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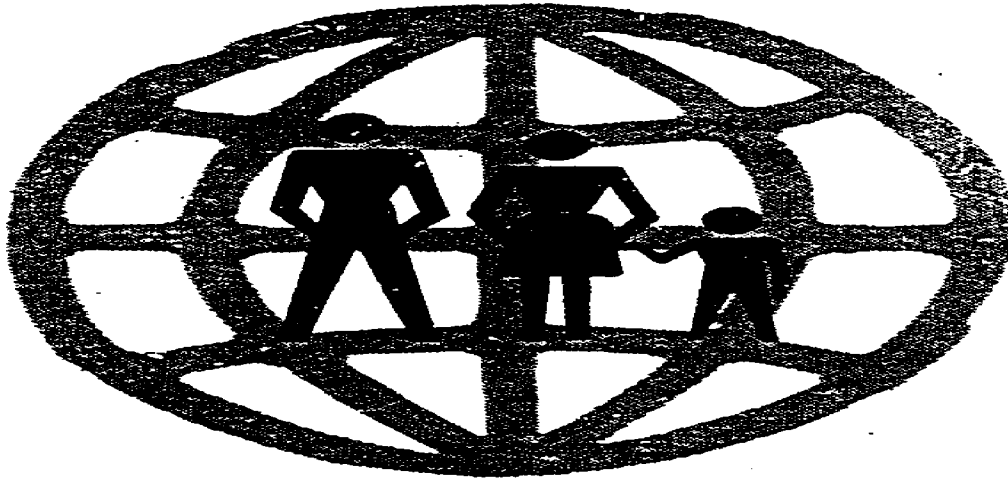
## ABSTRACT

This report summarizes abortion information received by the Center for Disease Control from collaborators in state health departments, hospitals, and other pertinent sources. While it is intended primarily for use by the above sources, it may also interest those responsible for family planning evaluation and hospital abortion planning. Information in narrative and statistical form delineates the status of abortion reporting systems in the 16 states that passed new abortion laws between January 1, 1967 and December 31, 1970, reported legal abortions, abortion ratios, demographic characteristics of the population of women who received legal abortions, reasons for which legal abortions are performed, and procedures used to perform abortions. Four special studies on abortion are highlighted: Joint Program for the Study of Abortion; The Practice of Legal Abortion - New York City; Decrease in Septic Abortion Morbidity in a Municipal Hospital - Los Angeles, California; and Hospital Study of Abortion Services. A short history of abortion law changes in the United States prior to 1970 is presented, along with a more thorough review of legislative and judicial changes affecting American abortion laws during 1970. Changes in the abortion laws and practices of Canada and Finland are detailed under International Notes. (BL)

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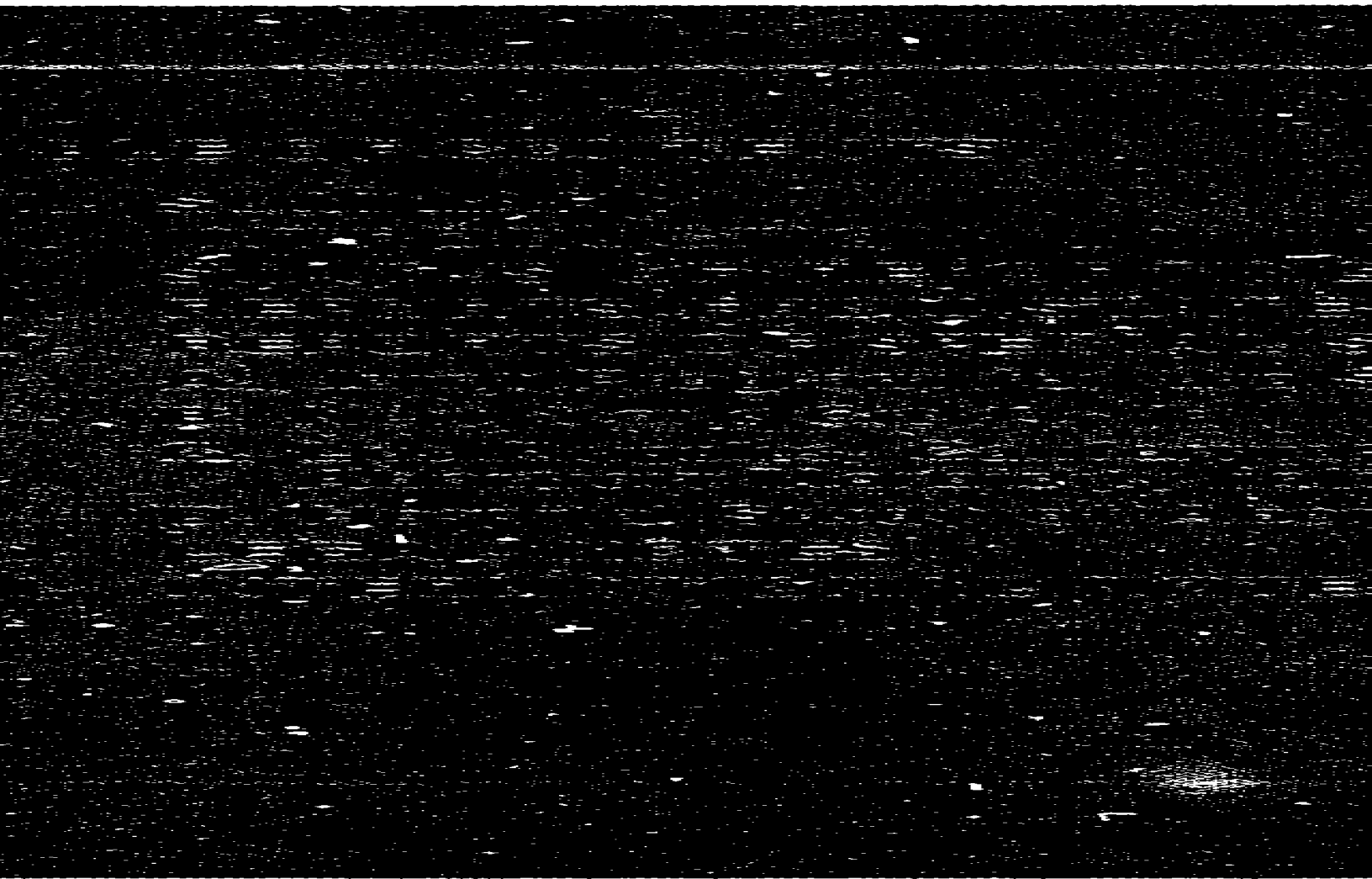
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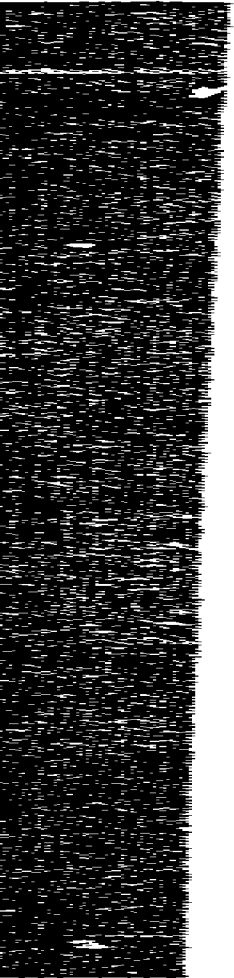
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PREFACE

This report summarizes information received from collaborators in state health departments, hospitals, and other pertinent sources. It is intended primarily for their use, but may be of interest to others with responsibility for family planning evaluation and hospital abortion planning.

Contributions to this report are most welcome. Please Address:

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## I. SUMMARY

In 1970, more than 180,000 legal abortions were performed in the United States and reported to the Center for Disease Control from 19 states and the District of Columbia. Abortion practices in the United States vary widely, in part because of variations in state abortion laws. Twenty-eight states restrict legal abortions to situations where it is necessary to preserve the pregnant woman's life, while four states allow abortion on the decision of a pregnant woman and her physician. Eighteen other states and the District of Columbia allow abortions under a variety of legally specified or restricted conditions.

New York is the only state among those with the least restrictive abortion laws which permits abortions for non-resident women. Between July 1, the date the New York law went into effect, and the end of the year, New York reported the nation's highest abortion to live-birth ratio, 534 abortions per 1,000 live births. More than 36,000 non-resident women received abortions in New York during those 6 months.

Although the largest number of abortions, reported by age, were obtained by women age 15-24, pregnant women who were either less than 15 or older than 40 had the highest ratios of abortions per 1,000 live births. Two-thirds of the abortions reported by marital status were performed on unmarried women. Nearly half of the abortions reported by parity were performed on women who had no living children. Four of six states which reported legal abortions by race had higher abortion ratios for white than for black women. Two-thirds of the abortions were performed by the end of the 12th week of gestation; 97.5 percent were performed by the end of the 20th week. In seven states which reported type of operative procedure used, 76 percent of the abortions were performed by either suction or sharp curettage.

Reports of several special studies on abortion are included. One of the most important of these is a preliminary report based on data collected by the Joint Program for the Study of Abortion on early complications of legally performed abortions. Results showed a one percent incidence of major complications. Three of the studies dealt with abortion practices in New York City. Between July 1 and December 31, 1970, a total of 68,995 legal abortions were reported to the New York City Health Department. Analysis of those abortions by type of facility they were performed in showed that women cared for in publicly financed facilities tended to have abortions later in pregnancy and more often by a non-D&C method than women who were served as private patients. In New York City fewer deaths from illegal abortion were reported after the new law went into effect than in the previous 6 months. Eight deaths associated with legal abortion were reported between July 1 and December 31. Estimated legal abortion mortality rates in New York City were higher for black and Puerto Rican women than for white women. The estimated mortality rate for abortions performed after the 12th week of pregnancy was three times as great as the rate for abortions performed earlier in gestation. The overall death

rate for legal abortion in New York City was 11.6 per 100,000 abortions during the first 6 months. Investigation of the death of one out-of-state woman after a New York City abortion led to the discovery of six uterine perforations resulting from aspiration abortions performed by one physician. Gestation of greater than 12 weeks at time of abortion was found to be the factor most closely associated with incidence of this complication.

During the time period 1966-1970 admissions for treatment of septic, non-hospital induced abortions at one California hospital decreased by more than 50 percent while the number of legal induced abortions at that hospital rose from two to more than 3,000 per year.

A short history of abortion law changes in the United States prior to 1970 is presented, along with a more thorough review of legislative and judicial changes affecting American abortion laws during 1970. Changes in the abortion laws and practices of Canada and Finland are detailed under International Notes.

## II. INTRODUCTION

In 1969, four of the nine states with recently changed abortion laws reported 12,417 legal abortions to the Center for Disease Control (CDC). By contrast, in 1970 more than 180,000 abortions were reported from 19 states and the District of Columbia. In the year intervening these two reports, the United States has had unprecedented change in laws and practices related to legal abortion.

## III. STATUS OF REPORTING

As of December 31, 1970, statewide abortion reporting systems were in effect in 14 states. Table 1 summarizes the status of abortion reporting in the 16 states that passed new abortion laws between January 1, 1967, and December 31, 1970. This table identifies the source of abortion data for each state and the frequency with which each state compiles statistics on legal abortion. Arkansas and New Mexico were the only two of the 16 states without a statewide abortion reporting system in effect in 1970. Many of the new abortion laws enacted since 1967 require records to be filed with the state health department within a specified time after an abortion is performed; these records are the primary source of abortion data in those states. Five other states currently take their abortion data from fetal death certificates. Unfortunately, fetal death certificates do not always provide all the data appropriate for induced abortion. Moreover, fetal death certificates are not available as a source of abortion data in states where reporting of fetal deaths is not required, unless it occurs after the 16th week of gestation.

Several other states are now in the process of developing an abortion reporting system, although in many areas of the country individual hospitals remain the only source of accurate information on legal abortion.



