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INSTITUT NATIONAL DE LA SANTE
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Direction de la Recherche, des Etudes,
l'Evaluation et des Statistiques

Equipe de recherche en
épidémiologie obstétricale, périnatale
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FRENCH NATIONAL

PERINATAL SURVEY 2016

SITUATION IN 2016

AND TRENDS SINCE 2010

Bénédicte Coulm, Camille Bonnet, Béatrice Blondel

Obstetrical, Perinatal and Pediatric Epidemiology Research Team

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Trends from1995 to 2016:
Blondel B, Coulm B, Bonnet C, Goffinet F, Le Ray C. Trends in perinatal health in metropolitan France from 1995 to 2016. Results from the French National Perinatal Surveys. J Gyn Obstet Hum Reprod 2017.
http://www.sciencedirect.com/science/article/pii/S2468784717301848

Data from this report:
B. Coulm, C Bonnet, B. Blondel. French national perinatal survey 2016. INSERM, Paris, 2017
http://www.europeristat.com.

For more information about this survey, contact Béatrice Blondel at
beatrice.blondel@inserm.fr

Introduction

The national perinatal surveys were designed to provide reliable perinatal data, regularly updated, at the national level to monitor health trends, guide health policies, and assess the implementation of medical guidelines and preventive measures. They are based on information about health status and perinatal care collected from a representative sample of births. Four surveys have previously been conducted and reported, in 1995, 1998, 2003 and 2010 [1].

Objectives of the national perinatal surveys

-        to measure the principal indicators of health status, medical practices during pregnancy and delivery, and perinatal risk factors and to follow their changes from the preceding surveys;

-        to contribute information to guide decision making in public health and assess health actions in the perinatal domain, based on specific questions in each survey;

-        to provide a reference national sample to enable comparisons with data from other sources.

The objective of this report is to describe the perinatal situation in 2016 in metropolitan France (overseas territories excluded) and put it into perspective by looking at results from the previous survey for the principal indicators of health, medical practices and risk levels. Results from 1995 to 2016 are published elsewhere [1].

Data and methods

Protocol

Every survey followed the same protocol. Data collection covered all births during one week, that is, all live born or stillborn children, in public and private maternity units – as well as children born outside these institutions and subsequently transferred to one – at a gestational age of at least 22 weeks or weighing at least 500 g at birth. The design includes almost all births as only 0.4% of births take place out of hospital [2].

The information came from three sources: an interview with each woman in the postpartum ward, to obtain information about her social and demographic characteristics and antenatal care, data from the medical files about complications of pregnancy, the delivery and the child's health status at birth, and another form completed by the head of the maternity unit describing its principal institutional characteristics.

Several institutions were involved in these surveys. In 2016, the general organisation and development of the questionnaire were provided by the National Institute for Health and Medical Research (Institut national de la santé et de la recherche médicale

(INSERM), Epopé team), three directorates within the Ministry of Health (Health, Health Services, and Statistics) and the National Institute of Public Health (Santé publique France) as well as a committee including representatives from district-level maternal and child health services (physicians or midwives), regional and district social and health services bureaus, regional health observatories, professional societies (anaesthetists, midwives, obstetricians and paediatricians), and user groups. INSERM coordinated the study at the national level, and district Maternal and Child Health Protection Services (PMI), perinatal health networks, or INSERM coordinated the study at the district level.

INSERM produced the report that served as the basis of this document [3]; in addition, DREES drafted a report describing the characteristics and practices of the maternity units [4].

The surveys were approved by the National Council on Statistical Information (Comité du Label), the French Data Protection Authority (CNIL) and the Inserm ethics committee. The 2016 approval numbers were 2016X703SA (Comité du Label), 915197 (CNIL) and IRB00003888 no. 14-191 (Inserm ethics committee).

Data collected

In 2016, among the 497 maternity units operating in metropolitan France, four refused to participate, corresponding to about 120 missing births. In addition, 579 women (594 births) did not participate in the study; minors (N=56; 0.4%), and women with a stillborn baby (N=127; 0.9%) were not interviewed in 2016 because of concerns raised by the data protection committee; other women were discharged before the investigator could see them or they refused participation because of a language problem or the mother's or child's health status). For non-respondents, basic descriptive information, corresponding to the core indicators used by the Euro-Peristat Project [5] was collected from medical records. In the present study, the sample included 14 681 women and 14 903 children in 2010 and 13 148 women and 13 384 children in 2016.

Main results

Data quality

The data collected provides reliable estimates of the indicators and their course over time. The participation of nearly every maternity unit resulted in a number of births very close to that expected according to the INSEE statistics; at the same time, the characteristics of the mothers, deliveries and newborns are similar to those already known through the hospital discharge summaries (PMSI).

Main trends

The most marked changes since the 2010 national perinatal survey (NPS) are the following:

- Important pregnancy-related characteristics have tended to continue to evolve unfavourably. The postponement of births to older maternal ages, observed for several decades now, continues, although we know that the risks for mothers and children increase with the woman's age. The increase in overweight and obesity rates is also a cause for concern: in 2016, 20% of women were overweight, and nearly 12% obese, compared with respectively 17% and 10% in 2010. The situation concerning wanted and planned pregnancies is more complex. As expected in view of the guidelines, contraceptive methods before pregnancy have tended to become more diverse; on the other hand, we observe a slight increase in pregnancies while using contraceptives, and thus mixed reactions to it (wish that the pregnancy had occurred later on). Nonetheless, most pregnancies are foreseen or planned.

- The social context in which pregnancy occurs has changed in various ways. The educational level of women continues to rise, and nearly 55% of the pregnant women in this survey pursued their education beyond high-school. On the other hand, both their work status and that of their partner are deteriorating. Overall, 28% of households received public assistance or grants from other programs linked to unemployment or low income during pregnancy (for example, back-to-work assistance, "active solidarity income" (RSA) and low-income bonus (prime d'activité).

- The gynaecologist-obstetrician remains the professional most frequently consulted for antenatal monitoring; nonetheless, a midwife was the main care provider during the first six month of pregnancy for nearly a quarter of the women. Women are thus turning more often to midwives in their role as the first-line professional for the management of uncomplicated pregnancies. The rate of antenatal hospitalisation and the number of antenatal consultations have remained stable. On the other hand, the number of ultrasound examinations continues to rise; in 2016, 75% of women had more than the three ultrasound scans recommended for a low risk pregnancy, and 36% had twice as many as recommended.

- The place of delivery has changed notably: deliveries take place more often in the public sector (from 64.1% in 2010 to 69.2% in 2016), in specialised level III departments (from 22.3% to 26.4%) and in very large departments (from 18.7% to 29.0% for departments with 3000 deliveries or more per year). The increase in the number of very large maternity units explains this change. Midwives play a growing role: they handle 87.4% of the non-operative vaginal deliveries, compared with 81.8% in 2010, with a clear increase in the private for-profit sector.

- The rate of preterm birth did not increase significantly among singleton live births, but did rise regularly and significantly between 1995 (4.5%) and 2016 (6.0%); this result

raises questions about practices in France, for other countries succeed in having rates that are stable and low or decreasing. An increase in the frequency of small-for-gestational-age children was also observed between 2010 and 2016. The trends in other indicators of neonatal health status, such as an increase in resuscitation procedures performed just after birth and transfer to a neonatology department deserve deeper examination: it may result from changes in the organisation of departments and in medical practices, but it may also reveal some decline in their health at birth.

Several questions provide information about whether some public health measures were applied or if some medical guidelines were followed. The most notable results for metropolitan France are the following:

- Progress remains to be made for the preventive measure that rely on interaction between women and healthcare professionals. Folic acid intake to prevent neural tube defects has increased but nonetheless remains limited (23% in 2016), although it is an extremely effective prevention measure. Smoking during pregnancy has not decreased, and 17% of the women smoked at least one cigarette daily during the third trimester of pregnancy. Moreover, the frequency of exclusive maternal breastfeeding during hospitalisation in the obstetrics departments fell strongly between 2010 and 2016, from 60% to 52%; moreover, maternal breastfeeding at the hospital, whether exclusive or mixed, fell slightly, from 68% in 2010 to 66% in 2016.

- Among the programs offered to inform and support women, the antenatal classes are taken most often by nulliparas, and the rate of participants rose from 2010 (74%) to 2016 (78%); participation in the early prenatal interview (EPP) increased from 2010 to 2016, but was still only 28.5%, with very strong geographical disparities showing unequal investment by regions or perinatal health networks in organising these interviews. Moreover, the care givers did not routinely raise the question of drinking and smoking during pregnancy; more than half the smokers said that they had not received any counselling about stopping their smoking during pregnancy.

- The assessment of the application of guidelines intended for obstetrics professionals during pregnancy showed contrasting results. After changes in the methods of trisomy 21 screening, trophoblast biopsy remained stable while the number of amniocenteses fell (from 8.7 to 3.6% between 2010 and 2016), especially because they are no longer routinely recommended for women aged 38 years or older. The percentage of women who had not had a PAP smear taken from the cervix during pregnancy or in preceding three years (preceding two years according to the guidelines in effect in 2010) remained stable and relatively high (19.7%); pregnancy management does not appear to make up for this deficiency in screening. The

percentage of women who were screened for diabetes fell from 86.0% to 73.2% with a new screening modality: a test targeted at women with risk factors. The rates nonetheless remained higher than expected and suggest that this test is frequently performed in women who do not correspond to the guideline's target population. Moreover, the frequency of gestational diabetes, insulin-dependent and diet-controlled, increased; this may be explained in part by the changes in the screening methods and by the rise in the prevalence of risk factors. Findings concerning vaccination were unfavourable: few women knew their vaccination status for whooping cough or had a status that meets the guidelines. Only 7% of pregnant women were vaccinated against seasonal influenza, although this group is at high risk of complications and were all pregnant during the vaccination season.

- On the other hand, guidelines appeared to have a strong effect on practices at the moment of delivery, or immediately before. Antenatal corticosteroid therapy, intended to accelerate fetal maturation in cases of very preterm births, increased substantially, with 90.2% of the children born before 34 weeks treated, compared with 77.4% in 2010. The caesarean rate (20.4%) has remained stable since 2010, which suggests a general attitude tending to reduce the performance of this intervention. For example, caesareans were performed less often in 2016 than in 2010 among women who had a previous caesarean, consistently with the professional guidelines issued in 2012. The episiotomy rate continued to drop (from 27% to 20% between 2010 and 2016), after the French National College of Gynaecologists and Obstetricians (CNGOF) issued guidelines in 2005 recommending against routine episiotomy in view of its lack of benefit in the prevention of severe perineal lesions. Interestingly, professional awareness of the abnormally high use of oxytocin during labour in France and its maternal health risks led to a decrease in its use (from 57.6% to 44.3% among women in spontaneous labour), even before the guidelines issued at the end of 2016 by the National College of Midwives and CNGOF. Another example of guideline adherence concerns the routine preventive administration of oxytocin to prevent postpartum haemorrhage, which has been recommended since 2004 and is now almost routinely applied (83.3% in 2010 and 92.7% in 2016).

