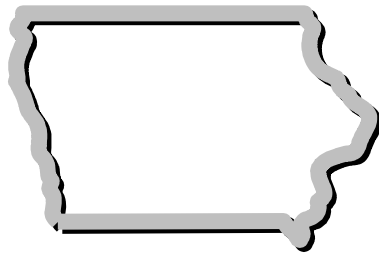


2003 IOWA

Termination Of Pregnancy Report



Iowa Department of Public Health
Center for Health Statistics



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Acknowledgements

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The Center acknowledges the input of the following Iowa Department of Public Health (IDPH) staff

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Comparative Summary

Overall, the annual number of pregnancy terminations in Iowa decreased in 2003. In 2003, 6,999 pregnancy terminations were reported. This is a 3.9 percent decrease from 2002. Induced terminations of pregnancy decreased by 314 cases from 6,230 in 2002 to 5916 in 2003, which represents a 5.0 percent decrease. Spontaneous terminations of pregnancy increased by 30 cases from 1,044 to 1074, which represents a 2.9 percent increase.

Pregnancy Terminations by Regions

Regions were used to present the numbers, ratios, and rates of reported termination of pregnancy. The region number was adopted from the 1999 state Maternal and Child contract agency number, but did not follow their number and county coverage change.

- **The fertility rate** for the state as a whole in 2003 was 62.6, less than a two per cent increase from 61.7 per 1,000 women of childbearing age in 2002. The pattern of fertility rate in Iowa remained stable since 2001 (61.7 per 1,000). The fertility rate ranges from 46.4 to 75.0 among all regions.
- **The pregnancy rate** showed a slight increase trend since 2001. In 2003, the overall rate of pregnancy for the state was 74.4 per 1,000 women of childbearing age, compared to 73.8 per 1,000 women in 2001 and 72.5 per 1,000 women in 2002. This rate ranges from 57.0 to 89.1 among all regions.
- **The induced termination rate** This rate varies from year to year. In 2003, 9.7 per 1,000 childbearing age women had induced termination, which was a decrease from 10.2 per 1,000 in 2002. The reported induced termination rate varies from 0.2 per 1,000 to 13.8 per 1,000.
- **The spontaneous termination rate** The statewide rate has been stable around 1.8 per 1,000 childbearing age women. The reported rates for regions can vary from about 0.1 per 1,000 to 3.5 per 1,000.
- **The induced termination ratio** for the state as a whole decreased from 165.6 per 1,000 live births in 2002 to 155.1 per 1,000 live births in 2003, which represents a 6.3 percent decrease. As reported in previous years, this ratio varied dramatically among regions, from 2.6 per 1,000 to 270.0 per 1,000.
- **The spontaneous termination ratio** for the state as a whole, this ratio is showing a slight declining trend, from 29.3 per 1,000 live births in 2001 to 27.8 per 1,000 live births in 2002, and 28.2 per 1,000 live births in 2003. Similar to the reported ratio of induced termination, the range varied greatly among regions, from about 1.9 per 1,000 to 56.1 per 1,000.

Pregnancy Terminations (spontaneous and induced) by Month of Occurrence

The total number of live births was 38,139 in 2003. The lowest number of births was in November and the highest number of births was in May.

As reported in 2003, the first one-third of the year had the highest number of induced terminations. The last one-third of the year had the lowest number of induced terminations. This variation matches the pattern of the previous years' reports. Spontaneous terminations did not have a consistent pattern during all reporting years.

Induced Pregnancy Terminations by Gestational Age of Fetus

As in the past, more than 93 percent of all terminations of pregnancy were obtained during the gestation week of 0-13. There were 324 induced terminations cases reported in the second trimester of pregnancy.

Pregnancy Terminations by Marital Status

For women whose marital status was reported, about 20.2 percent of women who obtained induced terminations of pregnancy in 2003 reported that they were married, about the same as in 2001 and 2002.

Pregnancy Terminations by Level of Education

For women whose education level was reported, approximately 15.7 percent who obtained terminations of pregnancy have completed less than a high school education and 36.7 percent had a high school diploma. About 36.1 percent had some college level education. The remaining 11.5 percent had other kinds of education.

Pregnancy Terminations by Mother's Race

For women whose race was reported, approximately 81.6 percent of women who obtained a termination of pregnancy were known to be white and 7.3 percent were black. Small termination reported numbers from minority populations in Iowa make it difficult to conclude trend for these groups.

Pregnancy Terminations by Mother's Age

The number of induced terminations peaked at 21 years old with the high frequency age from 18 to 28 years old. The distribution of spontaneous terminations shifted to 22 to 35 years old.

INTRODUCTION

This report is a compilation of data on reported terminations of pregnancy in Iowa. These are terminations that occurred from January 2003 through December 2003. State law requires the annual reporting of termination of pregnancy events. With this legal requirement, Iowa joins 45 other states, the District of Columbia, and New York City in providing information that relates to issues of pregnancy, termination of pregnancy, live births, and fetal deaths (1). This information contributes to the ability of public health officials and policy makers to understand these issues.

The Iowa reporting system is a variation on the model published by the National Center for Health Statistics in 1987 (2). These guidelines described the criteria and expectations for reporting pregnancy information.

Purpose

One purpose of termination of pregnancy surveillance is to determine if there are areas of the state with higher than expected rates of spontaneous pregnancy loss. The surveillance system also provides state health planners the information needed to address public health issues related to pregnancy loss. Data are collected using the 26 maternal and child health (MCH) regions as geographic identifiers. Most of these 26 regions are composed of multiple counties, although a few, which comprise Metropolitan Statistical Areas (MSAs), are single counties. During analysis, birth data (including pregnancy and fertility data) from these regions are used to achieve proper perspective. Other uses of these data may include issues of family planning, maternal and child health, access to health care, quality of care, and sexual education (3). It should be noted, however, that since termination of pregnancy can occur across state boundaries, undercounting of pregnancy terminations were likely possible.

Definitions and Types

A standard definition of the termination of pregnancy is:

“The termination of pregnancy before the fetus is viable. In the medical sense, the terms abortion and miscarriage both refer to the termination of pregnancy before the fetus is capable of survival outside the uterus. In general language, however, abortion most often refers to deliberate interruption of pregnancy, whereas miscarriage connotes a spontaneous or natural loss of the fetus.” (4)

Two types of terminations of pregnancy are examined in this report: spontaneous and induced. Spontaneous termination is “abortion occurring naturally” (4). “It has been estimated that 10 to 12 percent of all pregnancies end in spontaneous abortion” (4). Some research has shown that spontaneous abortions occur commonly, are directly associated with increasing maternal age, and may cluster by chance (5). The same article suggests a possible link between spontaneous termination and nitrate-contaminated water. Hormonal imbalances, emotions, and psychological disturbances frequently play an important role in spontaneous termination (4). Some other causes include trauma, stress, and malformation of the fetus, and drug or alcohol use. Hemorrhage, shock, and infection are also involved in spontaneous terminations. Treatment usually consists of dilation and curettage (D&C) to remove tissues that may be retained in the uterus (4).

The difference between a spontaneous termination and a fetal death is that a fetal death is “a birth which fails to show any signs of life after delivery. Reportable fetal deaths in Iowa are those greater than 20 weeks gestation” (6).

Induced termination is “abortion brought on intentionally by medication or instrumentation” (4).

For each year since 1969, the Centers for Disease Control and Prevention (CDC) has collected and compiled data on abortions by state or area of occurrence (1). It makes it possible for Iowa data to be compared to the nation as a whole or to other states. This report is based on abortion data for 2002 provided to the State Center for Health Statistics, Iowa Department of Public Health.