Table 1

**ABORTION REPORTING**  
**STATES WITH ABORTION LAWS ENACTED SINCE JANUARY 1, 1967**  
**DECEMBER 31, 1970**  
**Source of Data**

State	Frequency of Compilation of Data	Individual Abortion Reports Sent by Physician or Hospital to Health Department	Fetal Death Certificates	Other	No Reporting System
Alaska	Bi-Monthly	✓			
Arkansas					✓
California	Quarterly	✓ <sup>1</sup>			
Colorado	Monthly		✓		
Delaware	Annually	✓			
Georgia	Monthly	✓			
Hawaii	Monthly		✓	✓ <sup>2</sup>	
Kansas	Annually	✓			
Maryland	Quarterly	✓			
New Mexico					✓
New York City <sup>3</sup>	Weekly	✓	✓	✓	
Upstate New York	Monthly		✓		
North Carolina	Annually			✓ <sup>4</sup>	
Oregon	Monthly	✓			
South Carolina	Monthly	✓			
Virginia	Monthly		✓		
Washington	Monthly	✓			

1. Beginning April 1, 1971, hospitals in California will report only numbers of abortions performed and numbers of deaths associated with legal abortions.
2. In addition to reporting of abortions on fetal death certificates sent to the state health department, hospitals in Hawaii voluntarily send case reports to the University of Hawaii School of Public Health, which was requested by the state legislature to study abortion practices in the state.
3. Pregnancies aborted before the 16th week of gestation are reported to the health department on a "Certificate of Termination of Pregnancy;" those aborted during or after the 16th week are reported on an abridged fetal death certificate. New York City hospitals also submit a weekly report of abortions performed, by method used and length of gestation.
4. Hospitals are asked but not required to submit case reports on abortions to the Committee on Maternal Health of the Medical Society of the State of North Carolina for compilation and analysis.

#### IV. REPORTS FROM STATES

Table 2 shows reported legal abortions for 14 states and the District of Columbia. A total of 175,508 abortions were reported from these jurisdictions, giving an overall ratio of 178 abortions per 1,000 live births. The range between legal abortion ratios for these states is very great, from a low of 7 in Georgia to 534 for the State of New York.

Table 3 shows legal abortion ratios from 13 hospitals located in Alabama, Kansas, Massachusetts, Pennsylvania and Wisconsin. All of these states allow legal abortion in a variety of circumstances not restricted to situations in which the life of the pregnant woman is threatened; none had statewide abortion reporting systems in effect for the entire year of 1970. The 13 hospitals reported a total of 4,611 abortions performed during 1970, which, in addition to the 175,508 reported abortions shown in Table 2, makes a total of 180,119 abortions reported for the country in 1970.

Only four states—Colorado, Delaware, Georgia and Oregon--had abortion data broken down by month for the complete year of 1970 (Figure 1). Although these states demonstrate widely divergent abortion practices, in each state the abortion ratio increased over the course of the year. Although Georgia's ratios throughout the year were lower than those of the other states, the legal abortion ratio for Georgia increased more than five-fold between January and December. Abortion ratios in Colorado and Delaware more than tripled over the course of the year, and the ratio for Oregon increased by 71 percent.

REPORTED LEGAL ABORTION RATIOS  
SELECTED STATES  
1970

State	Months		Abortions <sup>2</sup>	Live Births <sup>2</sup>	Abortions/ Live Birth <sup>2</sup>
	Current Law In Effect	Reported Data <sup>1</sup>			
Alaska	5	5	408	3,390	120
California	12	12	62,672	364,007	172
Colorado	12	12	2,263	42,758	53
Delaware	12	12	560	10,234	55
Dist. of Columbia	12	8	4,579 <sup>3</sup>	17,067	268
Georgia	12	12	705	96,069	7
Hawaii	9-1/2	9-1/2	2,741 <sup>4</sup>	13,464	204
Maryland	12	6	3,210	31,739	101
New Mexico <sup>5</sup>	12	6	797	10,937	73
New York	6	6	87,530	163,847	534
(Upstate)	6	6	(18,535)	(86,632)	(214)
(City )	6	6	(68,995)	(77,215)	(894)
North Carolina	12	12	1,293	98,755	13
Oregon	12	12	7,196	36,167	199
South Carolina	11	11	392	46,306	8
Virginia	6	7	635	46,005	14
Washington	1	1	527	6,345	83
TOTAL			175,508	987,090	178

\* All states with data available.

1. In some instances, data were not available for all months the current law was in effect.
2. Reported legal abortions and live births by place of occurrence. Live birth data taken from Monthly Vital Statistics Report Provisional Statistics, Vol. 19, No. 12, March 4, 1971, published by the National Center for Health Statistics, HSMHA, DHEW.
3. Abortions reported by all but two hospitals.
4. "Elective abortions" only.
5. Data obtained from all New Mexico hospitals for varying 6-month periods in 1970.

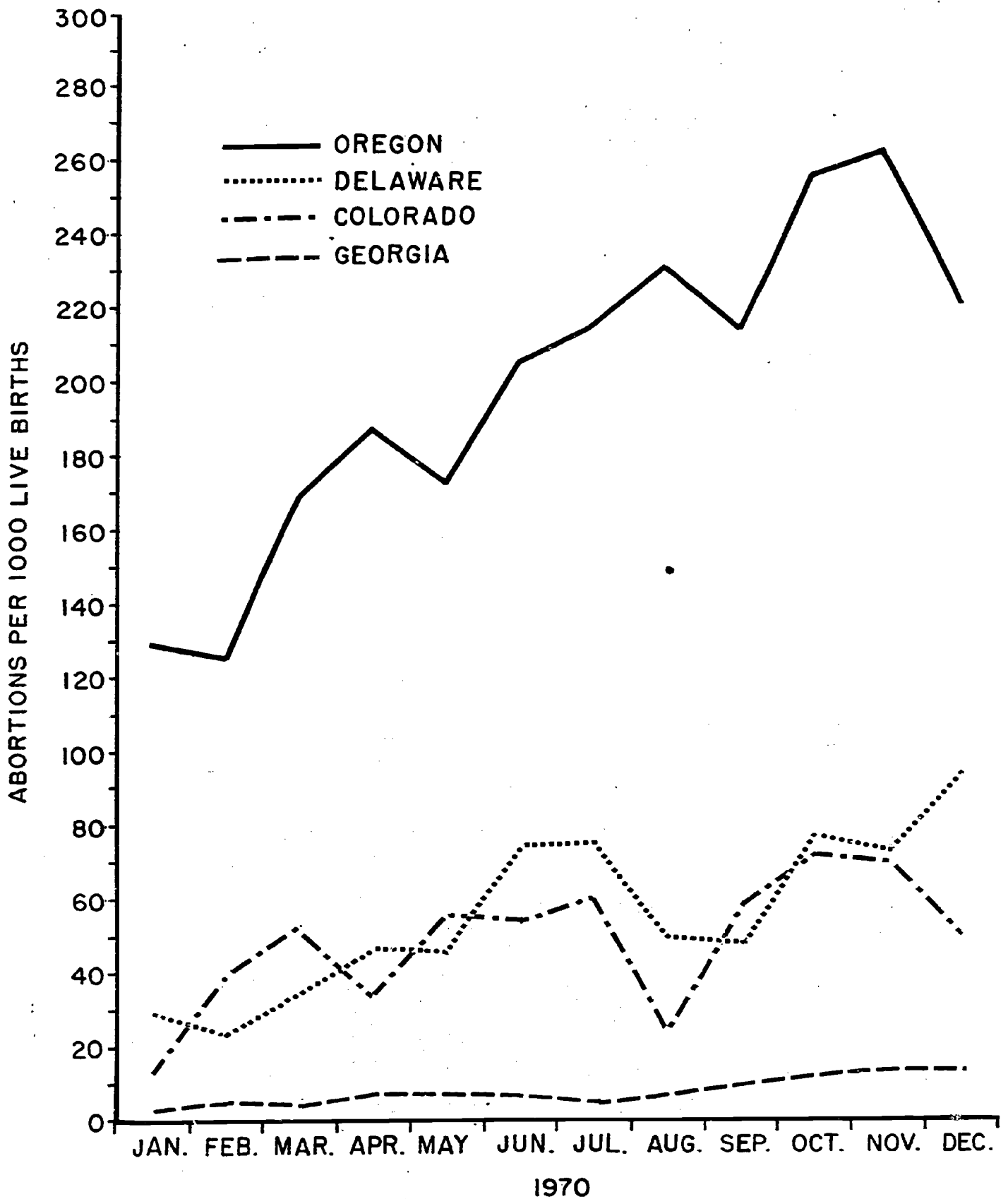
Table 3  
 LEGAL-ABORTION RATIOS  
 SELECTED HOSPITALS  
 1970

<u>Hospital</u>	<u>Location</u>	<u>Reporting Period</u>	<u>Abortions</u>	<u>Live Births</u>	<u>Abortions/1,000 Live Births</u>
U. of Ala. Med. Ctr. 1	Birmingham, Ala.	Jan. - Dec.	393	3,196	123
U. of Kans. Med. Ctr. 1	Kansas City, Kans.	July - Dec.	1,200	900	1,333
Beth Israel	Boston, Mass.	Jan. - Dec.	561	3,169	177
Newton-Wellesley	Boston, Mass.	Jan. - Dec.	103	1,217	85
Peter Bent Brigham University	Boston, Mass.	Jan. - Dec.	194	NONE	--
Albert Einstein	Boston, Mass.	Jan. - Dec.	148	NONE	--
Geisinger Med. Ctr.	Philadelphia, Penn.	July - Dec.	440	1,701	259
Pennsylvania Hosp.	Danville, Penn.	Jan. - Dec.	43	550	78
Philadelphia Gen.	Philadelphia, Penn.	Jan. - Dec.	1,118	2,910	384
Madison Gen.	Philadelphia, Penn.	July - Dec.	211	823	256
Mount Sinai University	Madison, Wisc.	Jan. - Sept.	7	1,584 <sup>2</sup>	4
	Milwaukee, Wisc.	Jan. - June	128	1,094 <sup>2</sup>	117
	Madison, Wisc.	July - Oct. 19	65	530	123
<b>TOTAL</b>			<b>4,611</b>	<b>17,674</b>	<b>261</b>

1. Abortions and live birth figures are estimated.
2. Live birth figure was estimated from reported abortions and abortion ratio.