Particular attention was paid in the survey to women's expectations at delivery and the professionals' responses to them. A small minority of women wrote a birth plan (3.7%) or expressed particular requests on arrival at the maternity ward. Those who did have particular requests for their delivery were very often satisfied by the medical team's response to their wishes. Before they arrived at the maternity ward, only 14.6% of women definitely did not want epidural analgesia. During labour, beyond an increase in epidural use from 78.9% to 82.2%, pain management moved towards a more diversified and better-

quality approach, through the more frequent use of patient-controlled epidural analgesia (PCEA, a pump enabling women to control their analgaesic dose), and the more frequent use of non-pharmaceutical methods (from 14.3% in 2010 to 35.5% in 2016), with and without epidurals. A huge majority of the women (88.3%) said that they were very or fairly satisfied with the methods used to manage their pain and contractions. Nonetheless, the fact that nearly 12% were not very or not at all satisfied underlines the importance of continuing efforts to improve women's comfort during labour.

Conclusion

We have shown major trends in risk factors, medical practices and the health status of children at birth. More detailed analyses will allow us to rank France in relation to other European countries in the Euro-Peristat Project, study some risk factors in greater detail and assess the application of some regulatory measures and guidelines, as was done with the previous survey.

References

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Tables

► **Table 1. Core indicators: maternal characteristics**
(metropolitan France; all women and births)

	n	%	95% CI
Woman's age [1]			
< 20 years (including teenagers)	260	2.0	1.7 - 2.2
20 - 24	1565	11.9	11.4 - 12.5
25 - 29	4089	31.1	30.4 - 32.0
30 - 34	4417	33.7	32.8 - 34.5
35 - 39	2262	17.2	16.6 - 17.9
≥ 40	534	4.1	3.7 - 4.4
	(13 127)		
Parity [1]			
0	5573	42.5	41.6 - 43.3
1	4650	35.4	34.6 - 36.2
≥ 2	2907	22.1	21.4 - 22.9
	(13 130)		
Previous caesarean [1]			
Yes	1497	11.4	10.9 - 12.0
No	11 631	88.6	88.0 - 89.1
	(13 128)		

(1) Denominator: number of women.

► **Table 2. Core indicators: delivery**
(metropolitan France; all women and births)

	n	%	95% CI%
Type of pregnancy [1]			
Singleton	12 899	98.2	98.0 - 98.4
Multiple	234	1.8	1.6 - 2.0
(13 133)			
Fetal presentation [2]			
Cephalic	12 579	94.5	94.1 - 94.9
Breech	643	4.8	4.5 - 5.2
Other	93	0.7	0.6 - 0.8
(13 315)			
Onset of labour [1]			
Spontaneous	8939	68.1	67.3 - 68.9
Induction	2957	22.6	21.8 - 23.3
Caesarean before labour	1223	9.3	8.8 - 9.8
(13 119)			
Mode of delivery [2]			
Spontaneous vaginal delivery	9047	67.7	66.9 - 68.5
Instrumental vaginal delivery	1615	12.1	11.5 - 12.7
Caesarean	2697	20.2	19.5 - 20.9
(13 359)			
Status of the maternity ward [1]			
Public or ESPIC [3]	10 080	76.7	76.0 - 77.4
Private	3061	23.3	22.6 - 24.0
(13 141)			
Level of care of the maternity unit [1]			
Level I	2930	22.3	21.6 - 23.0
Level II	6684	50.9	50.0 - 51.7
Level III	3523	26.8	26.1 - 27.6
(13 137)			

(1)   Denominator: number of women.

(2)   Denominator: total number of births (live-born, stillborn, and medically indicated termination of pregnancy).

(3)   Private non-profit hospital.

► **Table 3. Core indicators: the newborn**
(metropolitan France; all women and births)

	n	%	95% CI
Gestational age [1]			
≤ 32 weeks' gestation	307	2.3	2.0 - 2.6
33 - 34	206	1.5	1.3 - 1.8
35 - 36	596	4.5	4.1 - 4.8
37	954	7.2	6.7 - 7.6
38	2082	15.6	15.0 - 16.2
39	3544	26.5	25.8 - 27.3
40	3373	25.3	24.5 - 26.0
≥ 41	2287	17.1	16.5 - 17.8
	(13 349)		
Birth weight [1]			
< 1500 g	230	1.7	1.5 - 2.0
1500 - 1999	210	1.6	1.4 - 1.8
2000 - 2499	656	4.9	4.5 - 5.3
2500 - 2999	2738	20.5	19.8 - 21.2
3000 - 3499	5224	39.1	38.3 - 40.0
3500 - 3999	3388	25.4	24.7 - 26.1
≥ 4000	902	6.8	6.3 - 7.2
	(13 348)		
Newborn status at birth [1]			
Living	13232	99.0	98.8 - 99.1
Stillborn	79	0.6	0.5 - 0.7
Termination of pregnancy (medically indicated)	58	0.4	0.3 - 0.6
	(13 369)		
5-min Apgar score [2]			
< 7	154	1.2	1.0 - 1.4
	(13 200)		
Neonatal transfer [2,3]	1382	10.4	9.9 - 11.0
	(13 228)		
Breastfeeding (exclusive or mixed) during hospitalisation [2]	8226	66.5	65.6 - 67.3
	(12 373)		

(1)   Denominator: total number of births (live-born, stillborn, and medically indicated termination of pregnancy).

(2)   Denominator: number of live births.

(3)   Transfer to the intensive care, neonatology or kangaroo care units.

► **Table 4. Women's social and demographic characteristics**
(metropolitan France; adult women and live births)

	2010		2016		
	%	P	n	%	95% CI
Woman's age [1,2]					
18 - 19 years	2.0	< 0.001	204	1.6	1.4 - 1.8
20 - 24	14.6		1553	12.0	11.4 - 12.6
25 - 29	33.3		4052	31.3	30.5 - 32.1
30 - 34	30.8		4377	33.8	33.0 - 34.6
35 - 39	15.8		2236	17.3	16.6 - 17.9
≥ 40	3.5		519	4.0	3.7 - 4.4
	(14 342)		(12 941)		
Mean age	29.7 ± 5.4			30.3 ± 5.2	
Parity [1,2]					
0	43.1	NS	5464	42.2	41.4 - 43.1
1	34.6		4609	35.6	34.8 - 36.4
2	14.5		1854	14.3	13.7 - 14.9
3	5.1		625	4.8	4.5 - 5.2
≥ 4	2.7		393	3.1	2.8 - 3.3
	(14 332)		(12 945)		
Marital status [1]					
Married	47.5	< 0.001	4761	40.6	39.9 - 41.4
Civil union	} 52.5		2123	18.1	17.5 - 18.7
Single			4832	41.3	40.5 - 42.0
	(13 862)		(11 716)		
Has a partner [1,3]					
Yes, in the same residence	} 93.0	–	10 752	91.6	91.1 - 92.1
Yes, in different residences			374	3.2	2.9 - 3.5
No	7.0		610	5.2	4.9 - 5.6
	(13 887)		(11 736)		
Residence at end of pregnancy [1]					
Personal housing	93.6	NS	11 022	93.9	93.5 - 94.2
Family, friends	5.5		612	5.2	4.9 - 5.6
Short-term shelter, hotel	0.8		99	0.8	0.7 - 1.0
Other	0.1		9	0.1	0.0 - 0.1
	(13 804)		(11 742)		

(1) Denominator: number of women.

(2) Recommended indicator (sample includes non-participating women)

(3) Questions formulated differently in 2010 and 2016 (in 2010, no detail about the residence of women with partners).

► **Table 5. Women's birth place and educational level**
(metropolitan France; adult women and live births)

	2010		2016		
	%	P	n	%	95% CI
Nationality [1]					
French	86.7	NS	10 083	85.9	85.4 - 86.5
European	3.3		416	3.5	3.3 - 3.8
North African	4.8		587	5.0	4.7 - 5.4
Other African country	2.9		406	3.5	3.2 - 3.8
Other nationality	2.3		243	2.1	1.9 - 2.3
	(13 985)		(11 735)		
Country of birth [1]					
France	81.7	NS	9 569	81.4	80.8 - 82.0
Other European country	3.9		463	3.9	3.7 - 4.2
North African	7.1		827	7.0	6.7 - 7.4
Other African country	4.3		550	4.7	4.4 - 5.0
Other country	3.0		352	3.0	2.7 - 3.3
	(13 919)		(11 761)		
Interval between arrival in France and delivery [1,2]					
≤ 1 year	9.3	< 0.001	230	11.5	10.3 - 12.7
2-5 years	26.8		563	28.1	26.4 - 29.8
6-9 years	28.2		449	22.4	20.9 - 24.0
≥ 10 years	35.7		762	38.0	36.2 - 39.8
	(2 389)		(2 004)		
Educational level [1]					
None or only primary school	2.4	< 0.001	187	1.6	1.4 - 1.8
Middle school (Years 6-9)	8.1		728	6.2	5.9 - 6.6
Vocational education, short	17.6		1761	15.1	14.6 - 15.7
High school, academic studies	9.3		1008	8.7	8.2 - 9.1
High school, vocational studies	7.5		1173	10.1	9.6 - 10.5
High school, technical studies	3.0		340	2.9	2.7 - 3.2
Completed high school + 1 or 2 years	21.4		2247	19.3	18.7 - 19.9
Completed high school + 3 or 4 years	17.8		2124	18.2	17.6 - 18.8
Completed high school + 5 years or more	12.9		2093	17.9	17.4 - 18.5
	(13 933)		(11 661)		

(1) Denominator: number of women.
(2) For the women born abroad and living in France, interval calculated from the response to the following question: "What year did you arrive in France?".

