203	9388	9319	9228	9551
Fetal mortality rate per 1000 total births	-	-	- 1	1	1	1	1	3.5	4.1	5.0	5.5	3.3	5.2
Early neonatal mortality rate per 1000 <u>live</u> births	1.1	2.9	1.5	1.0	2.0	1.0	1.6	1.4	2.4	0.5	1.1	1.6	1.8
Late neonatal mortality rate per 1000 <u>live</u> births	0.4	0.5	0.5	0.6	0.7	0.5	0.2	0.3	0.4	0.4	0.2	0.3	0.4
Post neonatal mortality rate per 1000 <u>live</u> births	2.2	1.2	1.1	1.0	1.0	1.5	1.0	0.7	0.6	0.5	1.0	0.3	0.5
Infant mortality rate per 1000 <u>live</u> births	3.6	4.6	3.1	2.7	3.6	3.0	2.9	2.4	3.3	1.5	2.3	2.3	2.7

^{*} Source: Death Registry 2004-2016, Health Monitoring Unit, Ministry of Health

^{** &}lt;u>Source</u>: The data for the years 2004-2013 derived from the Demographic Report 2016 of the Statistical Service of Cyprus. For the years 2014-2016, the data derived from the National Birth Registry of the Health Monitoring Unit, Ministry of Health. <u>Notes</u>: Live births and stillbirths presented in the above table are only of mothers that are residents in the Government controlled areas (see details in table 7). The reason we exclude births of mothers with residence not under the Government controlled areas is for the rates to be adjustable with the population of Cyprus. The data for live births used in the above table for the years 2014-2016, differ from these of the Cyprus Statistical Service's live births due to the different periods of data processing. The rates, however, are the same since the differences are very small.

Figure 41. Fetal mortality rate per 1000 total births, neonatal and infant mortality rates per 1000 live births, Cyprus Government controlled areas 2014-2016



Table 42. Fetal mortality, Cyprus Government controlled areas 2014-2016

Vital status	2014	2015	2016	Total
Liveborn	9268	9198	9501	27967
Stillborn limit 22 weeks gestation (all stillbirths)	51	30	50	131
Total births (live and stillbirths)	9319	9228	9551	28098
Stillborn limit 28 weeks gestation	32	17	30	79

Fetal mortality rate per 1000 total births	2014	2015	2016	Total
Stillborn limit 22 weeks gestation (all stillbirths)	5.5	3.3	5.2	4.7
Stillborn limit 28 weeks gestation	3.5	1.8	3.1	2.8

<u>Denominator</u>: Total births in the Cyprus Government controlled areas.

Figure 42. Fetal mortality rate per 1000 total births, Cyprus Government controlled areas 2014-2016

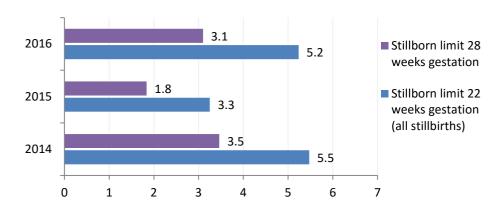


Table 43. Fetal mortality by plurality, Cyprus Government controlled areas 2014-2016

Vital status by plurality	2014	2015	2016	Total
Liveborn	9268	9198	9501	27967
Stillborn singletons	43	23	46	112
Stillborn multiples	8	7	4	19
Total births (live and stillbirths)	9319	9228	9551	28098

Fetal mortality rate per 1000 total births by plurality	2014	2015	2016	Total
Stillborn singletons	4.6	2.5	4.8	4.0
Stillborn multiples	0.9	0.8	0.4	0.7

 $\underline{\textbf{Denominator:}} \ \textbf{Total births in the Cyprus Government controlled areas.}$

Table 43. Fetal mortality rate per 1000 singleton and multiple births, Cyprus Government controlled areas 2014-2016

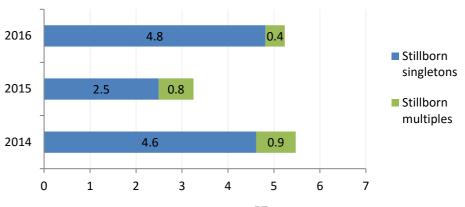


Table 44. Fetal deaths by gestational age, Cyprus Government controlled areas 2014-2016

Fetal deaths by gestational age	2014	2015	2016	Total
Less than 32 weeks	27	17	28	72
32-36 weeks	18	5	12	35
37 weeks or more	6	8	10	24
Stillbirths	51	30	50	131

Fetal deaths by gestational age	2014	2015	2016	Total
Less than 32 weeks	53.1%	56.5%	55.1%	54.6%
32-36 weeks	34.7%	17.4%	24.5%	26.8%
37 weeks or more	12.2%	26.1%	20.4%	18.5%
% of stillbirths	100.0%	100.0%	100.0%	100.0%

<u>**Denominator: Still**</u>births in the Cyprus Government controlled areas.