*Figure 1* LEGAL ABORTION RATIOS, COLORADO, DELAWARE, GEORGIA, AND OREGON, 1970

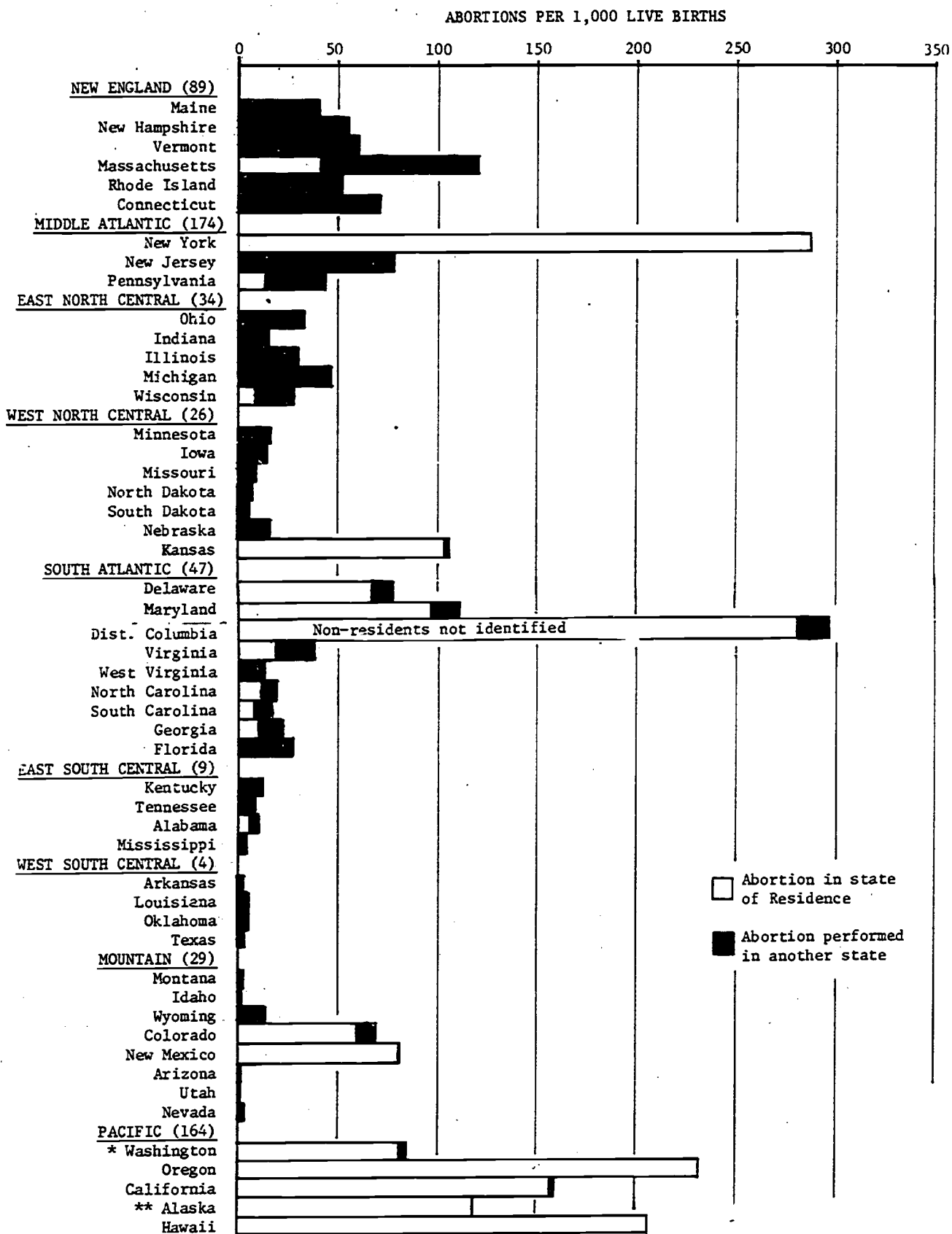


Although the ratios in Table 2 compare abortions and live births which occurred in the same state within a given period of time, they do not necessarily indicate the ratio of abortions to live births for women living in those states. More than 36,000 women from other states had abortions in New York in the last 6 months of 1970. Since the New York State abortion law went into effect on July 1, 1970, New York has become the major source of legal abortion services not only for its own residents but also for women from many states east of the Mississippi River. Therefore, to estimate the legal abortion ratio for women who live in any state, it is necessary to know not only how many abortions were performed in that state, but also how many of those abortions were performed on out-of-state women and how many women from that state obtained abortions somewhere else. Figures 2 and 3 show reported legal abortion ratios for women in each state and the District of Columbia for the last 6 months of 1970. The white bars represent abortions (per 1,000 live births in state) performed in state on residents of the state; the black bars represent abortions (per 1,000 live births in state) performed out-of-state on residents of the state. Of the 16 states with new abortion laws (listed in Table 1), only 6; viz, California, Colorado, Kansas, Maryland, New Mexico and New York, allow abortions for out-of-state women, and residency data were available for only four of these states. The proportion of abortions performed on non-residents was reported to be 7 percent in California, 8 percent in Colorado, 3 percent in Maryland, 25 percent in Upstate New York, and 51 percent in New York City. The abortion ratios for these states have been adjusted to allow for abortions performed on women from out-of-state (Figures 2 and 3). The assumption has been made that all abortions reported for other states were performed on residents. State of residence is known for out-of-state women who received abortions in Colorado and New York. Abortions performed on non-residents in these two states are the basis for the out-of-state abortion ratios represented in Figure 1 and 2.

In Figure 2 the states are organized by geographical regions. While there is wide disparity between abortion ratios of the 50 states, somewhat greater similarity exists between states within geographical regions. The Middle Atlantic Region has the highest overall ratio (174) with almost all abortions obtained by women from each state in that region having been performed in New York. The in-state abortion ratio for Pennsylvania is based on abortion data from only four hospitals and live birth data from the whole state. More complete reporting from Pennsylvania would certainly increase the in-state portion of the abortion ratio for that state.

The Pacific Region has the second highest ratio (164) and is the only area where all reported abortions were performed in each woman's home state.

**Figure 2 RATIOS OF REPORTED LEGAL ABORTIONS TO LIVE BIRTHS, BY STATE OF RESIDENCE, IN GEOGRAPHIC ORDER, JULY - DECEMBER 1970**



\* DECEMBER 3 - DECEMBER 31, 1970  
 \*\* JULY 29 - DECEMBER 31, 1970  
 ( ) RATIO FOR REGION



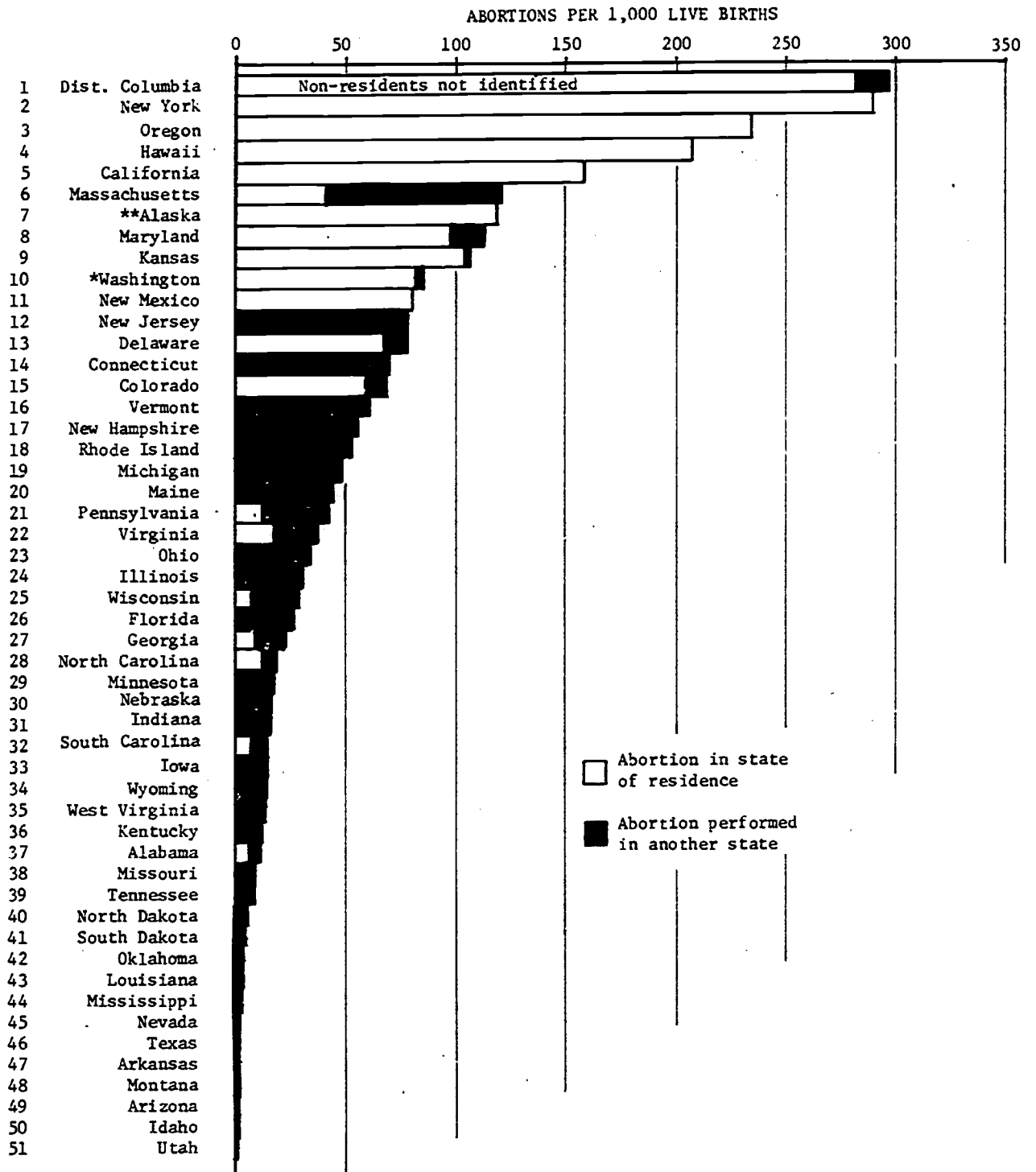
The third highest ratio is found among the four northern-most jurisdictions listed under the South Atlantic Region--Delaware, Maryland, the District of Columbia and Virginia. None of these jurisdictions restrict abortions to situations where it is necessary to preserve a woman's life, and all four show both abortions performed in-state and abortions performed out-of-state. The next highest regional ratio is that of New England, where, except for Massachusetts, virtually all reported abortions were performed in New York.

Ratios for the remaining regions decrease in relation to their distance from New York and as they become less urban. This is consistent with Pott's conclusion, based on data from many countries, that the ratio of induced abortions per live birth is always higher in urban areas.<sup>1</sup> Kansas in the West North Central Region and Colorado and New Mexico in the Mountain Region, the only states in those areas with updated abortion laws, are exceptions to this trend.

Figure 3 shows the same in-state and total abortion ratios by state of residence listed in rank order. The District of Columbia is first with an abortion ratio of 296; 95 percent of the abortions were performed in the District. Three factors have operated to inflate the ratio for the District of Columbia. First, although the residency of women who received abortions in Washington, D.C., was not reported, the D.C. ratio would be smaller if abortions performed on non-District women had been subtracted from the total, as was done for New York. Secondly, the District ratio was higher than that for New York State because it is a city rather than a state. Most abortions are performed in cities; as a result, large cities usually have a much higher abortion ratio than the state of which they are a part. For instance, the ratio for New York City, excluding non-New York State residents, is 434, compared with 160 for Upstate New York and 289 for the state as a whole. In Washington, D.C., there is no large rural and suburban area with live births to dilute the metropolitan area's abortion ratio. Finally, Washington, D.C., was the first jurisdiction to have its abortion law invalidated by judicial decision (See Legal Notes Section).

With the exceptions of the District of Columbia and Massachusetts, each of the first 11 states in Figure 3 have passed new abortion laws since 1967. The 5 states with the least restrictive laws (Alaska, Hawaii, New York, Washington and Oregon) listed in categories six and seven in Table 22 (Legal Notes) are all ranked in the top 10. However, those with laws similar to the American Law Institute (ALI) Model Penal Code on Abortion are distributed in this rank order between 5 and 47. Women residing in 10 of the states which permit abortions only to preserve a woman's life had higher abortion ratios than women from Georgia, South Carolina and North Carolina, which have laws similar to that recommended by the ALI. Although Georgia is the only state with an ALI abortion law which has been further liberalized by court decision, more abortions were performed on Georgia women in New York than in Georgia. Considering both figures 2 and 3, it appears that at least three factors affect the overall abortion ratio in individual states: (1) the status of abortion law in the state, (2) regional characteristics, and (3) the state's proximity to New York.

**Figure 3 RATIOS OF REPORTED LEGAL ABORTIONS TO LIVE BIRTHS, BY STATE OF RESIDENCE, IN RANK ORDER, JULY - DECEMBER 1970**



\*\* JULY 21 - DECEMBER 31, 1970

\* DECEMBER 3 - DECEMBER 31, 1970

Tables 4 through 9 describe demographic characteristics of the population of women who received legal abortions in a number of states in 1970. Table 4 presents age distribution of women who had legal abortions in the nine states which reported age. The largest number of abortions (36 percent) were obtained by women ages 20-24, the next largest group included women ages 15-19. Twenty-two percent of the women were 30 or older, and less than 1 percent were younger than 15. Age distribution data from selected hospitals tend to correspond with these general trends, except in the case of Philadelphia General Hospital, where 11 percent of the abortions performed between July 1 and December 31, 1970 were obtained by girls less than 15 years old. Philadelphia General Hospital has had to restrict the number of abortions performed there every month due to limited space and personnel, and has assigned adolescents a high priority among the many women seeking abortions at that facility.