► **Table 6. Women's activity and occupational category**
(metropolitan France; adult women and live births)

	2010		2016		
	%	*P*	n	%	95% CI
Woman's work status at the end of pregnancy [1]					
Working	70.2	< 0.001	7830	68.1	67.3 - 69.0
Housewife	13.9		1394	12.1	11.5 - 12.7
Student	2.4		236	2.1	1.8 - 2.3
Unemployed	12.8		1928	16.8	16.1 - 17.5
Other situation	0.7		108	0.9	0.8 - 1.1
	(13 452)		(11 496)		
Work during pregnancy [1]					
Yes	70.4	NS	8308	70.8	70.1 - 71.5
No	29.6		3425	29.2	28.5 - 29.9
	(13 973)		(11 733)		
Working time [1]					
Full-time	79.4	NS	6383	78.5	77.7 - 79.3
Part-time	20.6		1748	21.5	20.8 - 22.3
	(9 654)		(8 131)		
Gestational age at last day worked [1]					
1 - 14 weeks' gestation	9.3	< 0.001	810	9.9	9.3 - 10.6
15 - 22	15.6		1374	16.8	16.0 - 17.6
23 - 28	22.8		1909	23.3	22.4 - 24.2
29 - 32	26.0		1812	22.1	21.2 - 23.0
≥ 33	26.3		2290	27.9	27.0 - 28.9
	(9 503)		(8 195)		

(1)   Denominator: number of women.

► **Table 7. Activity and occupational category of partner** [1]
(metropolitan France; adult women and live births)

	2010		2016		
	%	P	n	%	95% CI
Situation of partner at time of the interview [1]					
Working	88.7	< 0.001	9646	87.9	87.4 - 88.4
Student	1.1		104	0.9	0.8 - 1.1
Unemployed	8.7		1082	9.9	9.4 - 10.3
Other situation	1.5		139	1.3	1.1 - 1.5
	(13 356)		(10 971)		
Occupation of partner [1,2,3]					
Farmer	–		162	1.7	1.5 - 2.0
Tradesperson, shopkeeper	–		822	8.7	8.3 - 9.2
Manager	–		1580	16.8	16.2 - 17.5
Intermediate profession	–		2365	25.2	24.4 - 25.9
Civil service worker	–		1049	11.2	10.6 - 11.7
Other office worker	–		24	0.3	0.2 - 0.4
Sales worker	–		154	1.6	1.4 - 1.9
Service worker	–		152	1.6	1.4 - 1.9
Skilled manual worker	–		2221	23.6	22.9 - 24.4
Unskilled manual worker	–		651	6.9	6.5 - 7.4
Worker (skills not specified)	–		109	1.2	1.0 - 1.4
Farm worker	–		111	1.2	1.0 - 1.4
			(9400)		

(1)   Denominator: number of women who answered the question, even if they had answered that they were not with a partner at the time of the interview.

(2)   Automated coding of occupation by *SICORE* (INSEE) software.

(3)   If working at the time of the interview.

► **Table 8. Household resources and women's health insurance coverage**
(metropolitan France; adult women and live births)

	2010		2016		
	%	P	n	%	95% CI
Household income associated with labour force participation [1]					
Yes	90.9	NS	10 668	91.1	90.7 - 91.6
No	9.1		1038	8.9	8.4 - 9.3
	(13 686)		(11 706)		
Total household resources [1,2]					
Back-to-work aid	14.5	–	1766	15.1	14.5 - 15.6
"active solidarity income" (RSA) and low-income bonus (prime d'activité)	8.4		1159	9.9	9.4 - 10.4
Other allocations	2.9		302	2.6	2.3 - 2.8
Income from work	73.5		8430	71.8	71.2 - 72.6
No resources	0.7		73	0.6	0.5 - 0.8
	(13 739)		(11 730)		
Monthly household resources [1]					
< 500 €	2.0	< 0.001	235	2.0	1.8 - 2.3
500 - 999	7.8		872	7.6	7.2 - 8.0
1 000 - 1 499	10.2		991	8.6	8.2 - 9.0
1 500 - 1 999	14.7		1461	12.6	12.1 - 13.2
2 000 - 2 999	30.6		3198	27.7	27.0 - 28.4
3 000 - 3 999	20.9		2704	23.4	22.8 - 24.1
≥ 4000	13.8		2094	18.1	17.5 - 18.7
	(13 443)		(11 555)		
Health coverage at beginning of pregnancy [1]					
Mandatory health insurance	86.2	NS	10 069	85.8	85.2 - 86.3
CMU (health insurance for very low-income individuals)	} 12.8		1376	11.7	11.2 - 12.2
AME (health insurance for undocumented individuals)			127	1.1	0.9 - 1.3
None	1.0		169	1.4	1.3 - 1.6
	(13 801)		(11 741)		
Supplementary health insurance [1]					
Mutual (cooperative) insurance company, private insurance, pension fund	–		9587	82.1	81.6 - 82.7
Supplementary CMU (health insurance for very low-income individuals)	–		1069	9.2	8.7 - 9.6
None	–		1013	8.7	8.3 - 9.1
			(11 669)		
Deprivation index [1,3]					
0	–		9231	78.5	77.7 - 79.2
1	–		1237	10.5	10.0 - 11.1
2	–		851	7.2	6.8 - 7.7
3	–		443	3.8	3.4 - 4.1
			(11 762)		

(1) Denominator: number of women.

(2) If there are several sources of income, they are selected in the order presented here.

(3) Combine the following variables: "no partner", "active solidarity income/low-income bonus", "insured by CMU (for very low-income individuals), AME (for undocumented individuals) or uninsured", and "no personal housing"; Index of 0 = Not disadvantaged to 3 = very disadvantaged.

► **Table 9. Contraception and fertility treatment**
(metropolitan France; adult women and live births)

	2010		2016		
	%	p	n	%	95% CI
Ever used contraceptives [1]					
Yes	91.8	NS	10 775	91.7	91.3 - 92.2
No	8.2		970	8.3	7.8 - 8.7
	(13 733)		(11 745)		
Last contraceptive method used [1,2]					
None	8.4	< 0.001	970	8.3	7.9 - 8.7
Pill	73.8		7371	62.8	62.1 - 63.6
Intrauterine device	5.6		1121	9.6	9.1 - 10.0
Implant, patch, vaginal ring	2.6		576	4.9	4.6 - 5.3
Condom	8.2		1306	11.1	10.7 - 11.6
Withdrawal	0.6		219	1.9	1.7 - 2.1
Periodic abstinence	0.5		134	1.1	1.0 - 1.3
Other method	0.3		30	0.3	0.2 - 0.4
	(13 444)		(11 727)		
Reason for stopping contraceptive use [3]					
Desire to have a child	80.1	< 0.001	8124	78.1	77.4 - 78.8
Became pregnant (while using contraception)	7.4		966	9.3	8.8 - 9.8
Other reason [4]	12.5		1311	12.6	12.1 - 13.2
	(12 580)		(10 401)		
Infertility treatments [1]					
None	94.3	< 0.001	10 896	93.1	92.7 - 93.5
IVF	2.3		388	3.3	3.1 - 3.6
Intrauterine insemination	1.0		117	1.0	0.9 - 1.2
Ovulation-inducing drugs	2.4		300	2.6	2.3 - 2.8
	(13 587)		(11 701)		
Pre-conception consultation for this pregnancy [1]					
Yes	–		4126	35.3	34.6 - 36.1
No	–		7558	64.7	64.0 - 65.4
			(11 684)		

(1) Denominator: number of women.

(2) If several methods are reported, they are selected in the order presented here.

(3) Denominator: number of women who have ever used contraception.

(4) In 2016: including 66.3% for whom the contraception might be considered inappropriate (medical contraindication, poor tolerance, poor adherence).

► **Table 10. Psychological situation during pregnancy**
(metropolitan France; adult women and live-births)

	2010		2016		
	%	p	n	%	95% CI
Reaction to the discovery of the pregnancy [1]					
Happy to be pregnant now	75.5	< 0.001	8499	72.5	71.8 - 73.2
Pregnancy desired earlier	11.1		1382	11.8	11.3 - 12.3
Pregnancy desired later	10.3		1424	12.2	11.7 - 12.7
Would have preferred not to be pregnant	3.1		413	3.5	3.3 - 3.8
	(13 814)		(11 718)		
Psychological status during pregnancy [1]					
Good	69.3	NS	7929	67.7	67.0 - 68.4
Fairly good	21.8		2599	22.2	21.6 - 22.8
Not good	6.4		857	7.3	6.9 - 7.7
Bad	2.5		328	2.8	2.6 - 3.1
	(13 455)		(11 713)		
Experience of the pregnancy [1]					
At least 2 consecutive weeks feeling sad, depressed, hopeless [2]					
Yes	–		2737	23.6	23.0 - 24.3
No	–		8851	76.4	75.6 - 77.1
			(11 588)		
At least 2 consecutive weeks with a loss of interest in most thing, such as leisure activities [2]					
Yes	–		2099	18.2	17.6 - 18.8
No	–		9460	81.8	81.1 - 82.5
			(11 559)		
Physical violence during pregnancy [2]					
Yes	–		199	1.7	1.5 - 2.0
No	–		11 282	98.3	98.0 - 98.5
			(11 481)		
Consulted a professional for psychological difficulties [1,3]					
No	95.2	< 0.001	10 953	93.6	93.2 - 94.0
Yes, a psychiatrist	0.9		138	1.2	1.0 - 1.4
Yes, another physician	0.5		56	0.5	0.4 - 0.6
Yes, a psychologist or psychotherapist	3.2		512	4.4	4.1 - 4.7
Yes, another professional	0.2		42	0.3	0.3 - 0.5
	(13 682)		(11 701)		

(1)   Denominator: number of women.

(2)   Responses from the self-administered questionnaire.

(3)   When several professionals were reported, they were selected in the order presented here.

