Legal Abortion Worldwide: Incidence and Recent Trends

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CONTEXT: Information on abortion levels and trends can inform research and policies affecting maternal and reproductive health, but the incidence of legal abortion has not been assessed in nearly a decade.

METHODS: Statistics on legal abortions in 2003 were compiled for 60 countries in which the procedure is broadly legal, and trends were assessed where possible. Data sources included published and unpublished reports from official national reporting systems, questionnaires sent to government agencies and nationally representative population surveys. The completeness of country estimates was assessed by officials involved in data collection and by in-country and regional experts.

RESULTS: In recent years, more countries experienced a decline in legal abortion rates than an increase, among those for which statistics are complete and trend data are available. The most dramatic declines were in Eastern Europe and Central Asia, where rates remained among the highest in the world. The highest estimated levels were in Armenia, Azerbaijan and Georgia, where surveys indicate that women will have close to three abortions each on average in their lifetimes. The U.S. abortion rate dropped by 8% between 1996 and 2003, but remained higher than rates in many Northern and Western European countries. Rates increased in the Netherlands and New Zealand. The official abortion rate declined by 21% over seven years in China, which accounted for a third of the world's legal abortions in 1996. Trends in the abortion rate differed across age-groups in some countries.

CONCLUSIONS: The abortion rate varies widely across the countries in which legal abortion is generally available and has declined in many countries since the mid-1990s.

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In recent decades, abortion has received considerable attention, and its legality and availability have often generated controversy. Even in countries where abortion is not a contentious issue, contraception is usually a less expensive and less taxing means of avoiding unintended births. Accurate information on abortion levels and trends can help donors, policymakers and program planners assess the extent to which women experience unintended pregnancies, and can facilitate the development of policies and programs to respond to unmet need for effective contraceptive services. Accurate measures of abortion can also inform the public discourse by providing impartial, empirical evidence of abortion prevalence.

The last assessment of abortion levels in countries where legal abortion is generally available* was conducted nearly a decade ago. According to that study, up to the mid-1990s, legal abortion rates had been falling in many parts

of the world, either as contraceptive prevalence was in-

In this article, we present statistics on the level of induced abortion in 60 countries and territories in which legal abortion was generally available in 2003. We assess the completeness of the available abortion data, and wherever statistics of comparable quality are available for 1996 (the most recent year for which similar statistics have been published), we report trends in abortion incidence. In addition, for countries with sufficiently complete data on legal abortion, we provide recent age-specific abortion rates, which can help identify groups of women who are experiencing the greatest difficulties in preventing unintended pregnancy.

creasing or as contraceptives were being used more effectively. The investigators speculated that although the legalization of abortion may initially result in an increase in the number of reported abortions in countries where desired fertility is low, abortion rates will eventually decline as access to family planning education and contraceptive services increases. Updated information on abortion incidence is needed to assess recent trends and current patterns in induced abortion across countries and regions and in different age-groups, and to document abortion incidence in countries in which legal abortion has recently become available.

^{*}Countries are included in this category if abortion is allowed for social or economic reasons or without specification as to reason. A few countries with more restrictive formal laws are included because sources indicate that legal abortion is broadly available: Australia, Hong Kong, Israel, New Zealand and Spain, where abortion is permitted to protect the woman's mental health, and South Korea, where it is permitted to protect her physical health.

[†]Dependent territories with separate abortion statistics or legislation are treated as countries.

METHODS

Data Collection

We employed methods similar to those used in the last review of the incidence of abortion worldwide. 1 For each country or territory with a population of at least one million in which legal abortion was generally available in 2003, we sought data on the total and age-specific numbers of abortions. Several sources of data were used: published abortion data from national statistical offices or relevant government agencies; for countries that lacked such data, responses to a standardized questionnaire or formal inquiry that we sent to appropriate government agencies, sometimes with the help of local contacts; for a few countries, abortion data from the Council of Europe or the European Region of the World Health Organization;^{3,4} and for countries whose official statistics were deemed incomplete or unavailable, abortion estimates from nationally representative population surveys.