Figure 4 compares percent distributions of legal abortions by age in those states with data available for 1969 and those states with data available for 1970. The 1970 data show a smaller proportion of abortions obtained by women less than 20 years old and a larger proportion obtained by women in each 5-year age group between 20 and 34, compared with 1969.

Although women at the age extremes had fewer abortions in relationship to the total number of abortions performed, they have the highest age-specific abortion ratios (Table 5). In Oregon girls less than 15 years old had nearly three abortions for every live birth; girls less than 15 also had more abortions than live births in Alaska and Colorado. New York City is the only reporting area which shows a higher abortion ratio for women age 15 through 19 than for those 14 years old or less. New York allows women 17 years old or older to consent to their own abortions, and may attract a disproportionate number of abortion patients age 17 to 20. A young woman age 17 to 20 may sign for her own abortion in New York, although she might be unable to do so in her own or another state.

Table 4

LEGAL ABORTIONS BY AGE  
SELECTED STATES  
1970\*

State	< 15		15-19		20-24		25-29		30-34		35-39		> 40		Unknown		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Alaska <sup>1</sup>	5	1.2	97	23.8	115	28.2	102	25.0	53	13.0	26	6.4	10	2.5	0	0.0	408	100.0
Colorado	61	2.7	695	30.7	697	30.8	364	16.1	214	9.5	226 <sup>2</sup>	10.0	-	-	6	0.3	2,263	100.0
Delaware	19	3.4	155	27.7	155	27.7	82	14.6	74	13.2	50	8.9	25	4.5	0	0.0	560	100.0
Georgia	32	4.5	173	24.5	159	22.6	152	21.6	89	12.6	68	9.6	32	4.5	0	0.0	705	100.0
Hawaii <sup>3</sup>	19	0.7	526	19.2	1,079	39.4	537	19.6	281	10.3	190	6.9	101	3.7	8	0.3	2,741	100.0
New York City	125	0.3	9,513	21.6	16,263	37.0	8,278	18.8	5,026	11.4	3,223	7.3	1,260	2.9	271	0.6	43,959	100.0
Up-State New York	138	0.7	4,490	24.2	6,262	33.8	3,218	17.4	2,102	11.3	1,554	8.4	661	3.6	110	0.6	18,535	100.0
Oregon	100	1.4	2,396	33.3	2,562	35.6	977	13.6	611	8.5	374	5.2	176	2.4	0	0.0	7,196	100.0
South Carolina <sup>6</sup>	6	1.5	110	28.1	112	28.6	62	15.8	47	12.0	26	6.6	29	7.4	0	0.0	392	100.0
TOTAL	505	0.7	18,155	23.7	27,404	35.7	13,772	17.9	8,497	11.1	5,737	7.5	2,294	3.0	395	0.5	76,759	100.0

1. July 29 - December 31. Provisional data.

2. Abortions performed on women 35 or older. Relative magnitude of totals is not affected.

3. March 11 - December 31, 1970. Elective abortions only.

4. Represents only abortions reported by certificates filed with the New York City Health Department. Delayed filing of certificates results in incomplete data on age. July - December.

5. New York State exclusive of New York City, July - December.

6. February - December.

\*All states with data available.

Table 5

AGE-SPECIFIC LEGAL ABORTION RATIOS<sup>1</sup>  
 SELECTED STATES\*  
 1970

State	<u>&lt; 15</u>	<u>15-19</u>	<u>20-24</u>	<u>25-29</u>	<u>30-34</u>	<u>35-39</u>	<u>&gt; 40</u>	<u>Overall</u>
Alaska	1,667	191	91	120	125	101	114	120
Colorado	1,419	100	42	32	43	76 <sup>2</sup>	-	53
Delaware	463	75	42	33	61	83	144	55
Georgia	67	8	4	7	9	14	20	7
Hawaii	731	304	217	133	159	261	543	204
New York City	812	1,053	610	375	431	535	777	569
Up-State New York	798	408	193	140	180	246	318	214
Oregon	2,778	370	169	114	167	207	374	199
South Carolina	26	10	6	6	10	11	37	8
Overall	425	256	178	134	169	221	326	186

1. Calculated as the number of legal abortions in women of a given age group per 1,000 live births to women of the same age group. Sources of data are Table 2 of this report for abortions by age and Table 1 for total 1970 live births. Age distribution of live births based on 1967 Vital Statistics of the United States, 1969 Georgia Vital and Morbidity Statistics, and 1969 Maryland Annual Vital Statistics Report.
2. Colorado reports oldest age group as  $\geq 35$ . The relative magnitude of the overall ratios would not be changed by further age breakdown.

\*All states with data available.

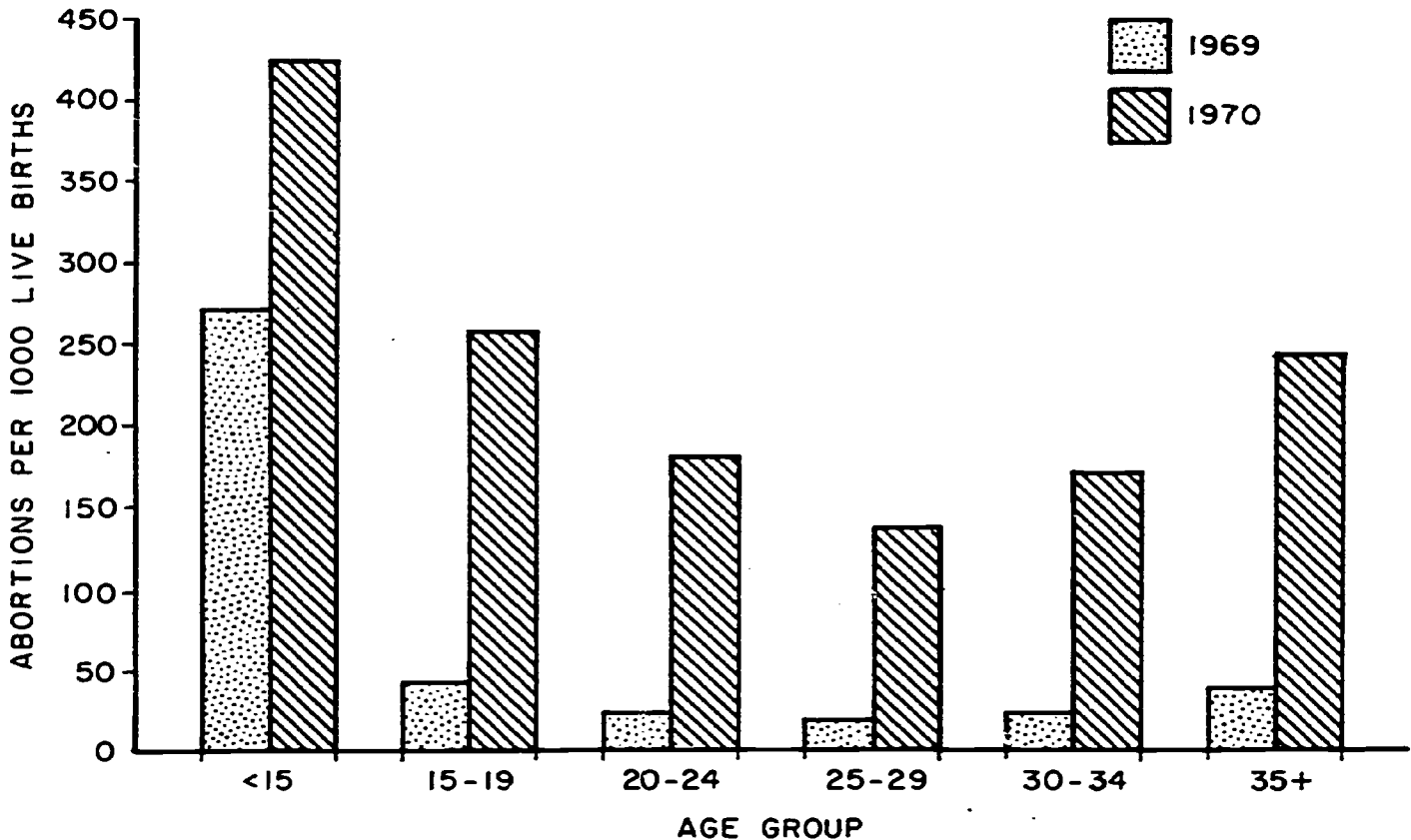
Although the percent distribution of legal abortion by age for 1969 and 1970 (Figure 4) indicates that in 1970 a smaller proportion of the total number of abortions were obtained by women younger than 20, as compared with 1969, legal abortion ratios (Figure 5) show not only that the abortion to live birth ratio has increased for every age group, but also that the increase has been greatest for women in the 15-19 age group. Relatively few pregnancies occur to women less than 20 years of age or older than 35. Therefore, increased utilization of legal abortion among women in these age groups has less effect on the overall percent distribution by age than a similar or even less dramatic increase in utilization of legal abortion by women between the ages of 20 and 35.

**Figure 4** PERCENT DISTRIBUTION OF LEGAL ABORTIONS BY AGE, SELECTED STATES, 1969-1970



1969 PERCENT DISTRIBUTION IS BASED ON DATA FROM CALIFORNIA, COLORADO, AND GEORGIA. 1970 PERCENT DISTRIBUTION IS BASED ON DATA FROM ALASKA, COLORADO, DELAWARE, GEORGIA, HAWAII, NEW YORK, OREGON, AND SOUTH CAROLINA

**Figure 5** AGE-SPECIFIC LEGAL ABORTION RATIOS, SELECTED STATES, 1969-1970



SEE FIGURE 4

Data from seven states shows that two-thirds of the women were not married at the time of abortion (Table 6). The category of "unmarried" includes women separated, widowed, divorced or never married. This represents a decrease in the percent unmarried when compared with the 1969 data. The 1969 Annual Summary, which contained marital status on abortions from only three states, showed a total of 73.2 percent unmarried at the time of abortion. Table 7 shows estimated legal abortion ratios by marital status for six states. Although married women had one-third of the abortions in the states shown in Table 6, the abortion ratio for married women in those states is only one-eighteenth the ratio for unmarried women. In Oregon, unmarried women had almost twice as many abortions as live births.

Table 6

LEGAL ABORTIONS BY MARITAL STATUS  
SELECTED STATES\*  
1970

State	Married		Unmarried <sup>1</sup>		Unknown		Total	
	No.	%	No.	%	No.	%	No.	%
Alaska <sup>2</sup>	157	38.5	249	61.0	2	0.5	408	100.0
Delaware	169	30.2	391	69.8	0	0.0	560	100.0
Georgia	308	43.7	397	56.3	0	0.0	705	100.0
Maryland <sup>3</sup>	1,015	31.6	2,182	68.0	13	0.4	3,210	100.0
Up-State N.Y. <sup>4</sup>	6,894	37.2	11,641	62.8	0	0.0	18,535	100.0
Oregon	1,655	23.0	5,541	77.0	0	0.0	7,196	100.0
South Carolina <sup>5</sup>	146	37.2	246	62.8	0	0.0	392	100.0
TOTAL	10,344	33.4	20,647	66.6	15	0.0	31,006	100.0

1. Unmarried includes women who are separated, widowed, divorced, and women who have never married.
2. Provisional figures, July 29 - December 31.
3. July - December.
4. New York State, exclusive of New York City, July-December.
5. February - December.

\*All states with data available.