► **Table 11. Women's weight and height**
(metropolitan France; adult women and live births)

	2010		2016		
	%	p	n	%	95% CI
Height [1]					
< 150 cm	0.5	NS	57	0.5	0.4 - 0.6
150 - 159	19.2		2149	18.4	17.8 - 19.0
160 - 169	56.8		6744	57.9	57.1 - 58.6
170 - 179	22.4		2587	22.2	21.6 - 22.8
≥ 180	1.1		121	1.0	0.9 - 1.2
	(13 712)		(11 658)		
Prepregnancy weight [1]					
< 40 kg	0.2	< 0.001	25	0.2	0.2 - 0.3
40 - 49	9.2		943	8.1	7.7 - 8.5
50 - 59	35.8		3791	32.5	31.8 - 33.2
60 - 69	29.7		3424	29.4	28.7 - 30.1
70 - 79	13.1		1816	15.6	15.0 - 16.1
≥ 80	12.0		1661	14.2	13.7 - 14.8
	(13 770)		(11 660)		
BMI before pregnancy [1]					
< 18.5	8.2	< 0.001	863	7.4	7.1 - 7.9
18.5 - 24.9	64.6		7045	60.8	60.0 - 61.5
25 - 29.9	17.3		2312	20.0	19.3 - 20.6
30 - 34.9	6.8		941	8.1	7.7 - 8.6
≥ 35	3.1		427	3.7	3.4 - 4.0
	(13 551)		(11 588)		
Weight gain during pregnancy [1]					
< 5 kg	4.5	< 0.001	702	6.1	5.7 - 6.4
5 - 9	15.7		2077	17.9	17.3 - 18.5
10 - 12	25.5		2842	24.5	23.9 - 25.2
13 - 15	24.3		2721	23.5	22.8 - 24.1
16 - 19	17.5		1932	16.7	16.1 - 17.3
≥ 20	12.5		1314	11.3	10.9 - 11.8
	(13 664)		(11 588)		
Mean weight gain during pregnancy (kg)	13.3 ± 5.8		12.8 ± 5.8		

(1)   Denominator: number of women.

► **Table 12. Tobacco and cannabis consumption**
(metropolitan France; adult women and live births)

| | 2010 | | 2016 | | |
	%	P	n	%	95% CI
Smoking just before pregnancy [1]					
Yes	30.6	NS	3525	30.0	29.3 - 30.7
No	69.4		8217	70.0	69.3 - 70.7
	(13 831)		(11 742)		
Number of cigarettes/day before this pregnancy [1]					
0	69.6	NS	8217	70.2	69.5 - 70.9
1 à 9	10.8		1350	11.6	11.1 - 12.0
≥ 10	19.6		2132	18.2	17.6 - 18.8
	(13 798)		(11 699)		
Number of cigarettes/day during the third trimester of pregnancy [1]					
0	83.0	NS	9798	83.4	82.9 - 84.0
1 à 9	12.2		1447	12.3	11.8 - 12.8
≥ 10	4.8		499	4.3	4.0 - 4.6
	(13 952)		(11 744)		
Consumption of cannabis during pregnancy [1]					
Yes	1.1	< 0.0001	244	2.1	1.8 - 2.4
No	98.9		11 327	97.9	97.6 - 98.1
	(13 686)		(11 571)		
Frequency of cannabis intake during pregnancy [1]					
< Once a month	50.8	NS	69	42.1	34.4 - 50.0
Once or twice a month	16.7		24	14.6	9.6 - 21.0
≥ 3 times/month	32.5		71	43.3	35.6 - 51.2
	(126)		(164)		

(1)   Denominator: number of women.

► **Table 13. Attention paid to smoking and alcohol use by professionals during antenatal care**
(metropolitan France; adult women and live births)

	2010		2016		
	%	P	n	%	95% CI
Question asked about smoking [1]					
Yes	_		9367	79.9	79.2 - 80.5
No	_		2363	20.1	19.5 - 20.8
			(11 730)		
Advised to stop smoking (if woman smoked during the pregnancy) [1,2]					
Yes	_		1446	46.3	44.5 - 48.1
No	_		1678	53.7	52.0 - 55.5
			(3124)		
Question asked about drinking alcohol [1]					
Yes	_		7870	67.1	66.3 - 68.0
No	_		3855	32.9	32.0 - 33.7
			(11 725)		
Recommendation against drinking alcohol during pregnancy [1]					
Yes	_		3400	29.3	28.5 - 30.2
No	_		8196	70.7	69.8 - 71.5
			(11 596)		

(1)   Denominator: number of women.

(2)   Exclusion of women who reported that they did not smoke during pregnancy.

► **Table 14. Medical certification of pregnancy for Social Security**
(metropolitan France; adult women and live births)

	2010		2016		
	%	P	n	%	95% CI
Certification of pregnancy [1]					
Yes	99.6	NS	11 675	99.4	99.3 - 99.5
No	0.4		67	0.6	0.5 - 0.7
	(14 075)		(11 742)		
Trimester of certification [1]					
1st	92.4	NS	10 770	92.7	92.4 - 93.2
2nd	6.5		717	6.2	5.8 - 6.6
3rd	1.1		124	1.1	0.9 - 1.2
	(13 658)		(11 611)		
Reason for late certification (2nd or 3rd trimester) [1]					
Late discovery of pregnancy	–		309	37.8	35.0 - 40.7
Long wait for an appointment	–		46	5.6	4.4 - 7.1
Not in France (holidays, etc.)	–		63	7.7	6.2 - 9.4
Did not know certification required during 1st trimester	–		109	13.4	11.4 - 15.5
Other	–		290	35.5	32.7 - 38.4
			(817)		
Professional who made the pregnancy declaration [1]					
General practitioner	22.0	< 0.001	2144	18.5	17.9 - 19.1
Gynaecologist-Obstetrician in private practice [2]	72.8		6032	52.1	51.3 - 52.8
Gynaecologist-Obstetrician in public hospital [2]			1630	14.1	13.5 - 14.6
Midwife in a public hospital	3.4	< 0.001	859	7.4	7.0 - 7.8
Midwife (in private practice)	1.1	< 0.001	676	5.8	5.5 - 6.2
PMI [2,3]	–		214	1.8	1.7 - 2.1
Other [2]	–		31	0.3	0.2 - 0.4
	(13 639)		(11 586)		

(1) Denominator: number of women.

(2) Questions formulated differently in 2010 and 2016; responses to questions not comparable.

(3) PMI: district Maternal and Child Health Services.

► **Table 15. Antenatal visits: professionals consulted during pregnancy**
(metropolitan France; adult women and live births)

	2010		2016		
	%	P	n	%	95% CI
Professionals consulted after the certification of pregnancy [1.2]					
General practitioner	23.8	< 0.001	2254	19.3	18.7 - 19.9
	(13 329)		(11 690)		
Gynaecologist-Obstetrician in private practice	–		6667	57.0	56.2 - 57.7
			(11 700)		
Gynaecologist-Obstetrician in public hospital	–		3873	33.1	32.4 - 33.8
			(11 695)		
Midwife in private practice	16.0	< 0.001	2948	25.2	24.6 - 25.9
	(13 321)		(11 694)		
Midwife in public hospital	39.5	NS	4761	40.7	40.0 - 41.5
	(13 386)		(11 695)		
PMI [3]	5.3	NS	633	5.4	5.1 - 5.8
	(13 664)		(11 691)		
Main care provider during the first 6 months [1,2,3]					
General practitioner	4.7		761	6.5	6.2 - 6.9
Gynaecologist-Obstetrician in private practice	} 66.9		5785	49.7	48.9 - 50.4
Gynaecologist-Obstetrician in public hospital			1858	16.0	15.4 - 16.5
Midwife in private practice	} 11.6		988	8.5	8.1 - 8.9
Midwife in public hospital			1728	14.8	14.3 - 15.4
PMI [4]	–		267	2.3	2.1 - 2.5
Several of these professionals	–		258	2.2	2.0 - 2.5
	(13 695)		(11 645)		

(1)   Denominator: number of women.

(2)   Questions formulated differently in 2010 and 2016; responses to questions not comparable.

(3)   Principal professional through the entire pregnancy in 2010.

(4)   PMI: district Maternal and Child Health Services.

► **Table 16. Number of antenatal visits**
(metropolitan France; adult women who had a live-born child)

	2010		2016		
	%	P	n	%	95% CI
Total number of visits [1]					
0	0.0	NS	11	0.1	0.1 - 0.2
1 - 3	1.0		79	0.7	0.6 - 0.8
4 - 5	3.0		335	2.9	2.6 - 3.2
6	4.4		490	4.2	3.9 - 4.5
7	13.3		1 379	11.9	11.4 - 12.4
8	15.9		1 943	16.7	16.2 - 17.3
9	17.3		2 076	17.9	17.3 - 18.5
10	15.2		1 804	15.5	15.0 - 16.1
11 or 12	13.9		1 658	14.3	13.8 - 14.8
13 or 14	6.0		677	5.8	5.5 - 6.2
15 or 16	5.4		618	5.3	5.0 - 5.7
17 or more	4.6		540	4.7	4.3 - 5.0
	(13 665)		(11 610)		
Mean number of visits	9.9 ± 3.7			10.0 ± 3.8	
At least one visit with the team managing the delivery [1]					
Yes	94.8	NS	10 971	93.7	93.3 - 94.1
No	5.2		739	6.3	6.0 - 6.7
	(13 631)		(11 710)		
Number of visits at the emergency room [1]					
0	–		4 835	41.5	40.8 - 42.3
1	–		3 280	28.2	27.5 - 28.9
2	–		1 808	15.5	15.0 - 16.1
3 or 4	–		1 290	11.1	10.6 - 11.6
≥ 5	–		434	3.7	3.4 - 4.0
			(11 647)		

(1)   Denominator: number of women.

► **Table 17. Screening and diagnostic tests during pregnancy**
(metropolitan France; adult women and live births)

	2010		2016		
	%	P	n	%	95% CI
Total number of ultrasounds [1]					
0	0.1	< 0.001	7	0.1	0.0 - 0.1
1 or 2	1.5		110	0.9	0.8 - 1.1
3	31.3		2 834	24.3	23.6 - 25.0
4 or 5	38.4		4 532	38.8	38.1 - 39.6
≥ 6	28.7		4 186	35.9	35.1 - 36.6
	(13 997)		(11 669)		
Mean number of ultrasounds	5.0 ± 2.5			5.5 ± 2.8	
Measurement of nuchal translucency [1]					
Yes	85.0	< 0.001	10 195	87.0	86.5 - 87.5
No	5.6		715	6.1	5.7 - 6.5
Does not know	9.4		808	6.9	6.5 - 7.3
	(14 059)		(11 718)		
Serum screening for Down syndrome [1]					
Yes	84.2	< 0.001	10 150	88.2	87.7 - 88.7
No, not offered	1.9		73	0.6	0.5 - 0.8
No, screening refused	5.5		563	4.9	4.6 - 5.2
No, late initiation of care	2.7		246	2.1	1.9 - 2.4
None, fetal karyotype from the start (NIPT)	1.2		19	0.2	0.1 - 0.2
No, other reason or unspecified	1.8		417	3.6	3.3 - 3.9
Does not know	2.7		38	0.4	0.3 - 0.4
	(13 729)		(11 506)		
Invasive diagnosis [1]					
Yes, amniocentesis	8.7	< 0.001	381	3.6	3.3 - 3.9
Yes, trophoblast biopsy	0.5		67	0.6	0.5 - 0.8
No	88.8		10 006	93.3	92.9 - 93.7
Does not know	2.0		272	2.5	2.3 - 2.8
	(12.536)		(10 726)		
Screening for gestational diabetes [1]					
Yes	86.0	< 0.001	8 590	73.2	72.5 - 73.9
No	12.2		3 042	25.9	25.3 - 26.6
Does not know	1.8		106	0.9	0.8 - 1.1
	(13 800)		(11 738)		
PAP smear of the cervix [1,2]					
Yes, during pregnancy	28.5	< 0.001	2 689	23.1	22.3 - 23.9
Yes, in the 3 years before pregnancy	38.5		5 478	47.0	46.1 - 47.9
No	20.5		2 296	19.7	19.0 - 20.4
Does not know	12.5		1 193	10.2	9.7 - 10.8
	(13 773)		(11 656)		

(1)   Denominator: number of women.