Most of the statistics presented here are based on official reports of the numbers of induced abortions performed according to the laws of the countries. However, the available abortion statistics are not always complete. For example, providers do not always report all abortions they perform, even if legally required to do so. In some countries, only abortions performed at public facilities are reported, whereas large proportions of abortions are performed at private facilities. In addition, medication abortions or early surgical procedures may be underreported in some countries.

We asked local experts to assess the extent to which the reported statistics represented all legal abortions that had been performed. These experts included researchers, officials from government agencies involved in abortion data collection, and program administrators and providers who were familiar with abortion reporting practices. We also ensured that published statistics did not include spontaneous abortions, and confirmed that they included menstrual regulations (or "mini-abortions") where these are recorded separately. Furthermore, we drew upon any available studies that assessed the quality of a country's abortion data. All of this information was used to classify countries according to whether their abortion data are complete (defined as including at least 80% of all legal abortions) or incomplete, or whether the completeness of the available data is in doubt.

We obtained data for 60 of the 66 countries eligible for inclusion in this study.* For 33 of these countries, published or local sources indicated that the statistics included at least 80% of the actual number of legal abortions performed in that year. For 16 countries, local experts determined that the statistics were incomplete; for 11, we were unable to obtain a reliable assessment about the completeness of reporting. Survey-based estimates, while at times superior to government reporting systems, were always assumed to be incomplete because some women do not report their abortions, particularly in face-to-face interviews, ^{5,6} and surveys are subject to sampling error and random variation.

For all but four of the 33 countries considered to have complete counts, the data were government statistics. For Puerto Rico⁷ and the United States,⁸ data collected through surveys of all providers were used; the U.S. estimate for 2000 was projected to 2003.⁹ For Australia, we used a published estimate based on insurance claims and hospital statistics.¹⁰ For Switzerland, we used data compiled by a private organization using reports from local government offices.¹¹

Government statistics were available for 24 of the 27 countries with estimates that are incomplete or of unknown completeness. For South Korea, Turkey and Turkmenistan, only survey-based estimates were available. The survey in South Korea was administered to married women only, and the survey in Turkey was administered to ever-married women only. In 11 countries where both official statistics and nationally representative survey data were available, both sets of findings are shown. In all but one of these countries, survey estimates were based on women's reports of their induced abortions obtained in the one-, three- or fiveyear period prior to the survey. The abortion estimate for India is derived from a facility-based survey. In eight countries with incomplete reporting or reporting of uncertain completeness (China, Georgia, Hong Kong, India, Japan, Romania, Turkey and Vietnam), abortion estimates from the same data source are available for 1996, and these are presented as well.

We also obtained estimates of the population of women aged 15–44 in five-year age-groups and numbers of live births to calculate abortion rates and ratios for 2003. When available, we used data from country statistical offices. For countries where population estimates were not available, we used estimates published by the Council of Europe or the United Nations. We interpolated where necessary to obtain midyear population estimates.

Analysis

We calculated age-specific abortion rates (the number of abortions per 1,000 women in each five-year age-group), the general abortion rate (the number of abortions annually per 1,000 women aged 15–44), the total abortion rate (the number of abortions a woman would be expected to have over a lifetime at current age-specific rates) and the abortion ratio (the number of abortions per 100 live births) for each country. When age-specific abortion data were not available, the total abortion rate was estimated from the general abortion rate; in these cases, we estimated the general abortion rate and number of abortions from the total abortion rate. Where complete and comparable abortion statistics were available for two time periods, we present the average annual change in the general abortion rate dur-

^{*}Official estimates for Austria and Greece represent a negligible proportion of all abortions and are not included. We were unable to obtain abortion statistics for Bosnia and Herzegovina, North Korea, Taiwan or Zambia.

[†]To estimate the total abortion rate, we divided the general abortion rate for women aged 15–44 by 1,000, and multiplied the result by 30 (the number of years in this range).