Detail Data

The data for this report are from incidents that occurred during the period of January 2003 through December 2003. A total of 6,999 abortions were reported to have occurred during this time period. Of these, 5,916 were reported as induced, and 1,074 were reported as spontaneous. There were nine cases where the type was not identified.

It should be noted that Iowa has no agreement with border states on mandatory reporting of terminations in those states; therefore, the current data may be incomplete. The numbers for previous years' terminations shown here may differ somewhat from what was presented in last year's report due to additional information being received after the report was published. Data files are typically closed by the end of March for the previous year. For the sake of clarity, figures show only the occurrence of terminations for the year 2003.

Data were analyzed based on key demographic factors and other variables as specified in the *Code of Iowa*. These variables include Maternal and Child Health (MCH) region, age, race, marital status, education of the woman, and gestational age of the fetus. The findings are shown in the tables and figures in this report.

Terminations by Month of Occurrence

Table 1 shows the number of births and terminations by month of occurrence in the state from 2000 to 2003. The 2003 termination data are shown in Figure 1. Both Table 1 and Figure 1 show a relatively constant pattern of terminations and births during each of the months of occurrence. The lowest number of births was in February. The lowest number of induced terminations was in November, and the lowest number of spontaneous terminations was in December. The highest number of births was in August, the highest number of induced terminations was in January, and the highest number of spontaneous terminations was in May. This pattern does not resemble data shown last year. This means the monthly variations are most likely due to chance or unstable causes.

Terminations by Gestational Age of Fetus

All induced and spontaneous terminations in the state occurred during the first and second trimesters of pregnancy. The first trimester is from 0 to 13 weeks of gestation; the second trimester is from 14 to 28 weeks. Approximately 94 percent of induced terminations took place in the first trimester, while 6 percent were second trimester terminations. Most induced terminations occurred in the second month of gestation (see Tables 2a and 2b and Figure 2). This distribution was similar to spontaneous terminations.

Table 1
Total Births and Pregnancy Terminations by Month of Occurrence

Month	2000				2001				2002				2003			
	Total Births	Induced	Spont.	N/A	Total Births	Induced	Spont.	N/A	Total Births	Induced	Spont.	N/A	Total Births	Induced	Spont.	N/A
January	3,140	527	157	0	3,024	601	122	0	3,048	616	93	0	3,028	516	112	0
February	2,942	582	137	0	2,822	575	105	1	2,839	582	91	1	2,971	559	73	0
March	3,323	563	130	0	3,182	590	143	1	3,169	543	95	1	3,206	551	95	0
April	3,071	488	127	0	3,095	523	119	1	3,055	560	95	0	3,072	516	94	1
May	3,089	522	121	0	3,316	566	87	1	3,213	531	102	0	3,449	457	75	1
June	3,315	548	132	0	3,169	540	112	0	3,040	445	82	0	3,084	464	72	1
July	3,296	487	159	0	3,237	475	99	0	3,476	565	98	0	3,325	497	86	2
August	3,379	501	118	1	3,322	468	108	0	3,300	485	79	1	3,311	458	112	0
September	3,258	399	106	0	3,202	340	68	0	3,149	458	95	1	3,332	528	94	1
October	3,206	453	122	0	3,169	391	80	0	3,279	543	88	1	3,331	495	89	1
November	3,116	510	118	0	3,041	264	34	0	2,951	416	70	0	2,891	437	77	1
December	3,115	479	113	1	3,031	389	41	0	3,036	486	55	1	3,139	429	92	1
Unknown	0	0	1	0	0	0	1	0	0	0	1	0	0	9	3	
Total	38,250	6,059	1,541	2	37,610	5,722	1,119	4	37,555	6,230	1,044	6	38,139	5916	1074	9