(2)   In 2010, in the preceding 2 years, in accordance with the guidelines then in effect.

► **Table 18. Support for women during pregnancy (part I)**
(metropolitan France; adult women and live births)

	2010		2016		
	%	P	n	%	95% CI
Early prenatal interview (EPI) [1]					
Yes	21.4	< 0.001	3350	28.5	27.9 - 29.2
No	75.9		8036	68.5	67.8 - 69.2
Does not know	2.7		349	3.0	2.7 - 3.3
	(13 735)		(11 735)		
If EPI, professional who conducted it [1]					
Midwife at the hospital	50.3	< 0.001	1371	42.7	41.3 - 44.2
Midwife in private practice	35.4		1514	47.2	45.7 - 48.6
PMI [2] midwife	9.6		201	6.3	5.6 - 7.0
Gynaecologist-Obstetrician	3.7		107	3.3	2.8 - 3.9
Other	1.0		17	0.5	0.3 - 0.8
	(2883)		(3210)		
If EPI, term at that time [1]					
1st - 3rd month (< 14 weeks)	16.4	NS	563	17.8	16.7 - 19.0
4th month	30.4		1027	32.5	31.1 - 33.9
5th month	19.9		614	19.4	18.3 - 20.6
6th month	15.4		441	14.0	13.0 - 15.0
7th - 9th month	17.9		514	16.3	15.2 - 17.4
	(2275)		(3159)		
If EPI, referral to another professional afterwards [1]					
Yes	–		473	14.6	13.6 - 15.6
No	–		2770	85.4	84.4 - 86.4
			(3243)		
Antenatal classes [1]					
Nulliparas					
Yes	74.0	< 0.001	3873	77.9	76.7 - 79.1
No	26.0		1098	22.1	20.9 - 23.3
	(6015)		(4971)		
Paras					
Yes	28.6	< 0.001	2280	33.8	32.7 - 35.0
No	71.4		4456	66.2	65.0 - 67.3
	(7882)		(6736)		
Number of sessions [1]					
< 4	19.7	NS	1184	19.4	18.5 - 20.2
4 - 6	36.7		2279	37.2	36.2 - 38.3
7 or 8	39.5		2382	38.9	37.9 - 40.0
≥ 9	4.1		275	4.5	4.1 - 5.0
	(6582)		(6120)		

(1) Denominator: number of women.
(2) PMI: district Maternal and Child Health Services

► **Table 19. Support for women during pregnancy** (part II)
(metropolitan France; adult women and live births)

	2010		2016		
	%	P	n	%	95% CI
Home visits by a midwife [1]					
Yes, by a midwife from the PMI [2]	5.7	< 0.001	547	4.7	4.4 - 5.0
Yes, by a private-practice midwife	8.4		1479	12.7	12.2 - 13.2
Yes, by a hospital midwife	0.1		44	0.4	0.3 - 0.5
Yes, other [3]	0.4		74	0.6	0.5 - 0.8
No	85.4		9523	81.6	81.0 - 82.2
	(13 679)		(11 667)		
Interview with a social worker during pregnancy [1]					
Yes	–		1036	8.8	8.4 - 9.3
No	–		10 704	91.2	90.7 - 91.6
			(11 740)		

(1)   Denominator: number of women.

(2)   PMI: district Maternal and Child Health Services

(3)   Midwife of a different or unknown status.

► **Table 20. Information and prevention during pregnancy**
(metropolitan France; adult women and live births)

	2010		2016		
	%	P	n	%	95% CI
Began folic acid before conception to prevent neural tube defects [1]					
Yes	14.8	< 0.001	2591	23.2	22.6 - 23.9
No	85.2		8563	76.8	76.1 - 77.4
	(12 767)		(11 154)		
Dietician consultation (or informational meeting) [1]					
Yes	–		1484	12.6	12.1 - 13.2
No	–		10 250	87.4	86.8 - 87.9
			(11 734)		
Booster for whooping cough vaccination in the 10 years before pregnancy [1]					
Yes	–		4331	37.0	36.3 - 37.7
No	–		4092	35.0	34.2 - 35.7
Does not know	–		3284	28.0	27.4 - 28.7
			(11 707)		
Influenza vaccination [1]					
Yes	–		864	7.4	7.0 - 7.8
No	–		10 792	92.1	91.7 - 92.5
Does not know	–		60	0.5	0.4 - 0.6
			(11 716)		
Prescriber of influenza vaccine					
Gynaecologist-Obstetrician	–		304	35.7	33.0 - 38.5
Midwife	–		108	12.7	10.9 - 14.7
General practitioner	–		271	31.9	29.2 - 34.6
Others	–		168	19.7	17.5 - 22.1
			(851)		

(1) Denominator: number of women.

(2) Postpartum vaccination not taken into account.

► **Table 21. Medical history**
(metropolitan France; adult women and live births)

	2010		2016		
	%	P	n	%	95% CI
Family history of diabetes [1]					
Yes	–		2785	23.7	23.1 - 24.4
No	–		8816	75.2	74.5 - 75.8
Does not know	–		127	1.1	0.9 - 1.3
Diabetes before pregnancy [1]					
Yes, IDDM (type 1)	0.3	< 0.001	34	0.3	0.2 - 0.4
Yes, NIDDM (type 2)	0.2		29	0.2	0.2 - 0.3
Yes, gestational diabetes	1.0		221	1.8	1.6 - 2.0
No	98.5		12 192	97.7	97.5 - 97.9
	(14 306)		(12 476)		
Hypertension before pregnancy (1)					
Yes, chronic hypertension	1.0	NS	84	0.7	0.6 - 0.8
Yes, hypertension during another pregnancy	1.1		170	1.3	1.2 - 1.5
No	97.9		12 238	98.0	97.8 - 98.2
	(14 305)		(12 492)		
Number of elective abortions [1,2]					
0	84.4	NS	9635	83.6	83.0 - 84.1
1	12.6		1455	12.6	12.1 - 13.1
2	2.3		346	3.0	2.7 - 3.3
≥ 3	0.7		92	0.8	0.7 - 1.0
	(13 454)		(11 528)		

(1)   Denominator: number of women.

(2)   Elective abortion; information from interview with the women.

► **Table 22. Obstetric history**
(metropolitan France; adult women and live births)

	2010		2016		
	%	P	n	%	95% CI
Parity [1,2]					
0	43.1	NS	5464	42.2	41.4 - 43.1
1	34.6		4609	35.6	34.8 - 36.4
2	14.5		1854	14.3	13.7 - 14.9
3	5.1		625	4.8	4.5 - 5.2
≥ 4	2.7		393	3.1	2.8 - 3.3
	(14 332)		(12 945)		
Obstetric history [3]					
Stillbirth					
Yes	3.2	NS	263	3.7	3.2 - 4.1
No	96.8		6925	96.3	95.9 - 96.8
	(7984)		(7188)		
Neonatal death					
Yes	1.3	NS	68	0.9	0.7 - 1.2
No	98.7		7117	99.1	98.8 - 99.3
	(7978)		(7185)		
Preterm delivery					
Yes	6.2	NS	466	6.5	5.9 - 7.1
No	93.8		6715	93.5	92.9 - 94.1
	(7966)		(7181)		
Newborn with growth restriction					
Yes	5.0	< 0.001	495	6.9	6.3 - 7.5
No	95.0		6676	93.1	92.5 - 93.7
	(7959)		(7171)		
Newborn with macrosomia					
Yes	–		453	6.3	5.8 - 6.9
No	–		6718	93.7	93.1 - 94.2
			(7171)		
Stillbirth, neonatal death, preterm delivery or fetal growth restriction					
Yes	12.2	< 0.001	1064	14.8	14.0 - 15.6
No	87.8		6132	85.2	84.4 - 86.0
	(8000)		(7196)		
Caesarean					
None	80.8	NS	5793	80.2	79.3 - 81.1
1	15.6		1167	16.2	15.3 - 17.0
2 or more	3.6		264	3.6	3.2 - 4.1
	(7973)		(7224)		

(1)   Denominator: number of women.

(2)   Recommended indicator (sample includes non-participating women)

(3)   Denominator: number of parous women.

► **Table 23. Hospitalisation and complications during pregnancy (part I)**
(metropolitan France; adult women and live births)

	2010		2016		
	%	P	n	%	95% CI
Prenatal hospitalisation [1,2]					
Yes	18.6	NS	2 123	18.1	17.5 - 18.7
No	81.4		9 611	81.9	81.3 - 82.5
	(14 127)		(11 734)		
Duration of hospitalisation [1,2]					
1 day	19.9	NS	437	20.8	19.1 - 22.6
2	15.4		367	17.5	15.9 - 19.2
3 - 7	41.9		894	42.6	40.5 - 44.7
8 - 14	11.6		208	9.9	8.7 - 11.3
≥ 15	11.2		193	9.2	8.0 - 10.5
	(2 587)		(2 099)		
Mean duration	6.4 + 9.2			5.9 + 8.9	
In utero transfer [1]					
Yes	1.6	NS	210	1.7	1.5 - 1.9
No	98.4		11 895	98.3	98.1 - 98.5
	(14 071)		(12 105)		
Corticosteroid treatment [1,3]					
Yes	5.2	NS	730	5.9	5.5 - 6.2
No	94.8		11 689	94.1	93.8 - 94.5
	(14 135)		(12 419)		
Gestational age at first course of treatment					
≤ 25 weeks	7.0	NS	59	8.3	6.3 - 10.5
26 - 33	77.5		569	79.6	76.4 - 82.5
34	8.6		46	6.4	4.8 - 8.5
35 - 36	4.7		35	4.9	3.4 - 6.7
≥ 37	2.2		6	0.8	0.3 - 1.8
	(720)		(715)		
TPD with hospitalisation [1,4]					
Yes	5.9	NS	676	5.4	5.0 - 5.8
No	94.1		11 823	94.6	94.2 - 95.0
	(14 243)		(12 499)		
Gestational age at admission (weeks)					
20 - 23 weeks	4.8	0.0065	33	5.1	3.5 - 7.1
24 - 27	12.0		111	17.1	14.3 - 20.3
28 - 31	32.5		227	35.0	31.4 - 38.8
32 - 36	50.7		277	42.8	38.9 - 46.7
	(794)		(648)		

(1)   Denominator: number of women.