TABLE 1. Measures of legal abortion in countries where reporting is relatively complete, by country and year

Country	No.*		Rate†				Total
	2003	1996	2003	1996	Average annual % change	Ratio,‡ 2003	abortion rate,§ 2003
Eastern Europe							
Belarus**	80,200	u	35	u	u	91	1.1††
Bulgaria	34,700	89,000	22	51	-11.7	52	0.6††
Czech Republic	27,100	46,500	13	21	-6.9	29	0.4
Hungary	53,800	76,600	26	35	-4.2	57	0.7
Russian Federation	1,504,000	2,284,600	45	69	-6.0	104	1.3
Slovakia	16,200	25,200	13	20	-6.1	31	0.4††
Northern Europe							
Denmark	15,600	18,100	15	16	-1.6	24	0.4
England and Wales	‡ 181 <i>,</i> 600	167,900	17	16	0.9	29	0.5
Estonia	10,600	16,900	36	56	-6.1	82	1.1
Finland	10,700	10,400	11	10	1.1	19	0.3
Latvia	19,000	23,100	29	44	-6.0	69	0.9
Lithuania	11,500	27,800	15	34	-11.0	38	0.5
Norway	13,800	14,300	15	16	-0.5	25	0.5
Scotland§§	12,600	12,300	12	11	0.5	23	0.4
Sweden	34,400	32,100	20	19	1.1	34	0.6
Southern Europe							
Italy	132,800	u	11	u	u	25	0.3
Slovenia	6,900	10,400	16	23	-5.2	40	0.5
Western Europe							
Belgium*†	16,200	14,800	8	7	1.7	14	0.2
France	208,800	189,800	17	15	1.6	26	0.5††
Germany*†	129,300	130,900	8	8	0.2	18	0.2
Netherlands##	28,800	22,400	9	7	4.0	14	0.3
Switzerland	10,500	u	7	u	u	15	0.2††
North America							
Canada*‡	104,200	111,800	15	16	-0.3	31	0.5
United States*§	1,287,000	1,360,200	21	22	-1.2	31	0.6
Oceania							
Australia	84,500	89,100	20	22	-1.3	34	0.6††
New Zealand	18,500	14,800	21	17	2.8	33	0.7
South/Southeast							
Nepal†*	33,100	u	5	u	u	4	0.2††
Singapore	12,300	14,400	15	16	-0.9	31	0.4††
Western Asia							
Israel†‡	20,800	17,400	14	14	0.6	14	0.4
Caribbean Cuba†§	151 500	200,000	57	78	-3.8	109	1 744
Puerto Rico‡*	151,500 15,600	209,900 19,200	18	78 23	-3.8 -2.2	28	1.7†† 0.5††
Africa							
South Africa	70,100	u	6	u	u	6	0.2††
Tunisia‡†	16,000	19,000	7	9	-6.1	9	0.211
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*Rounded to the nearest 100. †Abortions per 1,000 women aged 15–44. ‡Abortions per 100 live births. §The number of abortions that the average woman would have during her reproductive lifetime, given present age-specific abortion rates. **May include spontaneous abortions. ††Estimated by dividing the general abortion rate by 1,000 and multiplying by 30. ‡‡Residents only. §SIncludes abortions residents obtained in England or Wales. *†Includes abortions residents obtained in the Netherlands. *‡Includes abortions residents obtained in selected U.S. states. *§Estimates are provisional and may change as more data become available. †*Abortions from March 2005 to February 2006. †‡Abortion applications approved, as reported to the Central Bureau of Statistics. †§Estimates are for 1996 and 2004. ‡*Estimates are for 1991 and 2001. ‡†Estimates are for 1996 and 2000.

ing the interval between the two estimates.

To calculate abortion rates for women aged 19 or younger, we used information on abortions among these women and the population aged 15–19. Similarly, for abortion rates among women aged 40 or older, we employed information

on abortions obtained by these women and the population aged 40-44.