Spont. = Spontaneous
N/A = Not Available

Figure 1

2003 Birth Counts and Terminations by Month of Occurrence

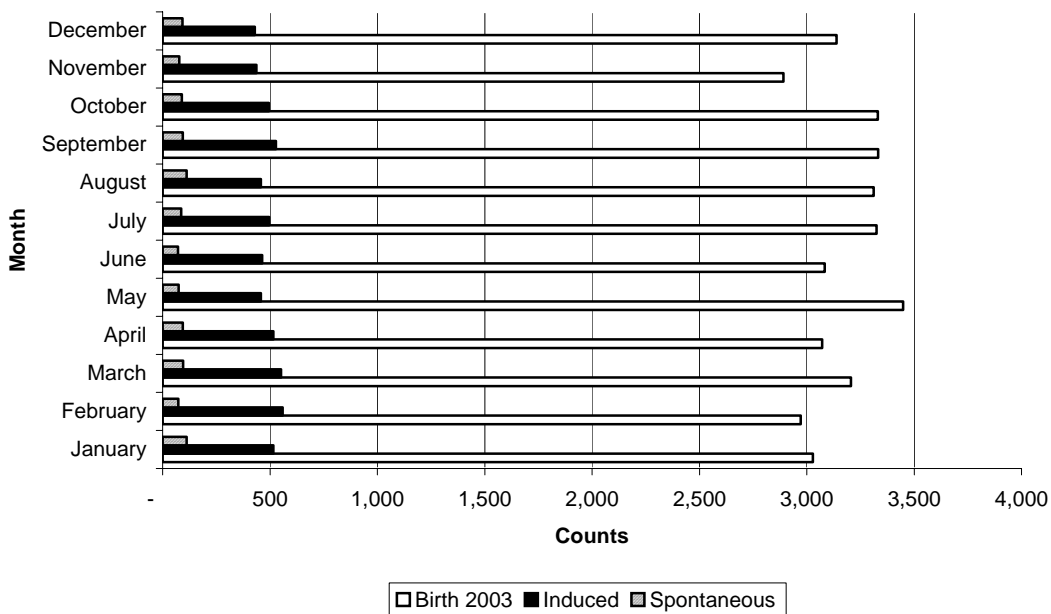


Table 2a
Gestational Age of Fetus by Termination Type Considered in Trimesters

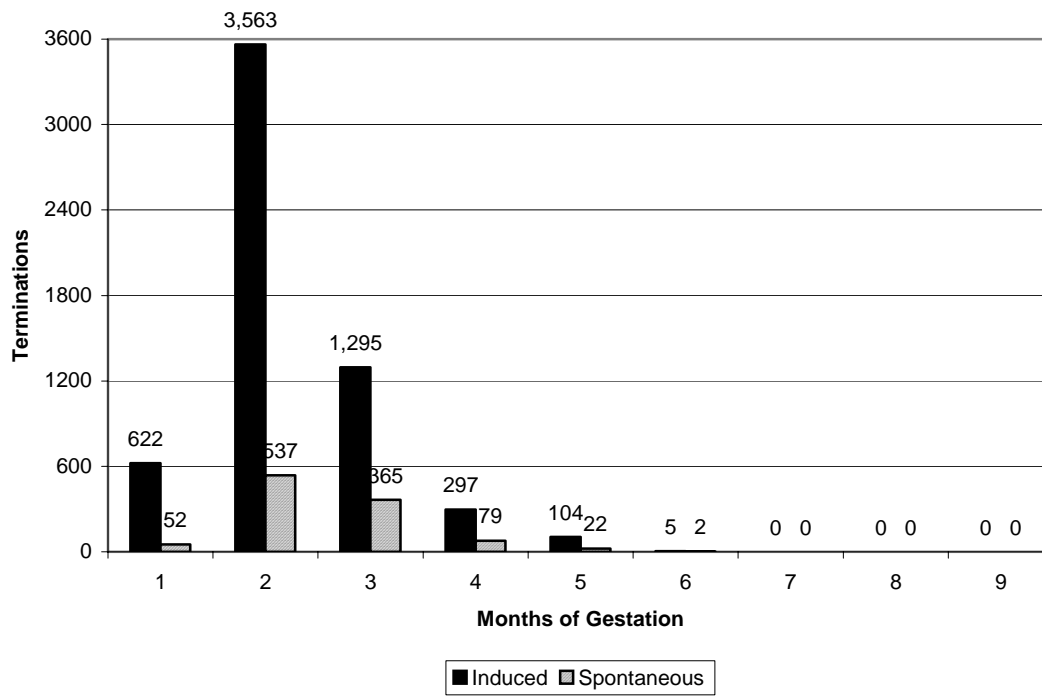
Gestational Age	2000				2001				2002				2003			
	Induced	%	Spont.	%	Induced	%	Spont.	%	Induced	%	Spont.	%	Induced	%	Spont.	%
0 to 13 weeks	5,685	93.8%	1,455	94.4%	5,415	94.6%	1,069	95.5%	5,913	94.9%	955	91.5%	5,562	94.0%	981	91.2%
14 to 28 weeks	366	6.0%	75	4.9%	297	5.2%	43	3.8%	297	4.8%	71	6.8%	324	5.5%	76	7.1%
Over 28 weeks	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.1%
Unknown	8	0.1%	11	0.7%	10	0.2%	7	0.6%	20	0.3%	18	1.7%	30	0.5%	17	1.6%
Total	6,059	100.0%	1,541	100.0%	5,722	100.0%	1,119	100.0%	6,230	100.0%	1,044	100.0%	5,916	100.0%	1,074	100.0%

Table 2b
Gestational Age of Fetus by Termination Type Considered in Months

Months of Gestation	2000			2001			2002			2003		
	Induced	Spont.	N/A	Induced	Spont.	N/A	Induced	Spont.	N/A	Induced	Spont.	N/A
1	986	61	0	746	46	0	828	31	0	622	52	1
2	3,068	794	1	3,148	610	4	3,553	542	5	3,563	537	3
3	1,631	600	1	1,521	413	0	1,532	382	1	1,295	365	4
4	267	56	0	242	39	0	246	50	0	297	79	
5	98	19	0	55	4	0	51	20	0	104	22	
6	1	0	0	10	7	0	0	1	0	5	2	
7	0	0	0	0	0	0	0	0	0	0	0	
8	0	0	0	0	0	0	0	0	0	0	0	
9	0	0	0	0	0	0	0	0	0	0	0	
Unknown	8	11	0	10	7	0	20	18	0	30	17	1
Total	6,059	1,541	2	5,722	1,119	4	6,230	1,044	6	5,916	1,074	9

Figure 2

Gestational Age at Termination Occuring in 2003



Terminations by Marital Status

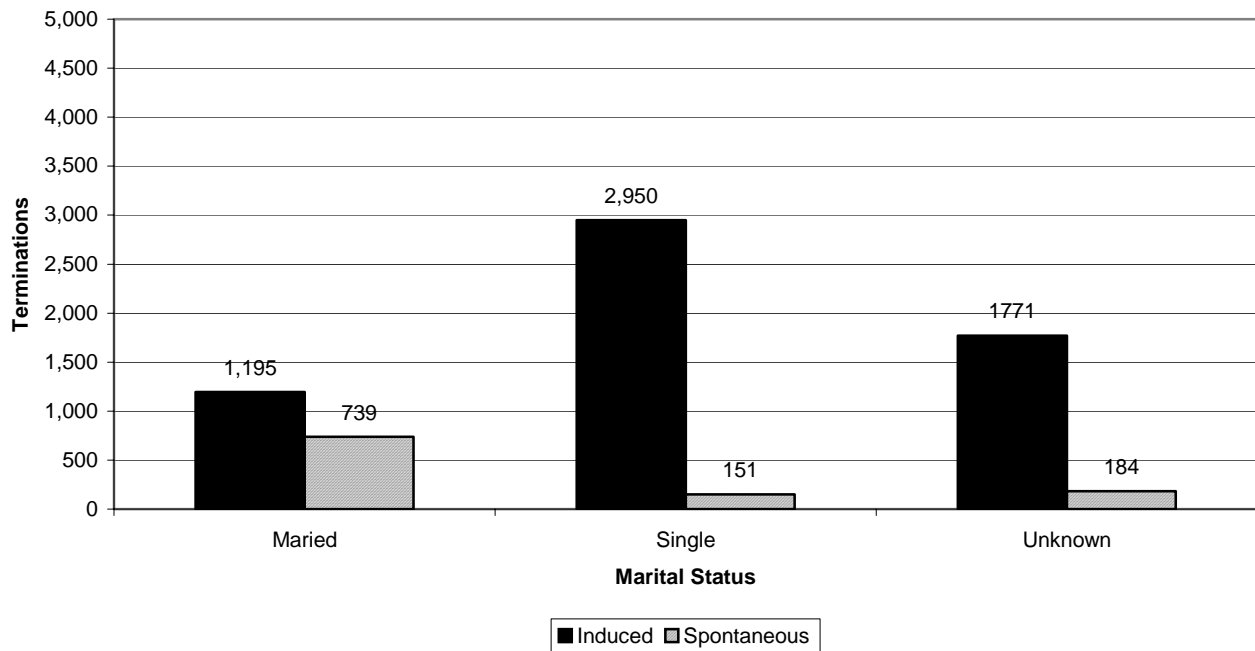
Single women experienced more induced terminations of pregnancy than married women did during the reporting period. On the other hand, married women experienced more spontaneous terminations than single women did. The pattern is shown in Table 3 and Figure 3.

Table 3
Termination of Pregnancy by Marital Status

Marital Status	2000			2001			2002			2003		
	Induced	Spont.	N/A	Induced	Spont.	N/A	Induced	Spont.	N/A	Induced	Spont.	N/A
Married	1,313	1,115	1	1,206	780	1	1,271	713	2	1,195	739	3
Single	4,694	413	1	4,476	323	2	4,937	313	3	2,950	151	0
Unknown	52	13	0	40	16	1	22	18	1	1,771	184	6
Total	6,059	1,541	2	5,722	1,119	4	6,230	1,044	6	5,916	1,074	9