Table 7

ESTIMATED LEGAL ABORTION<sup>1</sup> RATIOS  
 BY MARITAL STATUS<sup>1</sup>  
 SELECTED STATES\*  
 1970

<u>State</u>	<u>Married</u>	<u>Unmarried</u> <sup>2</sup>
Alaska	51	830
Delaware	19	272
Georgia	4	37
Maryland	37	480
Oregon	50	1,990
South Carolina	4	35
Overall	18	334

1. Calculated as legal abortions to women of a given marital status per 1,000 live births to women in that marital status. Live births to married women are legitimate births; live births to unmarried women are assumed to be registered as illegitimate births. Legitimacy distribution of live births based on 1967 Vital Statistics of the U.S., 1969 Georgia Vital and Morbidity Statistics, and 1969 Maryland Annual Vital Statistics Report.
2. Unmarried includes women who are separated, widowed, divorced, and women who have never married.

\*All states with data available.

Table 8 presents race-specific legal abortion ratios for six states, broken down into white, black and "other" races. The abortion ratio for white women is higher than for black women in every state except Alaska and Maryland. In South Carolina the abortion ratio for white women is four times as high as that for black women in the same state.



Table 8  
**LEGAL ABORTION RATIOS<sup>1</sup> BY RACE**  
**SELECTED STATES\***  
 1970

<u>State</u>	<u>White Ratio</u>	<u>Black Ratio</u>	<u>"Other" Races Ratio</u>	<u>White/Black Ratio</u>
Alaska <sup>2</sup>	141	185	65	0.8
Delaware	56	48 <sup>3</sup>		1.2 <sup>4</sup>
Georgia	9	4	5	2.2
Hawaii <sup>5</sup>	322	110	154	2.9
Maryland <sup>6</sup>	86	154	88	0.6
South Carolina <sup>7</sup>	12	3	14	4.0

1. Ratios calculated as the number of race-specific abortions per 1,000 race-specific live births. Racial distributions of live births based on 1967 Vital Statistics of the U.S.
2. July 29 - December 31.
3. Includes Black and "Other" (live births and abortions).
4. White abortions per 1,000 live births/Black and "Other" abortions per 1,000 live births.
5. March 11 - December 31.
6. July - December.
7. February - December.

\*All states with data available.

Table 9 shows legal abortions by number of living children for women in Alaska, Georgia, and South Carolina. Nearly one-half of the women (49.2 percent) who had abortions in these states had no living children. Slightly more of the women had two living children than had either one, three, four or more.



Table 9

LEGAL ABORTIONS BY NUMBER OF LIVING CHILDREN  
SELECTED STATES\*  
1970

State	Number of Living Children												Unknown		Total	
	<u>0</u>		<u>1</u>		<u>2</u>		<u>3</u>		<u>4</u>		<u>≥ 5</u>		No.	%	No.	%
Alaska <sup>1</sup>	225	55.1	47	11.5	47	11.5	35	8.6	27	6.6	20	4.9	7	1.7	408	100.
Georgia	300	42.6	99	14.0	113	16.0	111	15.7	49	7.0	33	4.7	0	0.0	705	100.
South Carolina <sup>2</sup>	216	55.1	42	10.7	50	12.8	33	8.4	26	6.6	22	5.6	3	0.8	392	100.
TOTAL	741	49.2	188	12.5	210	14.0	179	11.9	102	6.8	75	5.0	10	0.7	1505	100.

1. July 29 - December 31, provisional data.
2. February - December.

\*All states with data available.

Table 10 presents data from the 10 states showing the stated reason for which legal abortions were performed. The first four categories, mental health, physical health, risk of fetal deformity, and rape or incest, correspond to the legal indications for abortion in states with laws modeled after the ALI Model Penal Code on Abortion. As in 1969, the most common reason stated for legal abortions was danger to the mental health of the pregnant woman. However, the proportion of abortions performed for this reason has decreased to 76.6 percent, down from 90.6 percent in 1969. The 1970 data show 17.3 percent under "other" reasons or with the reason unstated or unknown, compared with only 0.4 percent listed under "other" reasons and none listed as "unknown" during 1969. These differences reflect changes in the status of abortion law in several of these states. New abortion laws enacted in Alaska and Hawaii in 1970 provide no restriction on the reasons for which women may obtain legal abortion. In Alaska 89.7 percent of the abortions were performed for reasons other than those four specifically listed in Table 10. The stated reason for most abortions listed in the "other" category for Alaska was "unwanted pregnancy." In Hawaii, 99.3 percent of the abortions were performed without a stated reason. Whereas in 1969 Georgia listed no abortions under "other" or "unknown", more than 10 percent of Georgia's 1970 abortions were listed in these categories. This reflects a 1970 Federal District Court decision in Georgia which forbade the state to limit the reasons for which abortions can be performed (See Legal Notes).

Table 10

INDICATIONS FOR ABORTION  
SELECTED STATES\*  
1970

State	Mental Health		Physical Health		Risk of Fetal Deformity		Rape or Incest		Other		Unknown		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Alaska <sup>1</sup>	22	5.4	9	2.2	5	1.2	6	1.5	366	89.7	0	0.0	408	100.0
Colorado	2,020	89.3	125	5.5	19	0.8	74	3.3	0	0.0	25	1.1	2,263	100.0
Delaware	533	95.2	14	2.5	10	1.8	1	0.2	2	0.4	0	0.0	560	100.0
Georgia	520	73.8	62	8.8	36	5.1	12	1.7	74	10.5	1	0.1	705	100.0
Hawaii <sup>2</sup>	8	0.3	7	0.3	3	0.1	0	0.0	1	0.0	2,761	99.3	2,780	100.0
Maryland <sup>3</sup>	3,085	96.1	72	2.2	13	0.4	12	0.4	26	0.8	2	0.1	3,210	100.0
North Carolina	1,138	88.0	136	10.5	10	0.8	9	0.7	0	0.0	0	0.0	1,293	100.0
Oregon	6,982	97.0	333	4.6	97	1.3	56	0.8	8	0.1	0	0.0	7,476 <sup>4</sup>	100.0
South Carolina <sup>5</sup>	336	85.7	39	9.9	14	3.6	2	0.5	0	0.0	1	0.3	392	100.0
Virginia <sup>6</sup>	459	72.3	16	2.5	16	2.5	1	0.2	0	0.0	143	22.5	635	100.0
TOTAL	15,103	76.6	813	4.1	223	1.1	173	0.9	477	2.4	2,933	14.9	19,722	100.0

1. July 29 - December 31.

2. March 11 - December 31, provisional data. Includes 2,739 elective and 41 therapeutic abortions as reported by the University of Hawaii School of Public Health.

3. July - December.

4. Total number of indications may not equal total abortions performed as more than one indication may be stated for each abortion.

5. February - December.

6. January - July.

\*All states with data available.

Table 11

LEGAL ABORTIONS BY WEEKS OF GESTATION  
SELECTED STATES\*  
1970

State	Weeks of Gestation at Time of Abortion															
	< 9		9-12		13-16		17-20		21-24		> 24		Unknown		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Georgia	203	28.8	326	46.2	74	10.5	83	11.8	16	2.3	1	0.1	2	0.3	705	100.0
Hawaii <sup>1</sup>	846	30.9	1,331	48.6	309	11.3	135	4.9	41	1.5	11	0.4	68	2.5	2,741	100.0
Maryland <sup>2</sup>	571	17.8	1,308	40.7	522	16.3	760	23.7	493	1.5	-	-	0	0.0	3,210	100.0
Oregon	1,124	15.6	3,589	49.9	1,193	16.6	1,158	16.1	132 <sup>3</sup>	1.8	-	-	0	0.0	7,196	100.0
South Carolina <sup>4</sup>	24	6.1	158	40.3	122	31.1	51	13.0	17	4.3	5	1.3	15	3.8	392	100.0
TOTAL	2,768	19.4	6,712	47.1	2,220	15.6	2,187	15.4	255	1.8	17	0.1	85	0.6	14,244	100.0

1. March 11 - December 31, 1970, elective abortions only.
2. July - December.
3. > 21 weeks.
4. February - December.

\*All states with data available.

Most of the individual hospitals which provided data on indications for abortions performed in their facility reported a pattern similar to that shown in Table 10. The outstanding exception was Bernalillo County Medical Center in Albuquerque, New Mexico where 63 percent of the abortions were performed to protect the woman's physical health. Prior to July 1, when legal abortions became available in New York, New Mexico women who anticipated rejection of their request for abortion frequently stated their intent to seek an illegal abortion in Juarez, Mexico. Physicians at Bernalillo County Medical Center often agreed to perform a legal, hospital abortion to protect the woman from the risk of physical harm associated with an illegal abortion.

Table 11 shows weeks of gestation for abortions performed in five states. The largest number were performed in the 9th through the 12th weeks of gestation. There was fairly wide variation among these states regarding this aspect of their abortion practices. Table 12 presents the cumulative distribution by length of gestation for abortions in the same five states. Two-thirds were performed before the end of the 12th week, and 97.5 percent by the end of the 20th week. Although nearly 91 percent of the abortions in Hawaii were performed by the end of the 16th week of pregnancy, only 77.5 percent were performed by the end of the 16th week in South Carolina. Two special studies of abortion in New York City, included in this report, implicate advanced gestation as an important factor contributing to morbidity and mortality associated with legal abortion.

Table 12

CUMULATIVE PERCENT DISTRIBUTION OF  
LEGAL INDUCED ABORTIONS BY  
MENSTRUAL WEEKS OF GESTATION  
SELECTED STATES\*  
1970

<u>State</u>	<u>&lt; 8</u>	<u>9-12</u>	<u>13-16</u>	<u>17-20</u>	<u>&gt; 21</u>	<u>Unk.</u>	<u>Total</u>
Georgia	28.8	75.0	85.5	97.3	99.7	0.3	100.0
Hawaii <sup>1</sup>	30.9	79.5	90.8	95.7	97.6	2.5	100.0
Maryland <sup>2</sup>	17.8	58.5	74.8	98.5	100.0	-	100.0
Oregon	15.6	65.5	82.1	98.2	100.0	-	100.0
S.C.	6.1	46.4	77.5	90.5	96.1	3.8	100.0
TOTAL	19.4	66.5	82.1	97.5	99.4	0.6	100.0

1. March 11 - December 31, elective abortions only.
2. July - December.
3. February - December.

\*All states with data available.

Table 13

LEGAL ABORTIONS REPORTED BY TYPE OF PROCEDURE  
SELECTED STATES\*  
1970

State	Sharp D&C		Suction D&C		Amniotic Fluid Replacement		Hysterotomy		Hysterectomy		Other		Unknown		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Alaska <sup>1</sup>	378	92.6	2	0.5	1	0.2	1	0.2	4	1.0	22	5.4	0	0.0	408	100.0
Georgia <sup>2</sup>	101	31.7	95	29.8	39	12.2	4	1.3	20	6.3	1	0.3	59	18.5	319	100.0
Hawaii <sup>3</sup>	360	30.8	664	56.8	118	10.1	10	0.9	17	1.5	0	0.0	0	0.0	1,169	100.0
Maryland <sup>4</sup>	363	11.3	1,446	45.0	1,072	33.4	162	5.0	146	4.5	21	0.7	0	0.0	3,210	100.0
Up-State N.Y. <sup>4</sup>	6,172	33.3	6,196	33.4	2,095	11.3	364	2.0	0	0.0	0	0.0	3,708	20.0	18,535	100.0
New York City <sup>4</sup>	17,239	39.2	18,427	41.9	7,584	17.3	709	1.6	0	0.0	0	0.0	0	0.0	43,959	100.0
Oregon	1,515	21.1	3,704	51.5	1,602	22.3	49	0.7	317	4.4	9	0.1	0	0.0	7,196	100.0
S. Carolina <sup>6</sup>	73	18.6	153	39.0	104	26.5	8	2.0	32	8.2	21	5.4	1	0.3	392	100.0
TOTAL	26,201	34.8	30,687	40.8	12,615	16.8	1,307	1.7	536	0.7	74	0.1	3,768	5.0	75,188	100.0

1. July 29 - December 31.

2. October - December.

3. March 13 - July 15.

4. July - December.

5. Abortions reported by certificates only.

6. February - December.

\*All states with data available.