RESULTS Countries with Complete Statistics

• Overall levels and trends. Of the 33 countries with relatively complete counts,* the numbers of legal abortions were greatest in the Russian Federation and the United States—more than one million each in 2003 (Table 1). At the other extreme, eight countries reported fewer than 15,000 abortions in 2003. The number of legal abortions per 1,000 women of reproductive age was highest in Cuba (57) and the Russian Federation (45). The legal abortion rate was lowest in Nepal (five) and South Africa (six), both countries where abortion was recently legalized and unreported, illegal abortions are still common. Other than these two countries, abortion rates were lowest in Belgium, Germany, Switzerland and Tunisia (7–8), where reported rates more accurately reflect the level of abortion because illegal abortions are rare.

Cuba and the Russian Federation, which had the highest official abortion rates, also had the highest number of abortions per 100 live births: Their abortion ratios of 109 and 104, respectively, reveal that more abortions than births occur annually. Aside from Nepal and South Africa, Tunisia had the lowest abortion ratio (nine).

In four countries with relatively complete data—Belarus, Cuba, Estonia and the Russian Federation—the total abortion rate was greater than 1.0, indicating that at current rates, the average woman would have more than one abortion in her lifetime. In the countries with the lowest total abortion rates, 0.2 abortions occur per woman over a lifetime, or one abortion for every five women.

Since 1996, abortion rates declined by at least 2% per year in 12 of the 28 countries with complete abortion counts and trend data, and rates increased by this much in two countries. Abortion rates were relatively stable in the remaining countries.

• Eastern Europe. Many of the most dramatic declines in abortion incidence between 1996 and 2003 occurred in Eastern Europe, which includes several countries of the former Soviet Union. These countries had some of the highest abortion rates in 1996, and despite significant declines, they continued to have the highest rates in 2003. The average annual decreases in abortion rate ranged from 4% in Hungary to 12% in Bulgaria, which represent net declines of 26% and 58%, respectively. The declines in this region represent a continuation of a trend that began in the early 1990s. Although in-country informants estimated that the official statistics are complete, an increasing number of abortions are paid for privately, and these procedures

^{*}Since 1996, five countries have been reclassified as having complete statistics: Lithuania and Russia, because of new information about the accuracy of the data; France, because of a new, more complete data source; and Italy and South Africa, because of improvements in data collection. Additionally, Nepal is now included because abortion was legalized in 2003.

[†]Net changes were calculated using unrounded abortion rates and so may differ from calculations based on the rounded rates listed in tables.

are often not reported. ^{13,14} The magnitude of the downward trend may therefore be exaggerated by measures based on official statistics in some of these countries. In most countries in this region, the declines coincided with increases in access to and use of modern methods of contraception in place of traditional methods (which have played a prominent role in family planning in these countries) and nonuse. ^{14–16}

• Northern, Western and Southern Europe. The 2003 abortion rates in the Northern European countries of Denmark, England and Wales, Finland, Norway, Scotland and Sweden changed little compared with rates in 1996, and ranged from 11 to 20 per 1,000 women. The rates were also low in Western Europe, where they ranged from seven (in Switzerland) to 17 (in France).

The abortion rate increased in the Netherlands by 31% over seven years, partly because of a growing demand for terminations from women in ethnic minority groups residing in the country. 17,18 Abortion rates otherwise changed minimally in Western Europe between 1996 and 2003. Medication abortion (using mifepristone) was introduced in a number of European countries before or during this period. It was approved in France in 1988, in Great Britain and Sweden in 1992, and in Belgium in 1999; mifepristone was registered and approved in Denmark, Finland, the Netherlands and Germany in 1999 in accordance with the European Union's principle of mutual recognition. Regulatory mechanisms and insurance reimbursement policies for medication abortion have affected the availability of this procedure to varying degrees in all of these countries. 19 The steady abortion rates in these countries (except the Netherlands) suggest that medication abortion is substituting for surgical abortion at the national level, and that its availability has not resulted in increased incidence of abortion.