Figure 3

Distribution of Terminations Occuring in 2003 by Marital Status



Terminations by Level of Education

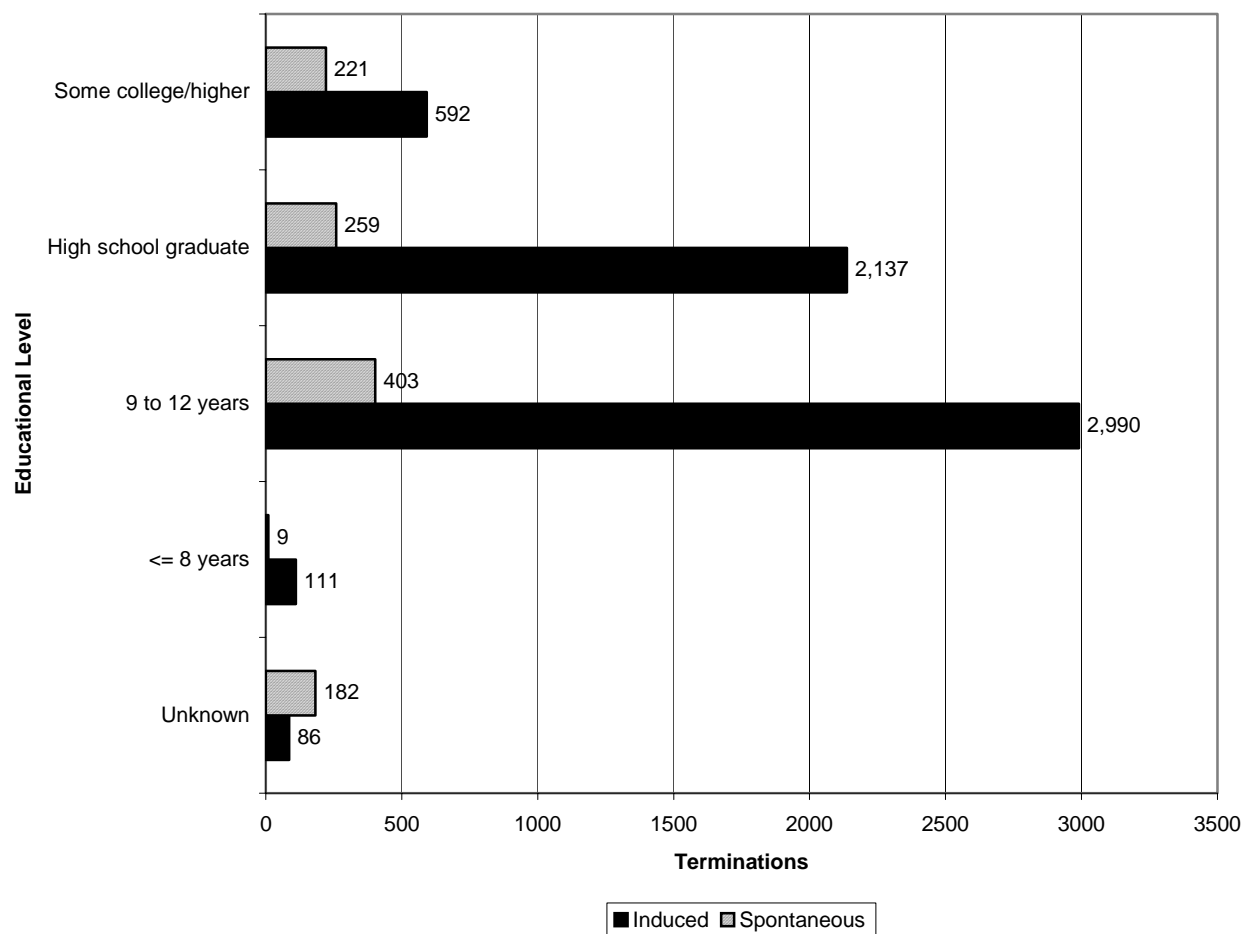
Table 4 and Figure 4 show the number of pregnancy terminations for women with different educational status. Women with 9 to 12 years and 13 to 16 years of education had more reported induced terminations, as well as more spontaneous terminations than did women at other educational levels during the reporting year. This pattern corresponded with the distribution of women's age.

Table 4
Termination of Pregnancy by Education Level

Level of Education	2000			2001			2002			2003		
	Induced	Spont.	N/A	Induced	Spont.	N/A	Induced	Spont.	N/A	Induced	Spont.	N/A
<= 8 years	119	13	0	101	8	0	128	11	0	111	9	0
9 to 12 years	3,164	600	1	2,961	375	2	3,267	358	3	2,990	403	3
High School Graduate	2,467	452	1	2,413	380	1	2,638	376	2	2,137	259	5
Some College/higher	121	39	0	99	41	0	103	33	0	592	221	1
Unknown	188	437	0	148	315	1	94	266	1	86	182	0
Total	6,059	1,541	2	5,722	1,119	4	6,230	1,044	6	5,916	1,074	9

Figure 4

Terminations Occuring in 2003 by Educational Level



Terminations by Race

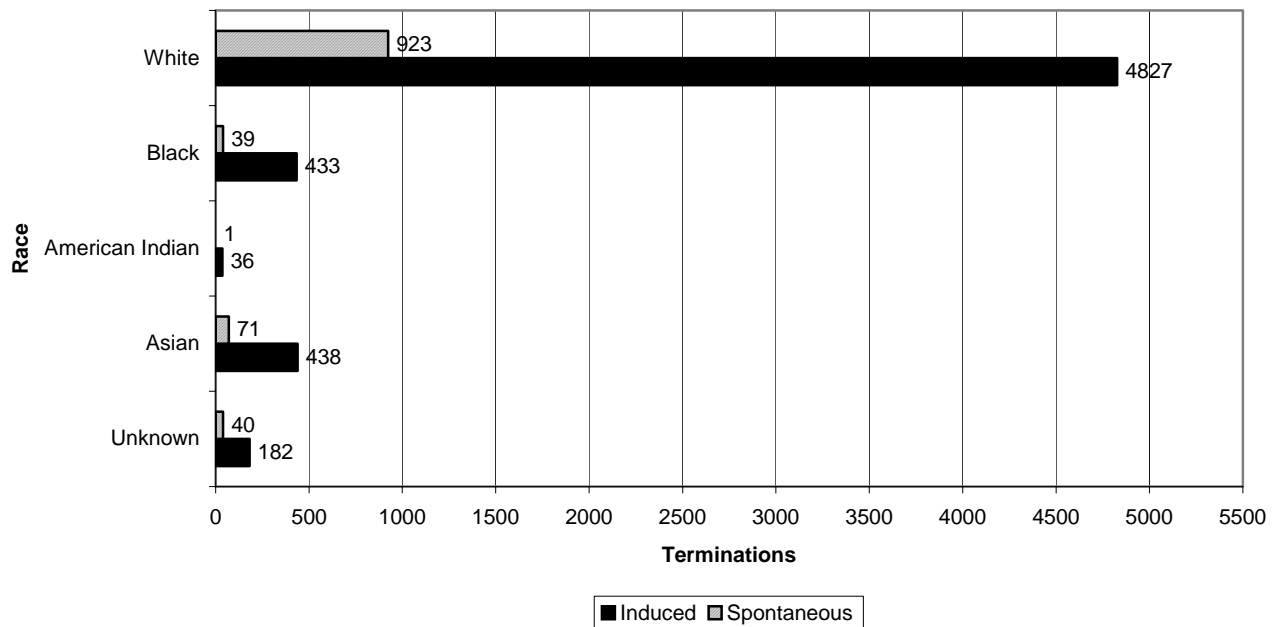
Table 5 and Figure 5 show the distribution of terminations of pregnancy by race. While comparing this pattern to the state annual birth records, White women had lower ratio of induced termination compared to black women. Small termination report numbers from other minority population make it difficult to conclude the trend for these groups.