Table 13 shows the type of procedure used to perform abortions. More than 75 percent were performed by dilatation and curettage using either sharp or suction curets. Hysterotomy and hysterectomy accounted for only 2.4 percent of the cases. The relatively new suction dilatation and curettage method has been more widely accepted in some states than in others; Alaska is the only state which reports almost all D&C abortions performed with sharp curet. Predictably, those states in which a larger percent of abortions were performed later in gestation also show a larger percent performed by the replacement of amniotic fluid with hypertonic saline.

## V. REPORTS OF SPECIAL STUDIES

- A. Interim Report on the Joint Program for the Study of Abortion (JP) Reported by Christopher Tietze, M.D., Associate Director, Bio-Medical Division, The Population Council, and Sarah Lewit, Research Associate.

This report is based on 42,598 abortion case reports from 64 institutions participating in the Joint Program for the Study of Abortion. Four extramural abortion clinics participating in the program accounted for 17 percent of the cases. Approximately 71 percent of the abortions reported by all participating institutions were performed within the first 12 weeks of gestation. Twenty-six percent were performed at 13 to 20 weeks of gestation, and three percent after the 20th week. The proportion of second trimester abortions was highest for the youngest women and lowest for women in their early thirties. Nearly 70 percent were performed by the suction method; 63 percent of these were performed as an out-patient procedure.

Complication rates were calculated excluding women with pre-existing complications and/or concurrent tubal sterilization. Of the remaining women, 9.3 percent experienced one or more complications; however, this includes all reported complaints, many of which were comparatively trivial. Slightly more than one percent of the patients experienced a complication considered to be "major." This number includes 90 cases of perforated uterus and one death. Three additional deaths are known to have occurred among the 2,753 women excluded from the analysis of complications because of pre-existing medical conditions and/or concurrent tubal sterilization. The overall complication rates (based on all complications) were higher for abortions performed at 6 weeks or less than for abortions performed at 7 or 8 weeks, after which the complication rate increased to a maximum at 15-16 weeks, followed by a decline. Both the rates for all complications and the rates for major complications were three or more times higher for abortions performed at 13 or more weeks of gestation as compared with abortions performed before the end of the 12th week. Complication rates were highest for women over 40 years of age. In each age group, high-parity women had the highest complication rates. Complication rates were lowest for abortions performed by suction, followed in ascending order, by sharp curettage, amniotic fluid replacement, hysterotomy and hysterectomy.



## B. New York City

1. The Practice of Legal Abortion, July 1 - December 31, 1970. Reported by Jean Pakter, M.D., Frieda Nelson, and Martin Svirig, New York City Health Department, James B. Kahn, M.D., Family Planning Evaluation Activity, CDC.

The New York City Health Department reported a total of 68,995 legal abortions between July 1 and December 31, 1970, the first 6 months the new New York State law was in effect. Approximately half of these were performed on women who were not residents of New York State. New York City's abortion ratio of 894 abortions per 1,000 live births during that 6-month period is the highest reported for any jurisdiction in the United States.

Analysis of New York City abortions by type of facility they were performed in shows differences between services received by private patients and those provided for indigent women. The abortion ratio reported by private hospitals (2,649 abortions per 1,000 live births) was more than twice as great as the ratio of 1,015 reported by New York City municipal hospitals. A similar trend was seen in the voluntary hospitals, which serve both private and public patients. Abortion ratios reported by private services in the voluntary hospitals were 1.74 times as high as those reported by the publicly financed "ward" services.

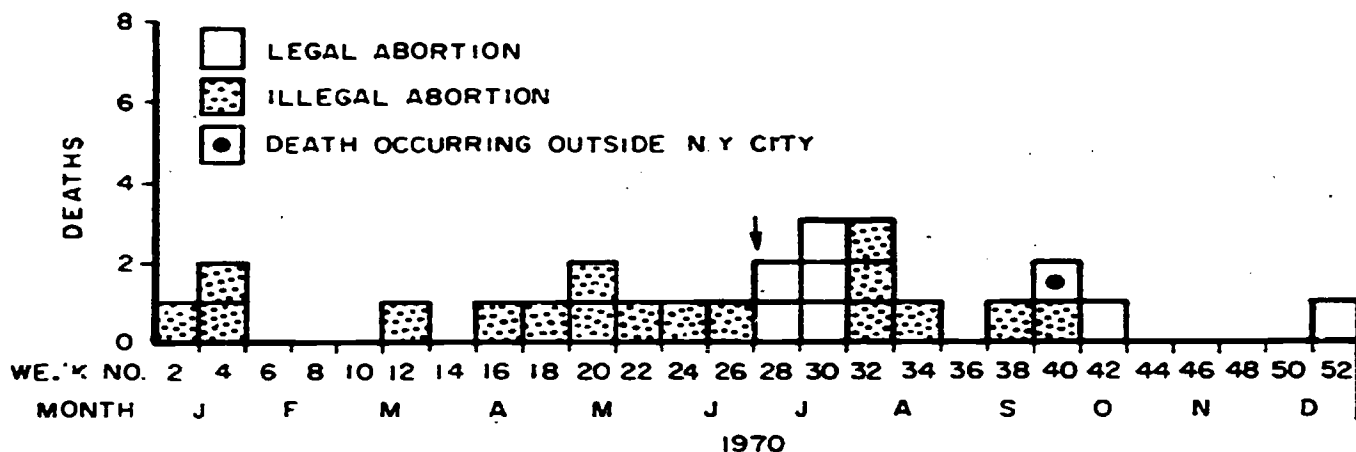
A higher percent of private patients obtained their abortions before the end of 12 weeks gestation and by the D&C method than did ward patients. Only 65 percent of municipal hospital patients and 67 percent of ward service patients in voluntary hospitals had their abortions done before the end of the 12th week. In contrast, 79 percent of the abortions performed in private hospitals and nearly 96 percent of those in non-hospital abortion clinics were performed during or before the 12th week. Virtually the entire caseload of non-hospital abortion clinics is private patients, many from out of state. Slightly more than 66 percent of the abortions performed in municipal hospitals were done by dilatation and curettage, as compared with 84 percent of the abortions performed in private hospitals and virtually all of the abortions performed in non-hospital clinics.

2. Abortion Mortality, 1970. Reported by Jean Pakter, M.D., and Frieda Nelson, New York City Health Department; S. Beach Conger, M.D., Family Planning Evaluation Activity, CDC.

Analysis of maternal mortality in New York City for 1970 showed a total of 25 reported deaths due to induced abortion, 11 of which were illegal abortion associated deaths reported before July 1. During the second half of the year, after the new abortion law was instituted, a total of 14 abortion deaths were reported, of which six were associated with illegal abortions, and eight with legal abortions performed by a physician.

Five of these eight deaths occurred within the first four weeks the new law was in effect. The epidemic curve for induced abortion deaths in New York City (Figure 6) shows that although there was substitution of legal for illegal abortion deaths, no significant decrease in total abortion mortality occurred following institution of the new law; however, the period elapsed is probably too short to predict the long term effects of the new law on abortion mortality. Only one death was reported during the last 10 weeks of the year.

Fig. 6 INDUCED ABORTION DEATHS, NEW YORK CITY



Of the eight deaths associated with legal New York City abortions in 1970, three followed abortions performed by hysterotomy, one followed replacement of amniotic fluid with hypertonic saline, and four followed a D&C procedure. Three of the women who died had significant underlying medical conditions that contributed to their deaths. Three of the four deaths associated with dilatation and curettage resulted from perforation of the uterus; two involved a sharp D&C procedure performed on women with pregnancies advanced beyond 12 menstrual weeks.

Six of the eight legal abortion deaths were associated with abortions performed in a hospital and two were associated with abortions performed in private physicians' offices. No deaths were reported following abortions performed in out-patient abortion clinics. These facilities restrict services to women in the first 12 weeks of pregnancy who have no complicating medical problems.

Although an estimated 72 percent of the women who received abortions in New York City during the 6-month period were white, six of the eight legal abortion deaths and all of the illegal abortion deaths were among blacks and Puerto Ricans. Estimated race-specific legal abortion mortality rates (Table 14) showed

Table 14

ESTIMATED\* LEGAL ABORTION CASE FATALITY RATE BY RACE  
 NEW YORK CITY  
 July - December 1970

<u>Race</u>	<u>Estimated* Abortions</u>	<u>Abortion Deaths</u>	<u>Deaths/ 100,000 Abortions</u>
White	49,956	2	4.0
Black	16,003	4	25.0
Puerto Rican	3,036	2	65.9
TOTAL	68,995	8	11.6

\*The proportion of certificates filed for each race from each type of abortion facility was multiplied by the total number of abortions reported from each type of facility to estimate the number of abortions performed on each race by type of facility. For each race, the estimates for each type of facility were summed.

Table 15

MATERNAL MORTALITY ASSOCIATED WITH CHILDBIRTH  
 AND MORTALITY ASSOCIATED WITH LEGAL ABORTION BY RACE  
 NEW YORK CITY

<u>Race</u>	<u>Maternal Deaths/100,000 Live Births, 1969-1970</u>	<u>Deaths/100,000 Legal Abortions, July-Dec. 1970</u>
White	13.0	4.0
Black	63.0	25.0
Puerto Rican	26.7	65.9
TOTAL	29.4	11.6

dramatic differences in race-specific mortality. Comparison of the case fatality rates for live births and for legal abortions by race (Table 15) shows that although blacks and Puerto Ricans have a higher mortality than whites in both categories, only in Puerto Ricans is the case fatality rate from legal abortions higher than the case fatality rate from live births.

Table 16 shows estimated New York City abortions and reported abortion deaths by weeks of gestation at time of abortion for July 1, 1970 - January 31, 1971. The mortality rate for abortions performed after the 12th week of gestation was three times as great as the rate for abortions performed at 12 weeks or less.

The total case fatality rate for legal abortions in New York City was 11.6 per 100,000 abortions during the first 6 months under the new law. Again, this time period is probably too short to accurately reflect practices in New York City.\* Legal abortion mortality rates in other countries range from a high of 41.4 in Denmark to a low of 1.2 in Hungary.

\*The legal abortion mortality rate in New York City for the first 11 months (July 1, 1970 - May 31, 1971) was 6.0 per 100,000 abortions.

Table 16

LEGAL ABORTION CASE FATALITY RATE  
BY LENGTH OF GESTATION  
NEW YORK CITY  
July 1, 1970 - January 31, 1971

<u>Length of Gestation (Weeks)</u>	<u>Estimated* Number of Abortions</u>	<u>Abortion Deaths</u>	<u>Deaths/100,000 Abortions</u>
12 or less	59,024	4	6.8
More than 12	23,542	5	21.2
TOTAL	82,566	9	10.9

\*For each category of gestation the proportion of certificates filed for that category for July - December 1970 was multiplied by the number of abortions reported for July 1970 - January 1971.

3. Investigation of a Cluster of Uterine Perforations. Reported by Jean Pakter, M.D., Director, Bureau of Maternity Services and Family Planning, New York City Health Department; Dennis Nicholas, M.D., Marion County Coroner, Indianapolis, Indiana; S. Beach Conge M.D., Family Planning Evaluation Activity, CDC.

The death of a mid-western woman following an abortion in New York City led to the discovery of a cluster of six cases of uterine perforation related to a single physician using suction curettage. Five of these women required an exploratory laparotomy and three had a hysterectomy. The physician was a board eligible obstetrician-gynecologist who had performed 1,668 abortions in his office and in two outpatient abortion clinics between July 1, 1970 and January 13, 1971. In the first 1,379 cases he used the standard diameter Karman cannula, and in the last 289 he used the Sorensen cannula. In cases of advanced gestation either ovum forceps or sharp curet was used to complete the abortion. All cases were done either under local anesthesia or without anesthesia.