(2)   Information from interview with the women.

(3)   In 2016, antenatal corticosteroid therapy for 90.2% of children born < 34 weeks (compared with 77.4% in 2010)

(4)   Threatened preterm delivery

► **Table 24. Hospitalisation and complications during pregnancy (part II)**
(metropolitan France; adult women and live-births)

	2010		2016		
	%	P	n	%	95% CI
Hypertension during pregnancy [1]					
Yes, with proteinuria [2]	2.0	NS	256	2.0	1.9 - 2.3
Yes, without proteinuria	2.8		284	2.3	2.1 - 2.5
No	95.2		11 937	95.7	95.4 - 96.0
	(14 322)		(12 477)		
Gestational age at diagnosis					
≤ 28 weeks	18.6	NS	54	12.2	9.3 - 15.7
29 - 31	8.9		34	7.7	5.4 - 10.6
32 - 36	32.4		183	41.5	36.9 - 46.3
≥ 37	40.1		170	38.6	34.0 - 43.3
	(618)		(441)		
Hospitalisation for hypertension					
Yes	53.3	NS	275	58.8	54.2 - 63.3
No	46.7		193	41.2	36.7 - 45.9
	(640)		(468)		
Gestational diabetes [1]					
Yes, treated with insulin	1.6	< 0.001	397	3.2	2.9 - 3.5
Yes, treated by diet	5.2		906	7.2	6.9 - 7.7
Yes, treatment not reported	0.4		47	0.4	0.3 - 0.5
No	92.8		11 142	89.2	88.7 - 89.7
	(14 130)		(12 492)		
Placenta praevia [1]					
Yes, without haemorrhage	–		87	0.7	0.6 - 0.8
Yes, with haemorrhage	–		46	0.4	0.3 - 0.5
No	–		12 330	98.9	98.8 - 99.1
			(12 463)		
Suspected fetal weight anomaly [3]					
Yes, fetal growth restriction/SGA [5]	4.0	< 0.001	686	5.4	5.1 - 5.8
Yes, macrosomia	3.8		618	4.9	4.6 - 5.2
No	92.2		11 374	89.7	89.3 - 90.2
	(14 457)		(12 678)		

(1) Denominator: number of women.

(2) With proteinuria ≥ 0.3 g/L or per 24 h.

(3) Denominator: number of live births.

(4) SGA: small-for-gestational age

► **Table 25. Place of delivery**
  (*metropolitan France ; adult women and live births*)

	2010		2016		
	%	P	n	%	95% CI
Status of the maternity unit [1]					
University or regional hospital centre	17.7	< 0.001	2546	19.8	19.1 - 20.5
Community hospital centre	46.4		6353	49.4	48.5 - 50.2
ESPIC [2]	7.5		962	7.4	7.0 - 7.9
Private for-profit establishment	28.4		3008	23.4	22.6 - 24.1
	(14 474)		(12 869)		
Level of care of the maternity unit[1]					
Level I	29.9	< 0.001	2893	22.5	21.8 - 23.2
Level II A	27.0		3759	29.2	28.4 - 30.0
Level II B	20.8		2817	21.9	21.2 - 22.6
Level III	22.3		3398	26.4	25.7 - 27.2
	(14 465)		(12 867)		
Maternity unit size [1]					
< 300 births/year	0.3	< 0.001	85	0.7	0.5 - 0.8
300 - 499	2.2		251	1.9	1.7 - 2.2
500 - 999	15.0		1916	14.9	14.3 - 15.5
1000 - 1499	20.7		2052	15.9	15.3 - 16.6
1500 - 1999	14.0		1900	14.8	14.2 - 15.4
2000 - 2999	29.1		2936	22.8	22.1 - 23.6
3000 - 3499	9.8		1695	13.2	12.6 - 13.8
3500 - 4499	6.5		1211	9.4	8.9 - 9.9
≥ 4500	2.4		825	6.4	6.0 - 6.9
	(14 474)		(12 871)		
Transportation time from home to maternity unit [1]					
< 30 min	76.9	NS	8854	76.2	75.4 - 77.0
30 - 44 min	16.3		1926	16.6	15.9 - 17.3
≥ 45 min	6.8		836	7.2	6.7 - 7.7
	(13 669)		(11 616)		

(1)   Denominator: number of women.

(2)   Private non-profit hospital

► **Table 26. Labour**
(metropolitan France; adult women and live births)

	2010		2016		
	%	P	n	%	95% CI
Fetal presentation [1,2]					
Cephalic	95.0	NS	12 442	94.8	94.4 - 95.2
Breech	4.4		608	4.6	4.3 - 5.0
Other	0.6		78	0.6	0.5 - 0.7
	(14 612)		(13 128)		
Mode of labour onset [2,3]					
Spontaneous labour	66.9	< 0.001	8871	68.6	67.8 - 69.4
Induced labour	22.1		2845	22.0	21.3 - 22.7
Caesarean before labour	11.0		1220	9.4	8.9 - 10.0
	(14 423)		(12 936)		
If induction, initial method					
Oxytocin alone	–		1037	38.1	36.3 - 40.0
Cervical ripening	–		1685	61.9	60.1 - 63.7
			(2722)		
Rupture of the membranes [3]					
Among the women with spontaneous or induced labour					
Artificial	53.7	< 0.001	4862	43.7	42.9 - 44.5
Spontaneous	46.3		6261	56.3	55.5 - 57.1
before labour			3263	29.3	28.6 - 30.1
during labour			2998	27.0	26.3 - 27.7
	(12 682)		(11 123)		
Among the women in spontaneous labour					
Artificial	51.1	< 0.001	3493	41.4	40.5 - 42.3
Spontaneous	48.9		4932	58.6	57.7 - 59.5
before labour			2366	28.1	27.3 - 28.9
during labour			2566	30.5	29.7 - 31.3
	(9528)		(8425)		
Oxytocin during labour [3]					
Among the women with spontaneous or induced labour					
Yes	64.1	< 0.001	5899	52.5	51.7 - 53.3
No	35.9		5334	47.5	46.7 - 48.3
	(12 641)		(11 233)		
Among the women in spontaneous labour					
Yes	57.6	< 0.001	3786	44.3	43.3 - 45.4
No	42.4		4750	55.7	54.6 - 56.7
	(9488)		(8536)		

(1)   Denominator: number of births.

(2)   Recommended indicator (sample includes non-participating women)

(3)   Denominator: number of women.

► **Table 27. Delivery**
(metropolitan France; adult women and live births)

	2010		2016		
	%	P	n	%	95% CI
Mode of delivery [1,2]					
Spontaneous vaginal delivery	66.7	NS	8877	67.4	66.6 - 68.2
Instrumental vaginal delivery	12.2		1603	12.2	11.6 - 12.8
Caesarean	21.1		2684	20.4	19.7 - 21.1
	(14 522)		(13 164)		
Instrument [1]					
Forceps	32.6	NS	430	27.6	25.3 - 29.8
Spatulas	23.7		353	22.6	20.6 - 24.8
Vacuum extraction	43.7		778	49.8	47.3 - 52.4
	(1 767)		(1 561)		
Professional attending childbirth					
Midwife	53.8	< 0.001	6995	58.6	57.7 - 59.5
Gynaecologist-Obstetrician	46.1		4932	41.3	40.4 - 42.2
Other	0.1		7	0.1	0.0 - 0.1
	(14 119)		(11 934)		
Oxytocin to prevent postpartum haemorrhage [3]					
Yes	83.3	< 0.001	11 516	92.7	92.3 - 93.0
No	16.7		912	7.3	7.0 - 7.7
	(14 080)		(12 428)		
Consumption of drink and food in the delivery room [4]					
Yes, drinks only	–		3 848	36.9	36.0 - 37.8
Yes, food and drinks	–		259	2.5	2.2 - 2.8
No	–		6 319	60.6	59.7 - 61.6
			(10 426)		
Severe postpartum haemorrhage (PPH) [3]					
Yes	–		223	1.8	1.6 - 2.0
No	–		12 047	98.2	98.0 - 98.4
			(12 270)		

(1) Related to number of births.

(2) Recommended indicator (sample includes non-participating women)

(3) Denominator: number of women.

(4) Denominator: number of women with a trial of labour.

► **Table 28. Vaginal delivery**
(metropolitan France; adult women and live births)

	2010		2016		
	%	P	n	%	95% CI
Position at the beginning of expulsive efforts [1]					
Supine (on her back)	–		8322	88.5	87.9 - 89.2
Lateral (on one side)	–		789	8.4	7.8 - 9.0
Seated, squatting, standing	–		168	1.8	1.5 - 2.1
On all fours, or kneeling	–		109	1.2	1.0 - 1.4
Other	–		13	0.1	0.1 - 0.2
			(9401)		
Position at expulsion [1]					
Supine (on her back)	–		9010	95.5	95.1 - 95.9
Lateral (on one side)	–		273	2.9	2.6 - 3.3
Seated, squatting, standing	–		73	0.8	0.6 - 1.0
On all fours, or kneeling	–		66	0.7	0.5 - 0.9
Other	–		11	0.1	0.0 - 0.2
			(9433)		
Episiotomy [1]					
Nulliparous					
Yes	44.8	< 0.001	1424	34.9	33.7 - 36.1
No	55.2		2659	65.1	63.9 - 66.4
	(4677)		(4083)		
Parous					
Yes	14.4	< 0.001	578	9.8	9.2 - 10.5
No	85.6		5321	90.2	89.5 - 90.8
	(6510)		(5 899)		
All women					
Yes	27.1	< 0.001	2002	20.1	19.3 - 20.9
No	72.9		7980	79.9	79.1 - 80.7
	(11 225)		(9982)		
Perineal tears [1]					
Yes, first and second degree	42.2	< 0.001	5039	51.3	50.4 - 52.1
Yes, third- and fourth-degree	0.8		83	0.8	0.7 - 1.0
No	57.0		4713	47.9	47.1 - 48.8
	(11 167)		(9835)		
If a spontaneous vaginal delivery, professional attending childbirth [2]					
Midwife	81.8	< 0.001	6990	87.4	86.8 - 88.1
Gynaecologist-Obstetrician	18.1		996	12.5	11.9 - 13.1
Other	0.1		7	0.1	0.0 - 0.2
	(9172)		(7993)		

(1) Denominator: number of women with a vaginal delivery.