Table 5
Terminations of Pregnancy by Race

Race	2000				2001				2002				2003			
	Induced		Spont.		Induced		Spont.		Induced		Spont.		Induced		Spont.	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%
White	4,912	81.1%	1,377	89.4%	4,603	80.4%	979	87.5%	5,034	80.8%	886	84.9%	4,827	81.6%	923	86.0%
Black	405	6.7%	39	2.5%	449	7.9%	27	2.4%	464	7.4%	22	2.1%	433	7.3%	39	3.6%
American Indian	54	0.9%	6	0.4%	63	1.1%	2	0.2%	45	0.7%	1	0.1%	36	0.6%	1	0.1%
Other	631	10.4%	81	5.3%	553	9.7%	52	4.7%	654	10.5%	62	5.9%	438	7.4%	71	6.6%
Unknown	57	0.9%	38	2.5%	54	0.9%	59	5.3%	33	0.5%	73	7.0%	182	3.1%	40	3.7%
Total	6,059	100.0%	1,541	100.0%	5,722	100.0%	1,119	100.0%	6,230	100.0%	1,044	100.0%	5,916	100.0%	1,074	100.0%

Figure 5

Terminations Occurring in 2003 by Race



Terminations by Mother's Age

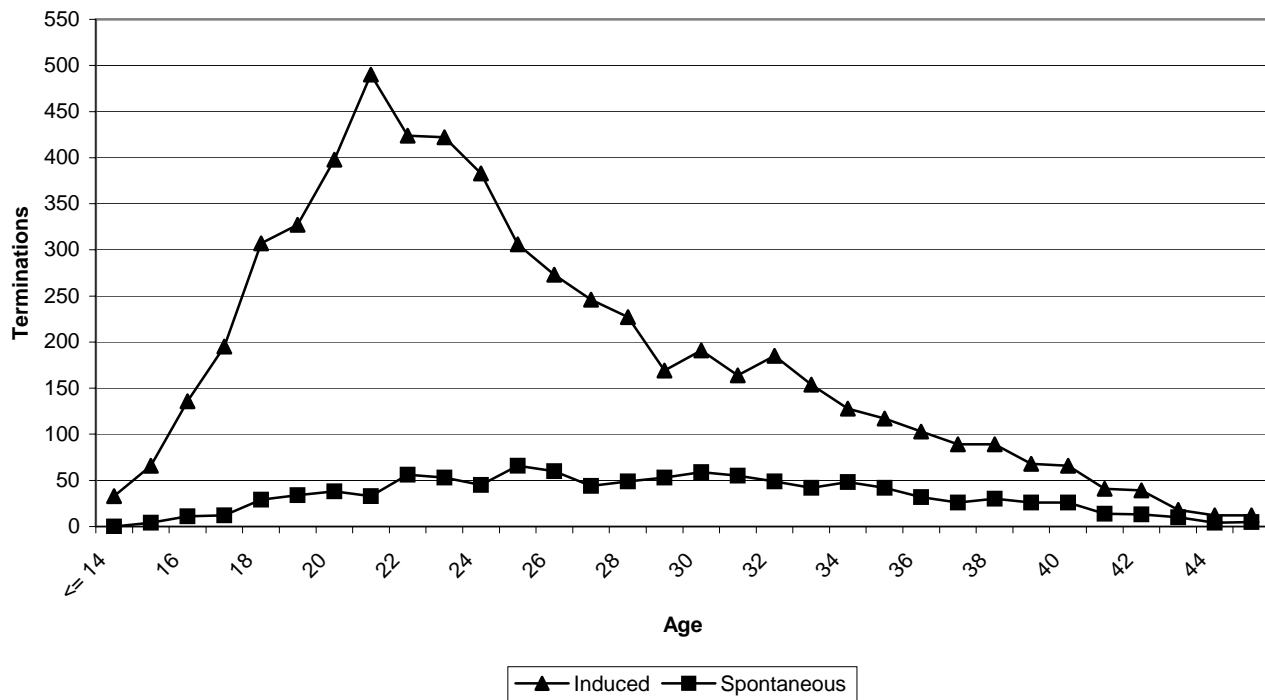
Table 6 and Figure 6 show the number of pregnancy terminations by age of the mother. The highest number of induced terminations was for women 18 to 28 years old. The distribution of spontaneous terminations did not show a noticeable peak with the age change.

Table 6
Termination of Pregnancy by Age of Mother

Age of Mother	2001			2002			2003		
	Induced	Spont.	N/A	Induced	Spont.	N/A	Induced	Spont.	N/A
<=14	38	2	0	35	1	0	33	0	0
15	73	4	0	86	4	0	66	4	0
16	113	10	0	129	8	0	136	11	0
17	200	20	0	197	17	0	195	12	0
18	320	17	0	383	23	2	307	29	1
19	416	30	0	379	28	0	327	34	2
20	450	39	0	467	40	1	398	38	0
21	464	56	0	507	48	0	490	33	1
22	431	48	0	474	52	0	424	56	0
23	368	52	1	413	45	0	422	53	0
24	322	52	1	359	43	0	383	45	0
25	255	57	0	302	58	1	306	66	0
26	264	63	0	283	46	1	273	60	1
27	208	55	0	262	70	0	246	44	2
28	218	65	0	224	71	0	227	49	1
29	201	57	0	203	60	0	169	53	0
30	213	66	1	196	45	0	191	59	0
31	172	66	0	189	55	0	164	55	0
32	141	52	0	153	59	0	185	49	0
33	113	45	0	164	47	0	154	42	0
34	117	40	1	128	34	0	128	48	0
35	103	36	0	146	31	1	117	42	0
36	104	31	0	99	24	0	103	32	0
37	87	28	0	108	25	0	89	26	0
38	86	28	0	83	25	0	89	30	0
39	74	26	0	65	31	0	68	26	0
40	59	24	0	68	14	0	66	26	0
41	36	18	0	44	10	0	41	14	0
42	19	12	0	37	11	0	39	13	0
43	25	7	0	16	6	0	18	10	0
44	18	5	0	15	4	0	12	4	0
>=45	14	2	0	12	4	0	12	5	0
Unknown	0	6	0	4	5	0	38	6	0
Total	5,722	1,119	4	6,230	1,044	6	5,916	1,074	9

Figure 6

Terminations Occurring in 2003 by Age of Woman



ITOP REGIONS

The Iowa Department of Public Health has divided state by geographic region for various purposes. This report uses Maternal and Child Health (MCH) regions created in 1999, which included twenty-six MCH regions, for program planning, intervention, and outcome oriented research.

Figure 7 is the map showing the location of the regions within the state that have been used since 1999. Table 7 shows the number of spontaneous and induced terminations occurring among women residing within each region. Regions 10, 12, 14 and 23 had more than 300 cases reported from each region, while region 19 and 22 had less than 10 cases reported.

Table 8a and 8b provide a comparison of live births, fertility rates, pregnancy rates, termination rates, and termination ratios by MCH regions (see Appendix for formula). These calculations were based on whichever year had the most recent data available. The fertility rate is the total number of live births per 1,000 women of childbearing age (see Appendix for formula). The fertility rate for the state as a whole was 62.6 per 1,000 women of childbearing age. The rate ranged from 46.4 to 75, with 15 regions above the rate for the state. The pregnancy rate is the total number of live births, fetal deaths, and terminations of pregnancy per 1,000 women of childbearing age (see Appendix for formula). The state rate was 73.4 per 1,000 women. The rate ranged from 56.9 to 89, with nine regions above the rate for the state. The termination rate is the total number of terminations of pregnancy per 1,000 women of childbearing age (see Appendix for formula). In 2003, the state reported rate for induced terminations was 7.6 per 1,000 women. The rate ranged from 0.2 to 13.7, with nine regions above the rate for the state. The total reported spontaneous termination rate for the state was 1.7 per 1,000 women in 2003. The rate ranged from 0.1 to 3.5, with eleven regions higher than the state rate.