Four perforations occurred in 1,379 abortions performed with the Karman cannula and two perforations in 289 abortions performed with the Sorensen cannula, resulting in perforation rates of 2.9 and 6.9 per 1,000 abortions for these two methods respectively. One of the women had an unrecognized congenital uterine abnormality, but none of the other cases involved pre-disposing medical conditions. By the physician's criteria, all six women were between 10 and 12 menstrual weeks of gestation at time of abortion, although when their length of gestation was calculated from date of last menstrual period, four were found to be beyond 12 weeks. Length of gestation is known for 809 of the abortions performed in this physician's office. Extrapolating data on length of gestation for those cases to the total number of abortions he performed makes it possible to calculate a perforation rate by length of gestation (Table 17). The perforation rate is zero for cases 10 weeks or less but increases to 96.8 for cases 15 weeks or greater. The overall perforation rate for abortions he performed at 12 or fewer weeks gestation was 1.3 per 1,000 abortions, while for pregnancies of greater than 12 weeks the perforation rate was 42.1. The total perforation rate for this physician was 3.6 per 1,000 abortions.

A physician might perform an aspiration abortion on a patient beyond 12 weeks of gestation either because he believes the patient is a good risk in spite of advanced gestation, or because he has misjudged the length of gestation. Comparison of this physician's estimated length of gestation and the calculated menstrual weeks of gestation shows the calculated length of gestation to be higher in 5 of 6 cases. In two cases the length of pregnancy was verified by pathological examination and was found to correspond to the length of gestation calculated from last menstrual period, suggesting that the physician was underestimating the length of pregnancy.

The difficulty of accurately diagnosing length of pregnancy during the 10 to 12 week period indicates that clinical decision making is particularly critical at this point. This epidemic suggests that restricting abortion by the D&C method to women whose length of gestation is less than 13 weeks as calculated by date of last menstrual period would considerably reduce the risk of perforation.

Table 17

**ADJUSTED UTERINE PERFORATION RATE  
BY LENGTH OF GESTATION FOR ABORTIONS  
PERFORMED BY A SINGLE PHYSICIAN  
NEW YORK CITY  
July 1, 1970 - January 13, 1971**

<u>Length of Gestation (Menstrual Weeks)</u>	<u>Abortions*</u>	<u>Perforations</u>	<u>Rate/1,000 Abortions</u>
8 or less	468	0	-
9-10	585	0	-
11-12	520	2	3.8
13-14	64	1	15.6
15 or more	31	3	96.8
<b>TOTAL</b>	<b>1,668</b>	<b>6</b>	<b>3.6</b>

\*Based on data for 809 abortions for which length of gestation was reported.

- C. Decrease in Septic Abortion Morbidity in a Municipal Hospital, Los Angeles, California. Reported by Charles Ballard, M.D., Gail V. Anderson, M.D., Chief, Division of Gynecology and Edward J. Quilligan, M.D., Department of Obstetrics and Gynecology, LAC/USC Medical Center.

A law to increase availability of legal abortions was passed by the California Legislature in 1967. The Los Angeles County/University of Southern California Medical Center (LAC/USC) has collected data on the number of women admitted to the hospital for care related to non-hospital induced septic abortions as well as the number of legal abortions performed at LAC/USC Medical Center for every year from 1966 through 1970 (Table 18). Admissions to the hospital for treatment of septic, non-hospital induced abortions declined from an average of 662 per year for the period 1966-1968 to 559 in 1969, and 305 in 1970. The septic abortion ratio during this 5-year time span fell from 72 septic abortion admissions per 1,000 live births in 1966 to 31 septic abortion admissions per 1,000 live births in 1970.



This decline in septic abortion admissions appears directly related to the increase in hospital-performed abortions from 2 in 1966 to 3,469 in 1970.

Table 18

ABORTION PATIENTS AT LOS ANGELES COUNTY/  
UNIVERSITY OF SOUTHERN CALIFORNIA  
MEDICAL CENTER, 1966-1970

<u>Year</u>	<u>Admissions for Non-Hospital Induced Septic Abortions</u>	<u>Abortions Induced at USC/USC Medical Center</u>
1966	646	2
1967	638	7
1968	701	127
1969	559	585
1970	305	3,469

D. Hospital Study of Abortion Services (HSAS), October-December, 1970.

In late 1970, four hospitals in different geographic areas of the country initiated the Hospital Study of Abortion Services (HSAS) with CDC serving as study coordinator. This study is intended to characterize the women who receive abortion services and to evaluate morbidity and mortality associated with legal and illegal abortions, and the inter-relationship between illegal and legal abortion morbidity and mortality.

Each hospital is situated in a large metropolitan area. Three of the hospitals serve primarily indigent patients; the fourth serves primarily private patients. A report is completed for each woman who has either had an abortion induced in the hospital or has been admitted for complications of a non-hospital abortion.

During this 3-month period a total of 1,815 abortions were performed in the four hospitals, resulting in a ratio of 341 abortions per 1,000 live births (Table 19). The abortion law of the state in which Hospital B is located is at least as permissive as the law under which abortions are performed in hospitals C and D, although there is greater than a 10-fold difference in their abortion ratios.



Table 19

HOSPITAL INDUCED ABORTION RATIOS  
HOSPITAL STUDY OF ABORTION SERVICES  
October - December 1970

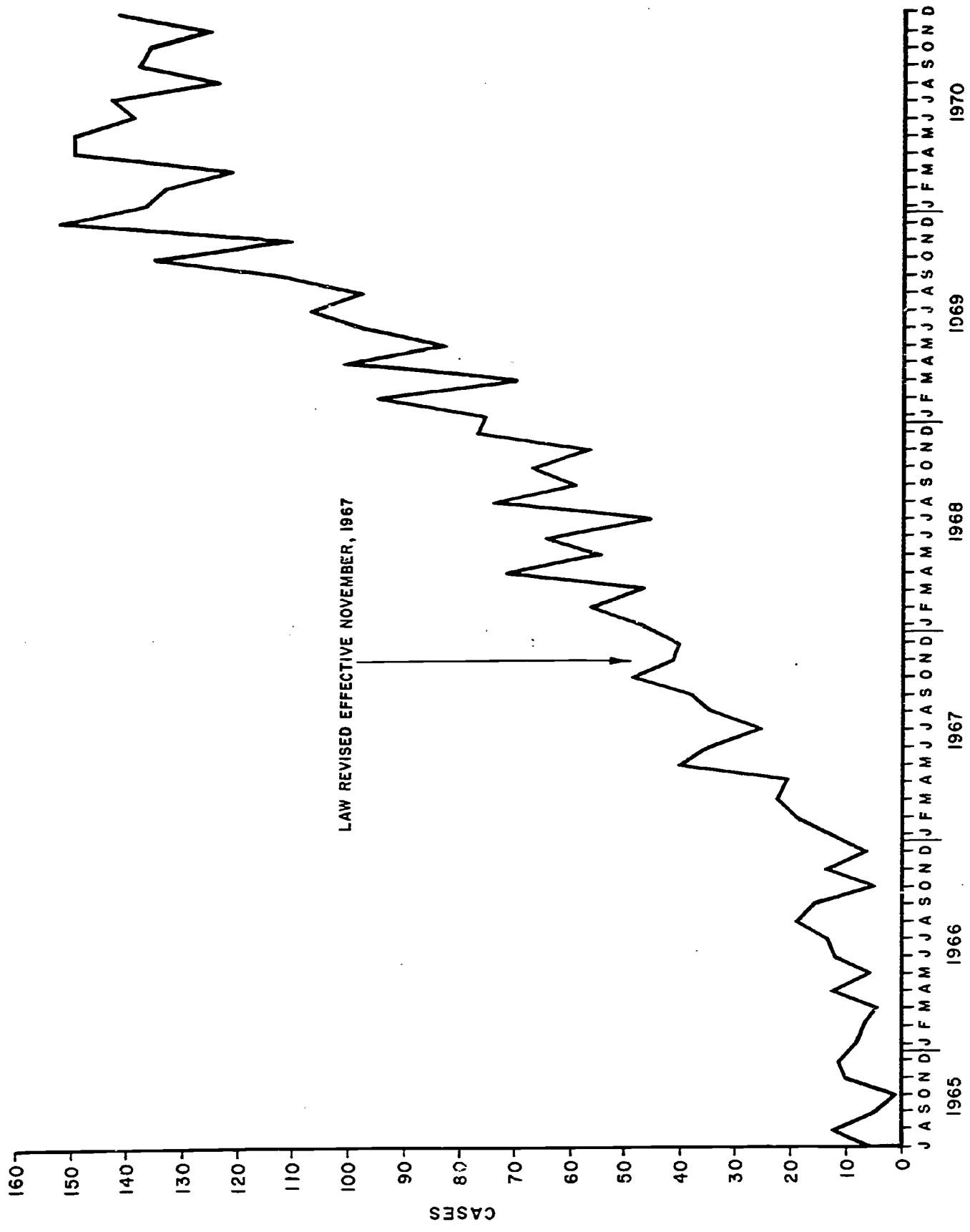
<u>Hospital</u>	<u>Abortions</u>	<u>Live Births</u>	<u>Abortions/ 1,000 Live Births</u>
A	479	644	744
B	56	1,620	35
C	956	2,414	396
D	324	641	505
TOTAL	1,815	5,319	341

Changing abortion practices over a period of time are shown for Hospital D in Figure 7. Monthly figures for abortions induced at the hospital from July 1965 through December 1970 show a sharp increase beginning in January 1967 and continuing until the first part of 1970. In 1970, the rate reached a relatively constant level of 120 to 150 abortions per month.

The majority of abortions at each of these hospitals were performed by suction dilatation and curettage (Table 20). Sharp D&C was used as a primary abortion procedure in only six cases. The high percent of abortions performed by amniotic fluid exchange reflects the large number of women whose abortions were performed after the 15th week of pregnancy in hospitals A and C. Women who were never married accounted for 54 percent of those who received abortions in these four hospitals during a 3-month period; 49 percent of the women had no living children.

# HOSPITAL INDUCED ABORTIONS, HOSPITAL D, JULY 1965 - DECEMBER 1970

Figure 7



62

Table 20

HOSPITAL ABORTIONS BY TYPE OF PROCEDURE  
 Hospital Study of Abortion Services  
 October-December 1970

Hospital	Suction		Sharp		Amn. Fl.		Hysterotomy		Hysterectomy		Other		Unknown		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
A	274	57.2	0	0.0	197	41.1	3	0.6	0	0.0	5	1.0	0	0.0	479	100.0
B	36	64.3	0	0.0	17	30.4	0	0.0	3	5.4	0	0.0	0	0.0	56	100.0
C	504	52.7	0	0.0	402	42.1	3	0.3	40	4.2	5	0.5	2	0.2	956	100.0
D	244	75.3	6	1.9	53	16.4	0	0.0	4	1.2	14	4.3	3	0.9	324	100.0
TOTAL	1058	58.3	6	0.3	669	36.9	6	0.3	47	2.6	24	1.3	5	0.3	1815	100.0

#### IV. LEGAL NOTES

##### A. History of Abortion Law in the United States Prior to 1967.

Although early common law in the United States did not treat abortion before "quickening" as a criminal offense, later, mainly during the 19th Century, each of the states passed laws to restrict the practice of abortion. Most of these laws stated that abortion was permitted only when necessary to preserve a pregnant woman's life. The only exceptions to that generalization were the abortion statutes of New Jersey, Massachusetts, and Pennsylvania, which were worded vaguely to prohibit "unlawful" or "illegal" abortions, and those of Alabama and the District of Columbia which provided for legal abortion to preserve both the life and the health of a woman endangered by carrying her pregnancy to term. In effect all of these laws were similar, prohibiting abortion except in situations of rather severe physical disease or impairment. This legal status existed unchallenged, if sometimes violated, until 1966, when Mississippi altered its law slightly to also provide for legal abortion of pregnancies resulting from rape.