Figure 44. Percentage of fetal deaths by gestational age, Cyprus Government controlled areas 2014-2016

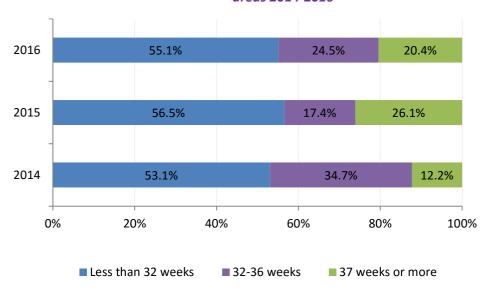


Table 45. Fetal deaths by birthweight, Cyprus Government controlled areas 2014-2016

Fetal deaths by birthweight	2014	2015	2016	Total
Less than 1500 g	33	19	27	78
1500-2499 g	9	7	13	29
2500 g or more	10	4	10	24
Stillbirths	51	30	50	131

Fetal deaths by birthweight	2014	2015	2016	Total
Less than 1500 g	64.6%	61.9%	53.3%	59.7%
1500-2499 g	16.7%	23.8%	26.7%	22.1%
2500 g or more	18.8%	14.3%	20.0%	18.2%
% of stillbirths	100.0%	100.0%	100.0%	100.0%

<u>Denominator</u>: Total births in the Cyprus Government controlled areas.

Figure 45. Percentage of fetal deaths by birthweight, Cyprus Government controlled areas 2014-2016

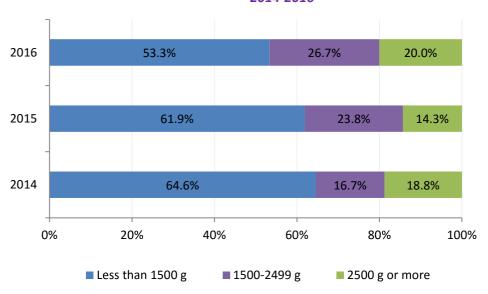


Table 46. Neonatal deaths (0-27 days) by plurality, Cyprus Government controlled areas 2014-2016

Neonatal deaths by plurality	2014	2015	2016	Total
Singletons	9	8	16	33
Multiples	3	10	5	18
Neonatal deaths (0-27 days)	12	18	21	51

Neonatal deaths by plurality	2014	2015	2016	Total
Singletons	75.0%	44.4%	76.2%	64.7%
Multiples	25.0%	55.6%	23.8%	35.3%
Neonatal deaths (0-27 days)	100.0%	100.0%	100.0%	100.0%

<u>Denominator</u>: Neonatal deaths (0-27 days) in the Cyprus Government controlled areas happened in the same year of birth

Figure 46. Percentage of neonatal deaths (0-27 days) by plurality, Cyprus Government controlled areas 2014-2016

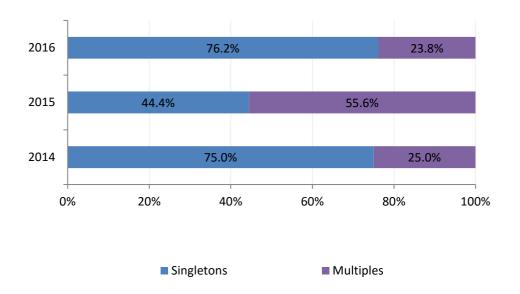


Table 47. Neonatal deaths (0-27 days) by gestational age, Cyprus Government controlled areas 2014-2016

Neonatal deaths by gestational age	2014	2015	2016	Total
Less than 32 weeks	7	14	13	34
32-36 weeks	4	1	2	7
37 weeks or more	1	3	6	10
Neonatal deaths (0-27 days)	12	18	21	51

Neonatal deaths by gestational age	2014	2015	2016	Total
Less than 32 weeks	58.3%	77.8%	61.9%	66.7%
32-36 weeks	33.3%	5.6%	9.5%	13.7%
37 weeks or more	8.3%	16.7%	28.6%	19.6%
% of neonatal deaths (0-27 days)	100.0%	100.0%	100.0%	100.0%

<u>Denominator</u>: Neonatal deaths (0-27 days) in the Cyprus Government controlled areas happened in the same year of birth

Figure 47. Percentage of neonatal deaths (0-27 days) by gestational age, Cyprus
Government controlled areas 2014-2016

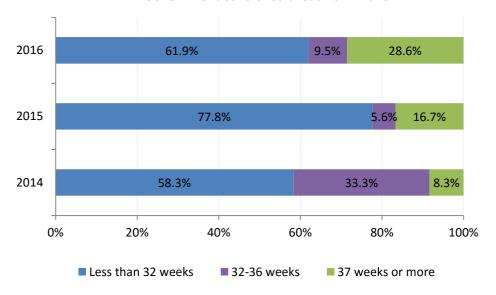


Table 48. Neonatal deaths (0-27 days) by birthweight, Cyprus Government controlled areas 2014-2016

Neonatal deaths by birthweight	2014	2015	2016	Total
Less than 1500 g	8	14	13	35
1500-2499 g	2	2	4	8
2500 g or more	2	2	4	8
Neonatal deaths (0-27 days)	12	18	21	51