Figure 7

ITOP Report Regions 1999-2003

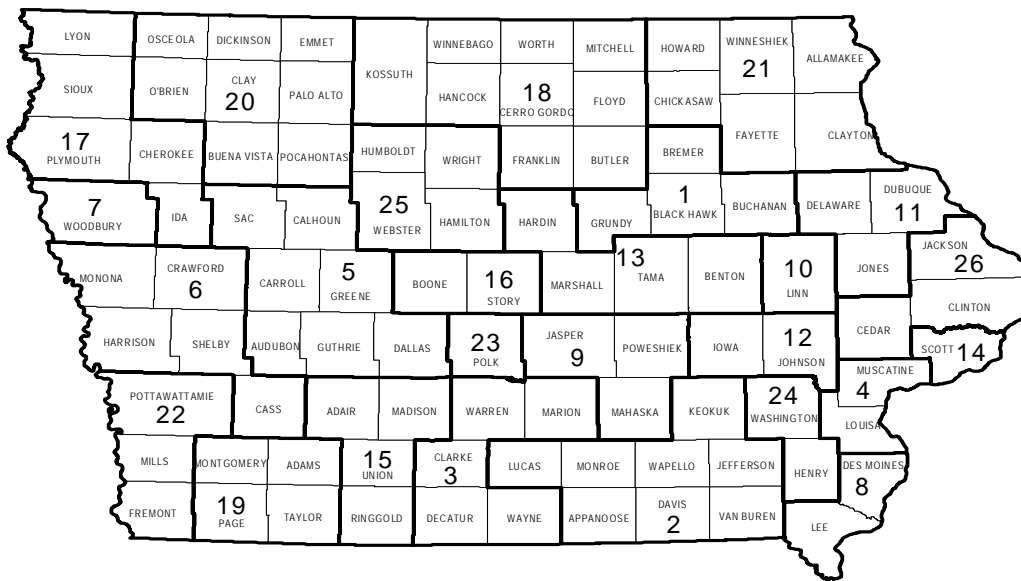


Table 7
Terminations of Pregnancy by ITOP Report Region

MCH Region	2000		2001		2002		2003	
	Induced	Spont.	Induced	Spont.	Induced	Spont.	Induced	Spont.
1	437	28	352	30	398	28	355	40
2	150	71	157	48	132	67	150	64
3	132	30	133	26	100	21	124	29
4	127	24	113	13	139	9	127	10
5	103	40	120	11	132	12	111	22
6	14	5	25	7	37	1	23	3
7	214	95	137	82	158	81	175	63
8	87	65	147	46	149	50	133	46
9	97	30	99	23	91	37	101	27
10	528	180	509	169	575	148	519	88
11	205	87	160	55	173	71	150	71
12	521	104	436	63	435	26	462	66
13	150	36	147	28	151	38	152	12
14	468	211	406	187	455	149	444	121
15	44	11	47	5	56	3	46	15
16	224	32	233	26	229	29	231	45
17	35	18	40	11	32	5	37	14
18	164	104	144	84	151	79	132	86
19	10	6	10	6	27	5	7	8
20	53	6	63	3	66	1	59	6
21	129	11	96	3	105	1	82	2
22	4	25	9	24	60	16	4	8
23	1,227	213	1,230	126	1,184	112	1,203	171
24	73	31	52	9	77	5	80	10
25	132	11	104	3	117	7	117	15
26	142	18	124	18	155	11	148	12
Out of State	559	19	591	9	821	29	687	18
Not Identified	30	30	36	4	25	3	57	2
Total	6,059	1,541	5,722	1,119	6,230	1,044	5,916	1,074

**Table 8a
Population, Live Births, Fertility Rate, and Pregnancy Rate by ITOP Report Regions**

MCH Region	2001				2002				2003			
	Live Births	Female 15-44yrs	Fertility Rate*	Pregnancy Rate*	Live Births	Female 15-44yrs	Fertility Rate	Pregnancy Rate	Live Births	Female**	Fertility Rate	Pregnancy Rate
1	2,260	40,643	55.2	66.2	2,288	40,326	56.7	67.7	2,204	40,326	54.7	64.9
2	1,272	20,675	61.4	71.3	1,269	20,465	62.0	72.2	1,365	20,465	66.7	77.3
3	1,196	20,376	59.5	65.8	1,191	20,495	58.1	64.2	1,191	20,495	58.1	65.8
4	812	11,099	73.1	87.5	831	11,064	75.1	88.7	753	11,064	68.1	80.5
5	1,255	22,083	58.1	65.4	1,323	22,510	58.8	65.5	1,388	22,510	61.7	67.9
6	768	12,744	59.9	63.2	799	12,595	63.4	66.6	783	12,595	62.2	64.7
7	1,623	21,788	73.6	84.9	1,592	21,641	73.6	85.0	1,624	21,641	75.0	86.6
8	913	15,047	59.5	72.6	901	14,701	61.3	75.2	889	14,701	60.5	73.0
9	957	15,406	62.3	71.0	902	15,372	58.7	67.2	912	15,372	59.3	68.0
10	2,846	42,468	67.0	84.5	2,751	42,301	65.0	82.6	2,754	42,301	65.1	80.0
11	1,580	25,682	60.9	70.5	1,570	25,702	61.1	71.0	1,668	25,702	64.9	73.8
12	1,552	35,022	44.9	58.4	1,622	35,221	46.1	59.4	1,711	35,221	48.6	63.9
13	1,314	19,450	67.9	78.0	1,252	19,501	64.2	74.2	1,357	19,501	69.6	78.4
14	2,214	34,509	63.8	81.6	2,275	34,479	66.0	83.8	2,233	34,479	64.8	81.6
15	434	7,516	58.0	66.3	474	7,554	62.7	70.6	482	7,554	63.8	72.5
16	1,215	26,497	45.9	55.7	1,212	26,566	45.6	55.5	1,232	26,566	46.4	57.0
17	1,093	17,349	62.6	65.1	1,132	17,337	65.3	67.7	1,116	17,337	64.4	67.5
18	1,586	26,850	57.7	66.4	1,545	26,582	58.1	66.9	1,534	26,582	57.7	66.2
19	416	6,859	59.0	64.0	432	6,732	64.2	69.5	383	6,732	66.9	59.4
20	1,115	19,451	56.9	60.7	1,176	19,214	61.2	65.1	1,206	19,214	62.8	66.3
21	1,048	18,955	54.9	60.7	1,004	18,861	53.2	59.2	1,057	18,861	56.0	60.8
22	1,493	22,700	65.8	69.4	1,417	22,786	62.1	65.8	1,519	22,786	66.7	67.7
23	6,110	86,785	70.7	86.1	6,140	87,228	70.4	85.6	6,371	87,228	73.0	89.1
24	546	8,072	68.9	79.7	548	8,004	68.5	79.1	509	8,004	63.6	75.2
25	953	14,860	63.6	72.3	920	14,628	62.9	71.7	945	14,628	64.6	73.9
26	1,039	17,287	59.7	69.7	989	17,236	57.4	67.2	953	17,236	55.3	65.0
Total*	37,610	610,173	61.5	73.8	37,555	609,101	61.7	72.5	38,139	609,101	62.6	74.4

* 2000 birth number was used for calculation.