(2) Denominator: number of live births by non-operative vaginal delivery.

► **Table 29. Analgesia and anaesthesia**
(metropolitan France; adult women and live births)

	2010		2016		
	%	P	n	%	95% CI
Type of analgesia during labour [1,2]					
No analgesia	20.4	< 0.001	1924	17.3	16.7 - 17.9
Epidural analgesia	78.1		9081	81.4	80.8 - 82.0
Spinal analgesia	0.4		47	0.4	0.3 - 0.5
Combined spinal epidural analgesia	0.8		86	0.8	0.6 - 0.9
Intravenous analgesia	0.3		15	0.1	0.1 - 0.2
	(12 684)		(11 153)		
If epidural analgesia (alone or combined with spinal), PCEA [1,2,3]					
Yes	35.6	< 0.001	4535	53.8	52.9 - 54.7
No	64.4		3888	46.2	45.3 - 47.1
	(8690)		(8423)		
Non-medical method for pain relief [1,2,4]					
Yes	14.3	< 0.001	3668	35.5	34.8 - 36.3
No	85.7		6653	64.5	63.7 - 65.2
	(11 567)		(10 321)		
Analgesia or anaesthesia during expulsion (all deliveries) [1]					
No analgesia	16.7	< 0.001	1843	14.8	14.2 - 15.3
Epidural analgesia/anaesthesia	68.8		9017	72.1	71.5 - 72.8
Spinal analgesia/anaesthesia	11.9		1349	10.8	10.3 - 11.3
Combined spinal epidural analgesia/anaesthesia	1.0		115	0.9	0.8 - 1.1
General anaesthesia	1.2		145	1.2	1.0 - 1.3
Intravenous analgesia	0.2		15	0.1	0.1 - 0.2
Other	0.2		16	0.1	0.1 - 0.2
	(14 363)		(12 500)		
Analgesia or anaesthesia during expulsion, if operative vaginal delivery or caesarean [1]					
No analgesia	1.2	< 0.001	54	1.4	1.1 - 1.7
Epidural analgesia	56.5		2417	60.5	59.3 - 61.8
Spinal analgesia	35.7		1304	32.7	31.4 - 33.9
Combined spinal epidural analgesia	2.6		57	1.4	1.1 - 1.8
General anaesthesia	3.7		144	3.6	3.1 - 4.1
Intravenous analgesia	0.0		4	0.1	0.0 - 0.2
Other	0.3		12	0.3	0.2 - 0.5
	(4648)		(3992)		

(1) Denominator: number of women.

(2) If trial of labour.

(3) Information from medical file in 2010 and from interview with women in 2016.

(4) One or several methods (walking, postural, bath, hypnosis, acupuncture, sophrology, homeopathy etc.); information from interview with the women.

► **Table 30. Women's requests about delivery**
(metropolitan France; adult women and live births)

	2016		
	n	%	95% CI
Specific wishes for delivery [1]			
Yes, wrote a birth plan	431	3.7	3.4 - 4.0
Yes, expressed wishes on arrival at the maternity ward	2011	17.2	16.6 - 17.8
Yes, but she did not express them	227	1.9	1.7 - 2.2
No, no particular requests	9019	77.2	76.5 - 77.8
	(11 688)		
Team satisfied the requests [1,2,3]			
Fully	1915	80.2	78.8 - 81.6
Mostly	390	16.4	15.1 - 17.6
Mostly not	58	2.4	1.9 - 3.0
Not at all	24	1.0	0.7 - 1.4
	(2387)		
Wish for epidural analgesia before delivery [1,4]			
Yes, absolutely	6758	64.3	63.5 - 65.1
Yes maybe	2214	21.1	20.4 - 21.7
No	1537	14.6	14.1 - 15.2
	(10 509)		
Satisfaction with the method used for management of pain and contractions [1,4]			
Very satisfactory	6298	61.3	60.5 - 62.1
Fairly satisfactory	2771	27.0	26.3 - 27.7
Not sufficiently satisfactory	793	7.7	7.3 - 8.2
Not at all satisfactory	408	4.0	3.7 - 4.3
	(10 270)		

(1)   Denominator: number of women.

(2)   Taking the course of the delivery into account.

(3)   If a birth plan was submitted or requests were expressed on arrival at the maternity ward.

(4)   If trial of labour.

► **Table 31. Distribution of women, the caesarean rate and the contribution to the global caesarean rate for each group in Robson's classification [1,2]**
(metropolitan France ; adult women who had a live-born child)

	Number of caesareans/Total women	Relative size (%)	Caesarean rate (%)	Contribution to overall rate (%)
1. Nulliparous, single cephalic, ≥ 37 weeks, in spontaneous labour	359/3372	26.1	10.7	2.8
2. Nulliparous, single cephalic, ≥ 37 weeks, induced or caesarean before labour	482/1393	10.8	34.6	3.7
2a. Induced	380/1291	10.0	29.4	2.9
2b. Caesarean before labour	102/102	0.8	100.0	0.8
3. Multiparous, single cephalic, ≥ 37 weeks, in spontaneous labour [3]	64/4202	32.5	1.5	0.5
4. Multiparous, single cephalic, ≥ 37 weeks, induced or caesarean before labour [3]	168/1242	9.6	13.5	1.3
4a. Induced	94/1168	9.0	8.1	0.7
4b. Caesarean before labour	74/74	0.6	100.0	0.6
5. Previous caesarean, single cephalic, ≥ 37 weeks	703/1275	9.8	55.1	5.4
6. All nulliparous breeches	227/273	2.1	83.2	1.7
7. All multiparous breeches [4]	189/243	1.9	77.8	1.5
8. All multiple pregnancies [4,5]	125/231	1.8	54.1	1.0
9. All abnormal lies [4]	57/57	0.4	100.0	0.4
10. All single cephalic, ≤ 36 weeks [4]	204/650	5.0	31.4	1.6
Total	2578/12 938	100.0		19.9

(1) The classification proposed by Robson is a practical tool for surveillance of caesarean rates. It classifies women into 10 groups (according to maternal and fetal characteristics) and calculates for each groups both its caesarean rate and its contribution to the global caesarean rate (Robson, 2001).

(2) Recommended indicator (sample includes non-participating women)

(3) Previous caesarean excluded.

(4) Previous caesarean included.

(5) Classified as caesarean if one child was born by vaginal delivery and another by caesarean (n = 3).

► **Table 32. Onset of labour and mode of delivery by gestational age and birth weight**
(metropolitan France; adult women and live births)

		Onset of labour				Mode of delivery			
		Sponta-neous	Induction	Caesarean	n	Sponta-neous [2]	Instru-mental [3]	Caesarean	n
Gestational age [1,2]									
≤ 34 weeks	%	54.7	6.9	38.4	(404)	38.9	5.2	55.9	(404)
35 - 36	%	55.3	26.9	17.8	(584)	59.2	9.1	31.7	(583)
37	%	57.6	26.2	16.2	(948)	63.0	8.7	28.3	(948)
38	%	58.9	25.0	16.1	(2066)	66.3	9.0	24.7	(2067)
39	%	71.5	17.9	10.6	(3521)	70.2	11.0	18.8	(3524)
40	%	85.1	12.3	2.6	(3346)	73.0	15.2	11.8	(3346)
41	%	57.1	39.1	3.8	(2212)	65.5	15.8	18.7	(2211)
≥ 42	%	15.6	84.4	0.0	(64)	51.6	20.3	28.1	(64)
					(13 145)				(13 147)
Birth weight [1,2]									
< 1500 g	%	50.7	3.6	45.7	(140)	32.9	0.7	66.4	(140)
1500 - 1999	%	44.7	15.1	40.2	(199)	38.7	4.5	56.8	(199)
2000 - 2499	%	51.7	29.8	18.5	(638)	54.6	8.9	36.5	(639)
2500 - 2999	%	66.8	23.0	10.2	(2715)	68.1	11.5	20.4	(2715)
3000 - 3499	%	72.3	19.8	7.9	(5181)	70.5	12.7	16.8	(5183)
3500 - 3999	%	70.1	22.6	7.3	(3373)	69.3	13.2	17.5	(3373)
≥ 4000	%	58.8	30.2	11.0	(901)	61.8	13.1	25.1	(901)
					(13 147)				(13 150)

(1)   Denominator: number of live births.

(2)   Recommended indicator (sample includes non-participating women)

► **Table 33. The newborn in the delivery room**
(metropolitan France; adult women and live births)

	2010		2016		
	%	P	n	%	95% CI
Sex					
Male	52.3	NS	6630	52.0	51.3 - 52.7
Female	47.7		6118	48.0	47.3 - 48.7
	(14 663)		(12 748)		
Type of birth [1,2]					
Singleton	97.1	NS	12 716	96.5	96.2 - 96.8
Twin	2.9		444	3.4	3.1 - 3.7
Triplet	0.0		15	0.1	0.1 - 0.2
	(14 688)		(13 175)		
Height of the newborn [1]					
≤ 47 cm	19.0	NS	2376	19.7	19.1 - 20.3
48 - 49	30.1		3700	30.6	29.9 - 31.3
50 - 51	36.1		4220	34.9	34.2 - 35.7
≥ 52	14.8		1785	14.8	14.3 - 15.3
	(13 923)		(12 081)		
Mean	49.3 ± 2.5			49.3 ± 2.4	
Head circumference [1]					
≤ 32 cm	10.7	NS	1464	12.0	11.5 - 12.5
33	17.1		2216	18.1	17.5 - 18.7
34	27.2		3261	26.6	26.0 - 27.3
35	24.6		2953	24.1	23.5 - 24.8
≥ 36	20.4		2344	19.2	18.6 - 19.8
	(13 939)		(12 238)		
Mean	34.3 ± 1.9			34.2 ± 1.6	
5-min Apgar score [1,2]					
< 5	0.2	< 0.001	47	0.4	0.3 - 0.5
5 - 6	0.6		107	0.8	0.7 - 1.0
7 - 8	2.6		427	3.2	3.0 - 3.6
9 - 10	96.6		12 562	95.6	95.2 - 95.9
	(14 531)		(13 143)		

(1) Denominator: number of live births.