Neonatal deaths by birthweight	2014	2015	2016	Total
Less than 1500 g	66.7%	77.8%	61.9%	68.6%
1500-2499 g	16.7%	11.1%	19.0%	15.7%
2500 g or more	16.7%	11.1%	19.0%	15.7%
% of neonatal deaths (0-27 days)	100.0%	100.0%	100.0%	100.0%

<u>Denominator</u>: Neonatal deaths (0-27 days) in the Cyprus Government controlled areas happened in the same year of birth

Figure 48. Percentage of neonatal deaths (0-27 days) by birthweight, Cyprus Government controlled areas 2014-2016

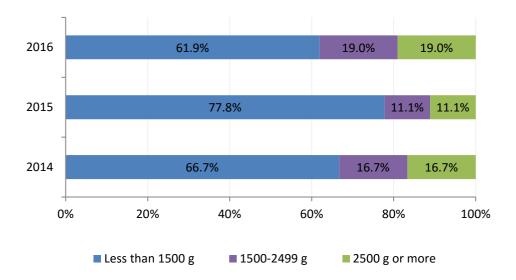


Table 49. Infant deaths (0-364 days) by plurality, Cyprus Government controlled areas 2014-2016

Infant deaths by plurality	2014	2015	2016	Total
Singletons	16	11	20	47
Multiples	5	10	6	21
Infant deaths (0-364 days)	21	21	26	68

Infant deaths by plurality	2014	2015	2016	Total
Singletons	76.2%	52.4%	76.9%	69.1%
Multiples	23.8%	47.6%	23.1%	30.9%
Infant deaths (0-364 days)	100.0%	100.0%	100.0%	100.0%

<u>Denominator</u>: Infant deaths (0-364 days) in the Cyprus Government controlled areas happened in the same year of birth

Figure 49. Percentage of infant deaths (0-364 days) by plurality, Cyprus Government controlled areas 2014-2016

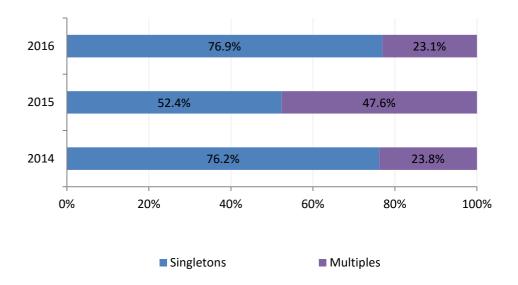


Table 50. Infant deaths (0-364 days) by gestational age, Cyprus Government controlled areas 2014-2016

Infant deaths (0-364 days) by gestational age	2014	2015	2016	Total
Less than 32 weeks	9	14	14	37
32-36 weeks	6	3	2	11
37 weeks or more	6	4	10	20
Infant deaths (0-364 days)	21	21	26	68

Infant deaths (0-364 days) by gestational age	2014	2015	2016	Total
Less than 32 weeks	42.9%	66.7%	53.8%	54.4%
32-36 weeks	28.6%	14.3%	7.7%	16.2%
37 weeks or more	28.6%	19.0%	38.5%	29.4%
% of infant deaths (0-364 days)	100.0%	100.0%	100.0%	100.0%

<u>Denominator</u>: Infant deaths (0-364 days) in the Cyprus Government Controlled Areas happened in the same year of birth

Figure 50. Percentage of infant deaths (0-364 days) by gestational age, Cyprus
Government controlled areas 2014-2016

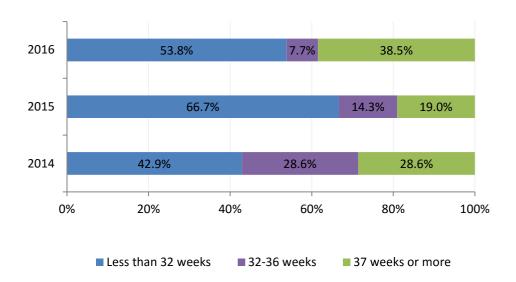


Table 51. Infant deaths (0-364 days) by birthweight, Cyprus Government controlled areas 2014-2016

Infant deaths (0-364 days) by birthweight	2014	2015	2016	Total
Less than 1500 g	10	15	14	39
1500-2499 g	3	3	5	11
2500 g or more	8	3	7	18
Infant deaths (0-364 days)	21	21	26	68

Infant deaths (0-364 days) by birthweight	2014	2015	2016	Total
Less than 1500 g	47.6%	71.4%	53.8%	57.4%
1500-2499 g	14.3%	14.3%	19.2%	16.2%
2500 g or more	38.1%	14.3%	26.9%	26.5%
% of infant deaths (0-364 days)	100.0%	100.0%	100.0%	100.0%

<u>Denominator</u>: Infant deaths (0-364 days) in the Cyprus Government controlled areas happened in the same year of birth

Figure 51. Percentage of infant deaths (0-364 days) by birthweight, Cyprus Government controlled areas 2014-2016