** 2002 estimate was used since 2003 data was not available at the time

**Table 8b
Termination Rates and Termination Ratios by ITOP Report Regions**

MCH Region	2001						2002						2003					
	Induced			Spont.			Induced			Spont.			Induced			Spont.		
	N	Rate*	Ratio	N	Rate*	Ratio	N	Rate	Ratio	N	Rate	Ratio	N	Rate***	Ratio	N	Rate**	Ratio
1	352	8.6	157.5	30	0.7	13.4	398	9.7	176.1	28	0.7	12.4	355	8.8	161.1	38	1.0	18.1
2	157	7.6	119.7	48	2.3	36.6	132	6.4	103.8	67	3.2	52.7	150	7.3	109.9	64	3.1	46.9
3	133	6.6	113.4	26	1.3	22.2	100	5.0	83.6	21	1.0	17.6	124	6.1	104.1	29	1.4	24.3
4	113	10.2	140.9	13	1.2	16.2	139	12.5	171.2	9	0.8	11.1	127	11.5	168.7	10	0.9	13.3
5	120	5.6	89.4	11	0.5	8.2	132	6.1	105.2	12	0.6	9.6	111	4.9	80.0	22	1.0	15.9
6	25	1.9	31.7	7	0.5	8.9	37	2.9	48.2	1	0.1	1.3	23	1.8	29.4	3	0.2	3.8
7	137	6.2	81.0	82	3.7	48.5	158	7.2	97.4	81	3.7	49.9	175	8.1	107.8	63	2.9	38.8
8	147	9.6	152.3	46	3.0	47.7	149	9.7	163.2	50	3.3	54.8	133	9.0	149.6	46	3.1	51.7
9	99	6.4	103.9	23	1.5	24.1	91	5.9	95.1	37	2.4	38.7	101	6.6	110.7	27	1.8	29.6
10	509	12.0	187.5	169	4.0	62.2	575	13.5	202.0	148	3.5	52.0	519	12.3	188.5	88	2.1	32.0
11	160	6.2	95.5	55	2.1	32.8	173	6.7	109.5	71	2.7	44.9	150	5.8	89.9	71	2.8	42.6
12	436	12.6	278.6	63	1.8	40.3	435	12.6	280.3	26	0.8	16.8	462	13.1	270.0	66	1.9	38.6
13	147	7.6	109.7	28	1.4	20.9	151	7.8	114.9	38	2.0	28.9	152	7.8	112.0	12	0.6	8.8
14	406	11.7	172.9	187	5.4	79.6	455	13.1	205.5	149	4.3	67.3	444	12.9	198.8	121	3.5	54.2
15	47	6.3	102.2	5	0.7	10.9	56	7.5	129.0	3	0.4	6.9	46	6.1	95.4	15	2.0	31.1
16	233	8.8	185.4	26	1.0	20.7	229	8.6	188.5	29	1.1	23.9	231	8.7	187.5	45	1.7	36.5
17	40	2.3	35.1	11	0.6	9.6	32	1.8	29.3	5	0.3	4.6	37	2.1	33.2	14	0.8	12.5
18	144	5.2	86.9	84	3.1	50.7	151	5.5	95.2	79	2.9	49.8	132	5.0	86.0	85	3.2	56.1
19	10	1.4	23.3	6	0.9	14.0	27	3.8	64.9	5	0.7	12.0	7	1.0	18.3	8	1.2	20.9
20	63	3.2	54.1	3	0.2	2.6	66	3.4	59.2	1	0.1	0.9	59	3.1	48.9	6	0.3	5.0
21	96	5.0	91.0	3	0.2	2.8	105	5.5	100.2	1	0.1	1.0	82	4.3	77.6	2	0.1	1.9
22	9	0.4	6.3	24	1.1	16.9	60	2.6	40.2	16	0.7	10.7	4	0.2	2.6	8	0.4	5.3
23	1,230	14.2	197.9	126	1.5	20.3	1,184	13.7	193.8	112	1.3	18.3	1,203	13.8	188.8	170	2.0	26.8
24	52	6.6	93.9	9	1.1	16.2	77	9.7	141.0	5	0.6	9.2	80	10.0	157.2	10	1.2	19.6
25	104	6.9	109.4	3	0.2	3.2	117	7.8	122.8	7	0.5	7.3	117	8.0	123.8	15	1.0	15.9
26	124	7.1	119.7	18	1.0	17.4	155	8.9	149.2	11	0.6	10.6	148	8.6	155.3	12	0.7	12.6
Out of State	591			9			821			29			687			18		
NA	36			4			25			3			57			2		
Total	5,722	9.4	149.6	1,119	1.8	29.3	6,230	10.2	165.6	1,044	1.7	27.8	5,916	9.7	155.1	1,074	1.8	28.2

* 2000 birth was used.

** 2002 population was used.

DISCUSSION

The Centers for Disease Control and Prevention (CDC) has collected and compiled data on abortions by state or area of occurrence since 1969 (1). From 1973 through 1997, data were received from or estimated for 52 reporting areas in the United States: 50 states, the District of Columbia, and New York City. Beginning in 1998, CDC compiled abortion data from 48 reporting areas. Alaska, California, New Hampshire, and Oklahoma did not report, and data for these areas were not estimated.

For a long-term perspective, Table 9 provides a review of changes in reported legal abortions, abortion rates, and abortion ratios for the nation from 1970 to 1999. There were increases in induced abortion until around 1990. Since that time, however, the number of legal induced abortions gradually declined. In 1998 and in 1999, the number of abortions continued to decrease when comparing the same 48 reporting areas.

Table 10 is provided to show how Iowa compares to other states regarding termination of pregnancy issues (1). Iowa had an abortion ratio of 186 per 1,000 live births based on residence for 1999 (the most current year of reporting for all states). The occurrence data show that for 1999, Iowa had a ratio of 163 abortions per 1,000 live births, and an abortion rate of 16 per 1,000. The national ratio was 256 per 1,000 live births and an abortion rate of 17 per 1,000 (see Table 10). Since the methodology for obtaining Iowa's figures has changed significantly between 1997 and the present, it is not possible to compare these rates to the data now available. Comparing rates from 2001 to 2003 – when the same methodology was used – shows a decline trend in numbers. This may be exaggerated, however, since reports may trickle in for months or even years after the end of the reporting year.

Limitations of Data

Health care providers report the data used for this analysis. Even though the state health department has been trying to standardize the reporting procedure, it may still be some time before every case of termination is reported, especially spontaneous cases. Table 8a evidenced that there might be cases missed from those regions with very low numbers reported, as those numbers did not match the nature of the population.

Conclusions

Despite the limitations discussed above, an analysis of the data suggests the following:

1. Most of both types of pregnancy terminations (induced and spontaneous) in the state occur within the first trimester; specifically, they occur in the second and third months of gestation.
2. Reports of induced terminations are much more prevalent than spontaneous terminations.
3. Unmarried women experience more induced terminations than married women did.
4. There were more women under 30 years of age with reported induced terminations of pregnancy.
5. Additional observation is needed to standardize the reporting system and process among different regions.
6. **Iowa has relative lower rate of pregnancy terminations when compared to other states.**

Although little may be determined from these data concerning the factors leading to either induced or spontaneous terminations of pregnancy, our annual report still can provide planners and policymakers a baseline of knowledge about such matters.

Table 9
Reported Number of Legal Induced Abortions, Abortion Ratios, * and Abortion Rates, † United States, Selected Years, 1970-1999

Year	No. of legal abortions	Ratio*	Rate†	No. of areas reporting	
				Central health agency§	Hospitals/facilities¶
All Reporting Areas					
1970	193,491	52	5	8	7
1971	485,816	137	11	19	7
1972	586,760	180	13	21	8
1973	615,831	196	14	26	26
1974	763,476	242	17	37	15
1975	854,853	272	18	39	13
1976	988,267	312	21	41	11
1977	1,079,430	325	22	46	6
1978	1,157,776	347	23	48	4
1979	1,251,921	358	24	47	5
1980	1,297,606	359	25	47	5
1981	1,300,760	358	24	46	6
1982	1,303,980	354	24	46	6
1983	1,268,987	349	23	46	6
1984	1,333,521	364	24	44	8
1985	1,328,570	354	24	44	8
1986	1,328,112	354	23	43	9
1987	1,353,671	356	24	45	7
1988	1,371,285	352	24	45	7
1989	1,396,658	346	24	45	7
1990	1,429,247	344	24	46	6
1991	1,388,937	338	24	47	5
1992	1,359,146	334	23	47	5
1993	1,330,414	333	23	47	5
1994	1,267,415	321	21	47	5
1995	1,210,883	311	20	48	4
1996	1,225,937	315**	21	48	4
1997	1,186,039	306	20	48	4
1998	884,273	264	17	48	0
1999	861,789	256	17	48	0
48 Reporting Areas††					
1995	908,243	277	18	47	1
1996	934,549	285**	18	47	1
1997	900,171	274	17	46	2
1998	884,273	264	17	48	0
1999	861,789	256	17	48	0

* Number of abortions per 1,000 live births.