##### B. The American Law Institute Model Penal Code on Abortion.

In 1957, the American Law Institute (ALI), composed of eminent lawyers, law professors, and judges from throughout the country, proposed a model penal code on abortion. Incorporated in this code was the concept that abortions should not be considered a crime when performed by a licensed physician on grounds of substantial risk that continuance of the pregnancy would gravely impair the physical or mental health of the woman, or that the child resulting from the pregnancy would be born with grave physical or mental defect, or in cases of pregnancy resulting from rape or incest.<sup>2</sup> A few years after this action by the ALI an epidemic of rubella (German Measles) which resulted in the birth of an estimated 20,000 defective babies in the U.S.<sup>3</sup> heightened public acceptance of the concept that legal abortion is necessary in some situations. During this epidemic many physicians ignored state abortion laws to perform abortions on women exposed to rubella in the first 3 months of pregnancy, and the medical profession in many states was supportive of changing the laws to correspond with this practice.

In April 1967 Colorado became the first state to enact a new abortion law designed along the lines proposed by the American Law Institute. By the end of 1967, North Carolina and California had also passed abortion legislation based on the ALI guidelines. Georgia and Maryland enacted similar laws in 1968, followed by Arkansas, Delaware, New Mexico, and Oregon in 1969, to bring the total number of states with new laws to nine by January 1, 1970. The Oregon law of August 1969, differed from the others by indicating that physicians should take account of the woman's total environment "actual or reasonably foreseeable" when determining if there is risk that continuation of the pregnancy would impair her physical or mental health.

### C. Judicial Decisions Affecting American Abortion Laws Prior to 1970.

In September 1969, the Supreme Court of California rendered a decision in the case of People v. Belous<sup>4</sup>, which at the same time invalidated the pre-1967 abortion law of California and raised the issue of constitutionality of state abortion statutes. The court declared the California law to be unconstitutional on grounds that (1) the law was vague and therefore violated the due process provisions of the 14th amendment of the Constitution; (2) under the right to privacy, it violated a woman's fundamental right to choose whether or not to have children, and (3) that, due to advanced in medicine, the state no longer had a compelling interest in preventing abortions as a means of protecting women's health. This court action was, however, directed at an old California abortion law and did not have a legal effect on the 1967 California Therapeutic Abortion Act, which had been passed by the legislature during the time this case was in the courts.

Also in 1969, the U.S. District Court for the District of Columbia, deciding on the case of Dr. Milan Vuitch, a Washington physician indicted for illegal abortion, held the District of Columbia's 1901 statute which made abortion a felony unless performed for preservation of the pregnant woman's life or health to be unconstitutional. Vagueness and the right to privacy were stated as the basis for this decision.<sup>5</sup>

### D. Abortion Law Changes in 1970.

During 1970, three more states put into effect abortion laws similar to the American Law Institute Model Penal Code. An ALI-type law became effective in South Carolina on January 27 and in Virginia on June 27. A similar law had passed the Kansas legislature in 1969, but did not become effective in Kansas until July 1, 1970. More significant, however, were four other states which, in 1970, enacted an entirely new kind of abortion law which contained no restriction on the reasons for which an abortion may be legally obtained. Hawaii was the first state to pass this kind of law. The Hawaiian law, effective on March 10, 1970, requires only that abortions (1) be performed by a licensed medical or osteopathic physician or surgeon, (2) be performed in a hospital licensed by the Department of Health or operated by the Federal Government or an agency thereof, (3) be performed only on women who have been residents of the state for at least 90 days preceding the abortion, and (4) be performed prior to viability of the fetus.<sup>6</sup>

The Alaskan law became effective on July 29, 1970, and requires that abortions (1) be performed only by a licensed physician, (2) in a hospital or other facility approved for that purpose by the Department of Health and Welfare or a hospital operated by the Federal Government or an agency of the Federal Government, (3) consent for abortion be obtained from the parent or guardian of an unmarried woman less than 18 years of age, (4) abortions be performed only on women who have been residents of the state for at least 30 days prior to the abortion, and (5) abortions only be performed prior to viability of the fetus.<sup>7</sup>

The New York law, which went into effect on July 1, 1970, contained fewer restrictions than those enacted in Hawaii and Alaska. The New York abortion law of 1970 requires only that all abortions (1) be performed with the consent of the women upon whom they are performed, (2) within 24 weeks from the commencement of pregnancy (unless, in the judgment of a licensed physician, abortion is necessary to preserve the woman's life) and (3) only by a duly licensed physician.<sup>8</sup>

In Washington State the new abortion law resulted not from legislative action but as a result of a successful public referendum held during the November 1970 general elections in the state. The result of passage of this referendum was to enact new abortion law in the state permitting termination of pregnancies when performed (1) by or under the supervision of a licensed physician, (2) within 16 weeks after conception (and before quickening), (3) only on women who have resided in the state for at least 90 days prior to the abortion, and (4) with the consent of the woman's husband, if she is living with him, or if unmarried and under 18 years of age, with her consent and that of her legal guardian. This law went into effect in Washington on December 3, 1970.<sup>9</sup>

Significant court decisions rendered in 1970 include three U.S. District Court decisions which found part or all of a state's abortion law to be unconstitutional (Wisconsin<sup>10</sup>, Texas<sup>11</sup>, and Georgia<sup>12</sup>). All of these cases are being appealed. A number of other cases have been heard in lower courts in states throughout the country.

Table 21 lists each state in one of eight categories on the basis of major legal requirements for performance of abortion in that state, as of the end of 1970.

**Table 21**  
**MAJOR CATEGORIES OF AMERICAN ABORTION LAWS**  
**UNITED STATES – JANUARY 1, 1971**

MAJOR CATEGORIES OF STATE ABORTION LAWS	STATES HAVING SIMILAR ABORTION LAWS
I. Abortion allowed only when necessary to preserve the life of the pregnant woman:	Arizona, Connecticut, Florida, Idaho, Illinois, Indiana, Iowa <sup>1</sup> , Kentucky, Louisiana <sup>2</sup> , Maine, Michigan, Minnesota, Missouri, Montana, Nebraska, Nevada, New Hampshire, North Dakota, Ohio, Oklahoma, Rhode Island, South Dakota, Tennessee, Utah, Vermont, West Virginia, Wyoming.
II. Indications for legal abortion include threats to the pregnant woman's life and forcible rape:	Mississippi.
III. "Unlawful" or "unjustifiable" abortions are prohibited:	Massachusetts, New Jersey, Pennsylvania.
IV. Abortions allowed when continuation of the pregnancy threatens the woman's life or health:	Alabama.
V. American Law Institute Model Abortion Law: "A licensed physician is justified in terminating a pregnancy if he believes that there is substantial risk that continuance of the pregnancy would gravely impair the physical or mental health of the mother or that the child would be born with grave physical or mental defect, or that the pregnancy resulted from rape, incest or other felonious intercourse":	Arkansas, California (does not include fetal deformity), Colorado, Delaware, Kansas, Maryland (does not include incest), New Mexico, North Carolina, South Carolina, Virginia.
VI. Abortion law based on the May 1968 recommendations of the American College of Obstetricians and Gynecologists. Allows abortion when the pregnancy resulted from felonious intercourse, and when there is risk that continuance of the pregnancy would impair the physical or mental health of the mother. "In determining whether or not there is substantial risk (to the woman's physical or mental health), account may be taken of the mother's total environment, actual or reasonably foreseeable":	Oregon.
VII. No legal restriction on reasons for which an abortion may be obtained prior to viability of the fetus:	Alaska, Hawaii, New York, Washington.
VIII. Legal restrictions on reasons for which an abortion may be obtained were invalidated by court decision:	District of Columbia, Georgia, Texas, Wisconsin <sup>3</sup> .

1. In *State vs Dunkleberger*, the Iowa statute which is couched in terms of saving the life of the woman, has been interpreted to suggest that preservation of health is sufficient, 221 N.W. 592 (Iowa, 1928).
2. Although the Louisiana abortion statute does not contain an express exception to the "crime of abortion" the Louisiana Medical Practice Act authorizes the Medical Board to suspend or institute court proceedings to revoke a doctor's certificate to practice medicine in the state when the doctor has procured or aided or abetted in the procuring of an abortion "unless done for the relief of a woman whose life appears imperiled after due consultation with another licensed physician." La. Rev. Stat. Ann. 37:1261.
3. The abortion law of several other states have been ruled unconstitutional by lower state trial courts; however, these decisions are binding only in the jurisdiction in which the decision was rendered.

## V. INTERNATIONAL NOTES

### A. Canada

On August 26, 1969, new abortion legislation went into effect in Canada. Under the 1969 law (Section 237 of the Criminal Code), abortion is illegal, unless performed under the following circumstances:

1. The abortion must be performed by a medical practitioner licensed to practice medicine in the province where the hospital in which the abortion is to be performed is situated. The doctor may not be a member of a therapeutic abortion committee of any hospital anywhere.
2. The abortion must be performed in an accredited or approved hospital. An accredited hospital is one accredited by the Canadian Council on Hospital Accreditation. Approved hospitals are those approved by the Provincial Minister of Health for the purposes of therapeutic abortions.
3. The abortion must have been sanctioned by the Therapeutic Abortion Committee of the hospital in which the abortion is to be performed. This committee is composed of at least three physicians licensed in the province where the hospital is situated.
4. The basic criteria for the performance of a legal abortion is that, in the opinion of the Therapeutic Abortion Committee, the continuation of the pregnancy would be likely to endanger the life or health of the pregnant woman.

During 1970 a total of 11,200 legal abortions were performed in Canada and were reported to the Dominion Bureau of Statistics in Ottawa. The 1970 abortion ratio for Canada was 30 per 1,000 live births.

### B. Finland

A new abortion law went into effect in Finland on June 1, 1970. According to the new law, abortion may be induced at the woman's request if:

1. Continuation of the pregnancy or delivery of a child would endanger her life or health on the grounds of her disease, physical deformity, or weakness,
2. Delivery and care of the child would place a notable strain on her in relation to her living conditions and those of her family and other circumstances,



3. She became pregnant in conditions referred to in some chapters in the criminal law, or if the act involved violation of the woman's freedom of action,

4. She was not 17 years of age when she became pregnant or was 40 years old or over or had already given birth to four children,

5. There is reason to assume that the child would be mentally retarded or would have or would develop a severe disease or physical defect, or

6. A disease of either parent or both parents, mental disturbance, or other comparable cause limits seriously their ability to care for the child.

Between June 1, the date the new law became effective, and December 31, 1970, 10,380 legal abortions were performed and reported in Finland. For the entire year of 1970, 14,525 abortions were reported in the country, for a ratio of 225.3 abortions per 1,000 births.<sup>13</sup>

### C. Update on International Abortion Ratios

Table 22 depicts recent abortion ratios in four foreign countries. Three of these countries have experienced some increase in the proportion of abortions to live births since their previous reporting period. In Czechoslovakia, the abortion ratio has increased from 344 in 1965, to 461 in 1969. England and Wales have experienced a more acute increase, from a ratio of 46 abortions per 1,000 live births in 1968, the first year the new abortion act was in effect, to a ratio of 107 abortions per 1,000 live births in 1969. The ratio for Japan increased slightly, from 387 in 1967 to 405 in 1968. Hungary is the only country among these four which reported a smaller abortion ratio in 1969 than during its most recent previous reporting period--1,356 abortions per 1,000 live births reported in Hungary for 1965, as compared to 1,341 abortions per 1,000 live births reported in 1969.

Table 22

#### INTERNATIONAL ABORTION RATIOS SELECTED COUNTRIES

<u>Country</u>	<u>Reporting Period</u>	<u>Abortions</u>	<u>Live Births</u>	<u>Abortions/1,000 Live Births</u>
Czechoslovakia <sup>1</sup>	1969	102,800	222,803	461
England & Wales <sup>2</sup>	1970	83,851	784,000	107
Hungary <sup>1</sup>	1969	206,817	154,176	1,341
Japan <sup>1</sup>	1968	757,389	1,870,159	405

1. Source of data: C. Tietze, M.D., The Population Council.

2. Source of data: The Registrar General's Quarterly Returns, Nos. 485-488, 1st - 4th quarters, 1970. Live births are estimated.

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