(2) Recommended indicator (sample includes non-participating women)

► **Table 34. Specific management of the newborn**
(metropolitan France; adult women and live births)

	2010		2016		
	%	P	n	%	95% CI
Umbilical cord blood pH [1,2]					
< 7.00	−		67	0.6	0.5 - 0.7
7 - 7.15	−		988	8.9	8.5 - 9.4
> 7.15	−		10 019	90.5	90.0 - 90.9
			(11 074)		
Bacteriological (gastric and/or peripheral) samples in the newborn [1,3]					
Yes	−		7061	56.0	55.4 - 56.8
No	−		5383	42.8	42.0 - 43.5
Not known	−		147	1.2	1.0 - 1.3
			(12 591)		
Resuscitation procedures performed					
Ventilation [1]					
Yes, mask ventilation	3.2	−	147	1.2	1.0 - 1.3
Yes, with Neopuff	2.3		510	4.1	3.8 - 4.4
Yes, method unspecified [4]	−		*128*	*1.0*	*0.9 - 1.2*
No	94.5		11 765	93.7	93.4 - 94.1
	(14 220)		(12 550)		
CPAP [1,5]					
Yes	1.3	NS	204	1.8	1.6 - 2.0
No	98.7		11 307	98.2	98.0 - 98.4
	(14 012)		(11 511)		
Intubation [1]					
Yes	1.1	NS	110	1.0	0.8 - 1.1
No	98.9		11 410	99.0	98.9 - 99.2
	(14 022)		(11 520)		
Intubation or CPAP before transfer to NICU or other neonatal unit [1]					
Yes	1.6	NS	210	1.8	1.6 - 2.1
No	98.4		11 324	98.2	97.9 - 98.4
	(14 030)		(11 534)		

(1)   Denominator: number of live births.

(2)   Arterial or venous pH (information not reported).

(3)   Among newborns ≥ 34 weeks, bacteriological samples: yes=56.8%; no = 42.2%; not known = 1.0%.

(4)   Modality of response not available in 2010.

(5)   CPAP (*Continuous Positive Airway Pressure*)

► **Table 35. Transfer of the newborn**
(metropolitan France; adult women and live births)

	2010		2016		
	%	P	n	%	95% CI
Transfer of the newborn to: [1,2]					
NICU	1.8	< 0.001	307	2.4	2.2 - 2.6
Neonatal unit	3.9		535	4.2	3.9 - 4.5
Kangaroo care unit	2.6		416	3.3	3.0 - 3.5
Other	0.2		6	0.0	0.0 - 0.1
None	91.5		11 485	90.1	89.6 - 90.5
	(14 725)		(12 749)		
Place of transfer [1,2]					
Same site	79.9	NS	598	83.6	81.2 - 85.9
Other hospital	20.1		117	16.4	14.1 - 18.8
	(745)		(715)		
Reason for transfer [1,3,4]					
Preterm birth or fetal growth restriction					
Yes	49.6	–	640	53.7	51.3 - 56.2
Respiratory distress					
Yes	29.3	–	304	25.5	23.5 - 27.7
Suspected infection					
Yes	18.2	–	131	11.0	9.5 - 12.6
Congenital anomaly					
Yes	5.1	–	42	3.5	2.7 - 4.5
Other					
Yes	18.2	–	266	22.3	20.4 - 24.4
	(1223)		(1191)		

(1)   Denominator: number of live births.

(2)   Transfer to kangaroo care unit and nearby perinatal centre (n=13) not included.

(3)   Transfer to the NICU, neonatal unit, kangaroo care unit, or other department of medicine or surgery.

(4)   Two reasons possible for the same transfer.

► **Table 36. Postpartum hospitalisation of the newborn**
(metropolitan France; adult women and live births)

	2010		2016		
	%	*P*	n	%	95% CI
Attempt to put the baby to the mother's breast in the first two hours of life [1]					
Yes	63.3	NS	7243	65.0	64.1 - 65.9
No	36.7		3904	35.0	34.1 - 35.9
	(13 183)		(11 147)		
Mode of feeding [2]					
Exclusive breast feeding	60.3	< 0.001	6170	52.2	51.4 - 53.0
Mixed breast feeding	8.4		1714	14.5	14.0 - 15.0
Formula for infants	31.3		3936	33.3	32.6 - 34.0
	(14 106)		(11 820)		
Advice given about sleeping position for the newborn: (prevention of SUID) [2, 3, 4]					
Yes	—		4960	42.7	41.8 - 43.6
No	—		6653	57.3	56.4 - 58.2
			(11 613)		

(1)   Denominator: number of children not transferred to NICU or neonatology.

(2)   Denominator: number of live-births.

(3)   SUID: Sudden unexplained infant death

(4)   Among the women questioned on D2 or later after their delivery, 51.4% said they had received this advice.

► **Table 37. Maternal postpartum hospitalisation**
(metropolitan France; adult women and live births)

	2010		2016		
	%	P	n	%	95% CI
Duration of hospitalisation in the maternity ward after giving birth [1]					
≤ 2 days [2]	3.4	< 0.001	564	4.5	4.2 - 4.8
3	20.5		4635	37.1	36.4 - 37.8
4	41.6		4507	36.1	35.4 - 36.8
5	19.7		1696	13.6	13.1 - 14.1
≥ 6	14.8		1083	8.7	8.3 - 9.1
	(14 233)		(12 485)		
Mean	4.3 $\pm$ 1.6			4.0 $\pm$ 1.6	
Duration of hospitalization, if vaginal delivery and child not transferred for medical reason [1]					
≤ 2 days	3.3	< 0.001	470	5.0	4.7 - 5.4
3	25.8		4379	46.9	46.1 - 47.8
4	50.8		3563	38.2	37.4 - 39.0
5	15.0		640	6.9	6.4 - 7.3
≥ 6	5.1		281	3.0	2.7 - 3.3
	(10 553)		(9333)		
Mean	4.0 $\pm$ 1.2			3.6 $\pm$ 1.0	
Duration of hospitalisation, if caesarean and child not transferred for medical reason [1]					
≤ 2 days	0.5	< 0.001	7	0.3	0.2 - 0.7
3	2.3		109	5.5	4.7 - 6.4
4	13.3		703	35.5	33.7 - 37.3
5	40.4		829	41.8	40.0 - 43.7
≥ 6	43.5		335	16.9	15.5 - 18.3
	(2408)		(1983)		
Mean	5.4 $\pm$ 1.2			4.8 $\pm$ 1.2	

(1)   Denominator: number of women.

(2)   Including possible transfer to bring mother and child closer on D0 or D1 if the newborn is transferred to another hospital.

► **Table 38. Gestational age and birth weight**
  (metropolitan France; adult women and live births)

	2010		2016		
	%	P	n	%	95% CI
Gestational age (weeks) [1,2]					
≤ 21	0.0	< 0.001	0	0.0	0.0 - 0.0
22 - 27	0.2		58	0.4	0.3 - 0.6
28 - 31	0.6		103	0.8	0.6 - 1.0
32	0.3		47	0.3	0.2 - 0.5
33	0.4		75	0.6	0.5 - 0.7
34	0.7		121	0.9	0.8 - 1.1
35	1.5		180	1.4	1.2 - 1.6
36	2.8		405	3.1	2.8 - 3.4
37	6.8		949	7.2	6.8 - 7.7
38	16.6		2068	15.7	15.1 - 16.4
39	24.6		3525	26.8	26.0 - 27.6
40	27.2		3348	25.5	24.7 - 26.2
41	18.0		2213	16.8	16.2 - 17.5
≥ 42	0.3		64	0.5	0.4 - 0.6
	(14 644)		(13 155)		
Preterm birth (gestational age < 37 weeks) [1,2]					
Yes	6.5	NS	989	7.5	7.1 - 8.0
	(14 644)		(13 155)		
Birth weight [1,2]					
< 500 g	0.0	NS	3	0.0	0.0 - 0.0
500 - 999	0.2		59	0.5	0.3 - 0.6
1000 - 1499	0.5		78	0.6	0.5 - 0.7
1500 - 1999	1.3		199	1.5	1.3 - 1.7
2000 - 2499	4.3		641	4.9	4.5 - 5.3
2500 - 2999	19.6		2716	20.6	20.0 - 21.3
3000 - 3499	40.8		5187	39.4	38.6 - 40.3
3500 - 3999	26.2		3374	25.7	24.9 - 26.4
4000 - 4499	6.4		806	6.1	5.7 - 6.6
≥ 4500	0.7		95	0.7	0.6 - 0.9
	(14 643)		(13 158)		
Mean weight	3272.3 ± 529.5		3246.6 ± 556.8		
Birth weight < 2500 g					
Yes	6.3	NS	980	7.5	7.0 - 7.9
	(14 643)		(13 158)		

(1) Denominator: number of live births.

(2) Recommended indicator (sample includes non-participating women).

► **Table 39. Preterm birth and low birth weight**
(metropolitan France; adult women and live births)

	2010		2016		
	%	P	n	%	95% CI
Preterm birth (< 37 weeks) [1,2]					
Total [3]	6.5	NS	989	7.5	7.1 - 8.0
	(14 644)		(13 155)		
Singletons	5.5	NS	763	6.0	5.6 - 6.4
	(14 211)		(12 696)		
Twins	41.9	NS	211	47.5	42.8 - 52.3
	(430)		(444)		
Birth weight < 2500 grams [1,2]					
Total [3]	6.3	NS	980	7.5	7.0 - 7.9
	(14 643)		(13 158)		
Singletons	5.0	NS	726	5.7	5.3 - 6.1
	(14 214)		(12 700)		
Twins	49.3	NS	239	53.9	49.2 - 58.7
	(426)		(443)		
Small-for-gestational-age (< 10th percentile) [4]					
Total [3]	10.8	< 0.001	1477	11.6	11.1 - 12.2
	(14 604)		(12 717)		
Singletons	10.1	< 0.001	1326	10.8	10.3 - 11.4
	(14 175)		(12 284)		
Twins	35.5	NS	145	34.7	30.1 - 39.4
	(426)		(418)		

(1)   Denominator: number of live-births.

(2)   Recommended indicator (sample includes non-participating women)

(3)   Including triplets

(4)   EPOPé curve. adjusted for gestational age and sex (Ego et al., 2016)

Publications from the 2010 national perinatal survey

(publications by INSERM, which used data from the survey)

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3. Pilkington H, Prunet C, Blondel B, Charreire H, Combier E, Le Vaillant M, Amat-Rozec JA, Zeitlin J. Travel time to hospital for childbirth: comparing calculated versus reported travel times in France. Mat Child Health J (in press).

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