† Number of abortions per 1,000 women aged 15–44 years.

§ State health departments and the health departments of New York City and the District of Columbia.

¶ Hospitals or other medical facilities in state.

** Beginning in 1996, the ratio was based on births reported by the National Center for Health Statistics, CDC.

†† Without Alaska, California, New Hampshire, and Oklahoma, which did not report number of legal abortions for 1999.

Table 10
Reported Number, * Ratio, and Rate of Legal Abortions and Percentage of Abortions Obtained
by Out-of-State Residents, † by State of Occurrence – United States, 1999

State	Residence			Occurrence			Percentage of legal abortions obtained by out-of-state residents
	No. of legal abortions	Ratio	Rate	No. of legal abortions	Ratio	Rate	
Alabama	11,972	193	12	13,273	214	14	17.4
Alaska**	—	—	—	—	—	—	—
Arizona††	11,024	136	11	10,765	133	11	1.0
Arkansas	5,614	153	10	5,755	157	11	13.1
California**	—	—	—	—	—	—	—
Colorado	4,385	71	5	5,017	81	6	15.0
Connecticut	13,086	302	19	12,958	299	19	3.4
Delaware	3,540	332	20	5,161	483	30	34.8
Dist. of Columbia	3,881	516	31	7,373	980	59	54.9
Florida§§	—	—	—	83,971	426	28	—
Georgia	30,405	240	17	33,095	261	18	9.5
Hawaii	4,397	258	18	4,404	258	18	0.5
Idaho	1,580	80	6	867	44	3	3.2
Illinois	42,563	234	16	45,924	252	17	9.4
Indiana	14,238	165	11	12,109	141	9	3.6
Iowa¶¶	6,989	186	12	6,106¶¶	163	10	—
Kansas	6,435	166	11	12,395	320	22	48.6
Kentucky	6,758	124	8	5,469	101	6	20.2
Louisiana§§	—	—	—	12,008	179	12	—
Maine	2,366	174	9	2,427	178	9	3.0
Maryland	15,557	216	13	11,164	155	9	4.1
Massachusetts††	25,047	309	18	26,852	332	19	6.1
Michigan	25,898	194	12	26,207	196	12	3.1
Minnesota	13,567	206	13	14,342	217	14	8.9
Mississippi	7,206	169	11	3,878	91	6	4.7
Missouri	15,838	210	13	8,113	108	7	9.5
Montana	2,150	199	12	2,499	232	14	14.6
Nebraska	3,831	160	11	4,565	191	13	18.4
Nevada	5,208	177	14	5,807	198	15	10.4
New Hampshire**	—	—	—	—	—	—	—
New Jersey	35,293	309	20	35,126	308	20	6.0
New Mexico	5,644	208	15	5,098	187	14	5.0
New York	133,495	522	33	137,234	537	34	—
City	95,978	804	—	102,334***	858	—	6.6†††
State	37,517§§§	275	—	34,900	256	—	5.5†††
North Carolina	28,459	250	17	32,081	282	19	14.3
North Dakota	960	126	7	1,345	176	10	34.2
Ohio	34,859	228	14	37,041	243	15	7.8
Oklahoma**	—	—	—	—	—	—	—
Oregon	12,562	278	18	14,145	313	20	12.6
Pennsylvania	37,097	255	15	34,494	237	14	4.7
Rhode Island	3,995	323	18	5,004	405	23	22.0
South Carolina	11,122	202	13	7,687	140	9	5.6
South Dakota	961	91	6	740	70	5	18.6
Tennessee	15,472	199	13	16,924	218	14	18.8
Texas	77,506	222	17	80,739	231	18	3.7
Utah	3,250	70	7	3,381	73	7	6.7
Vermont	1,476	225	11	1,748	266	13	16.8
Virginia	28,388	297	18	27,354	287	17	6.3
Washington	26,062	327	20	25,523	321	20	4.3
West Virginia	2,730	132	7	2,498	121	7	13.3
Wisconsin	12,113	178	11	11,013	161	10	2.8
Wyoming	833	136	8	110	18	1	1.8
Other residence¶¶¶	2,537	—	—	NA	NA	NA	NA
Total known	758,349			861,789	256	17	8.8

(to be continued)

Table 10 (continued)
Reported Number, * Ratio, and Rate of Legal Abortions and Percentage of Abortions Obtained by Out-of-State Residents, † by State of Occurrence – United States, 1999.

State	Residence			Occurrence			Percentage of legal abortions obtained by out-of-state residents
	No. of legal abortions	Ratio	Rate	No. of legal abortions	Ratio	Rate	
Unknown residence****	4,886						
Not reported by residence††††	98,554						
Total	861,789	256	17				

* Abortion data reported by central health agencies.

† Number of abortions per 1,000 live births. **Source:** Number of live births obtained from Ventura SJ, Martin JA, Curtin SC, Menacker F, Hamilton BE. Births: final data for 1999. Hyattsville, MD: US Department of Health and Human Services, CDC, National Center for Health Statistics, 2001. Natl Vital Stat Rep; vol 49, no. 1.

§ Number of abortions per 1,000 women aged 15–44 years. **Source:** Number of women in this age group was obtained from the US Census Bureau. Table ST-99-8: Population estimates for the U.S., Regions, Divisions, and States by 5-year age Groups and Sex: Time Series Estimates, July 1, 1990 to July 1, 1999, and April 1, 1990, Census Population Counts (includes revised population counts). Washington, DC: US Census Bureau, Population Division, Population Estimates Program.

¶ Based on number of abortions for which residence of women was known.

** State did not report abortions.

†† Reported numbers of abortions for in-state residents without detailed information regarding out-of-state residents.

§§ State did not report abortions by residence; therefore, no information is available regarding in-state residents.

¶¶ Reported for own residents only.

*** Reported by the New York City Department of Health.

††† Percentage based on number of abortions reported as "out of reporting area."

§§§ Abortions for women whose state of residence was listed as New York.

¶¶¶ Women whose residence was listed as Canada, Mexico, or Other.

**** Reported as unknown residence (3,249) or out-of-state residence, but not specified (1,637).

†††† Total for states that did not report abortions by residence.

— Not available; NA, not applicable.

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APPENDIX

Formulas

$$1. \text{ Termination Rate} = \frac{\text{\# of Terminations}}{\text{Female Population (age 15 - 44)}} \times 1,000$$

$$2. \text{ Termination Ratio} = \frac{\text{\# of Terminations}}{\text{\# Total Live Births}} \times 1,000$$

$$3. \text{ Fertility Rate} = \frac{\text{\# Total Live Births}}{\text{Female Population (age 15 - 44)}} \times 1,000$$

$$4. \text{ Pregnancy Rate} = \frac{\text{\# (Live Births + Fetal Deaths + Abortions)}}{\text{Female Population (age 15 - 44)}} \times 1,000$$