Italy's abortion rate of 11 per 1,000 women was apparently unchanged since 1996 (not shown), but the more recent statistical report indicated that the 1996 count was less complete than the 2003 count.²⁰ A separate report indicated that abortions decreased among Italian-born women and increased among immigrants in the late 1990s.²¹

• Oceania and North America. The abortion rate decreased slightly in Australia, to 20 per 1,000 women in 2003. However, it increased by nearly 3% per year (21% over seven years) in New Zealand, where the rate declined slightly among women of European descent and increased substantially among women of Asian ethnicity.²²

The abortion rate in the United States declined by 8% between 1996 and 2003 to 21 per 1,000 women, but remained higher, and in some cases substantially higher, than the rates in many Northern and Western European countries. However, within the United States, abortion levels differed widely by racial or ethnic group. In 2000, the abortion rate was 12 among white women, 31 among Hispanic women and 57 among black women. 12

• *Developing countries*. Legal abortion is generally available in relatively few developing countries or territories, and abortion rates vary widely across them. Cuba had one of the

highest rates among countries with complete counts in 2003, though its rate has fallen in the past decade (from 78 to 57 per 1,000 women). It has been reported that the family planning program in Cuba has sought to expand the range of methods available beyond the IUD, which has long been the predominant method, and to improve the quality of family planning services.²³

In contrast, the abortion rate in Puerto Rico was 18 in 2001, having declined from 23 in 1991.⁷ Surveys of women indicate that the use of modern contraceptives in this territory was widespread and continued to increase over this period.^{24,25} The rate was also low in Tunisia, where government investment in family planning has been long-standing.²⁶

The legal abortion rate in South Africa was very low (six per 1,000 women), but many abortions are performed outside the legal sector, despite liberalization of the abortion law in 1997.²⁷ The estimated rate of unsafe (primarily illegal) abortions for the Southern Africa region is nearly three times this legal abortion rate, ²⁸ and South Africa makes up 90% of the region's population. A review of abortion service provision in 2000 found that access to services remained limited and inequitable, and that many hospital-based providers were openly hostile toward women seeking abortions. ²⁹ Available evidence does not allow us to determine recent trends or the total level of abortion (legal and illegal) in South Africa. As services become more available, the rate of legal abortion will likely increase and the use of illegal abortions will likely decline.

Legal abortion became available in Nepal in March 2004, and the count in Table 1 represents legal procedures in 2005–2006. Access to legal abortion has so far been constrained by the cost of services, uneven access to approved health facilities and lack of awareness about the law. As in South Africa, this count probably represents a small portion of the total number of abortions that are occurring, and the reported abortion rate will likely increase as more abortions are performed in the legal sector.

Countries with Incomplete Statistics

In the 27 countries for which reporting is incomplete or the level of completeness is unknown,* the true incidence of abortion is likely higher than the reported incidence. Very low reported abortion rates are often not meaningful, since they may represent severe underestimations.

• Eastern Europe and Central and Western Asia. Survey-based estimates as well as government statistics are available for Armenia, Azerbaijan, Georgia, Kazakhstan, Kyrgyzstan, Moldova, Romania, Ukraine and Uzbekistan (Table 2, page 110). The contrast between the abortion counts from the two sources in all countries but Romania indicates that abortions are highly underreported in the official statistics. For example, in Azerbaijan, six abortions per 1,000 women aged

*Zambia was included in the prior round of estimates but was excluded here because of a lack of recent information; Northern Ireland has been added. Abortion reporting in Kazakhstan was considered complete in 1996, but is now classified as incomplete because a nationally representative survey revealed that abortion levels exceed the official count. The former Yuqoslavia is now Serbia and Montenegro.

Country	Year	No.*	Rate†	Ratio‡	Total abortion rate§	Country	Year	No.*	Rate†	Ratio‡	Total abortion rate§
Eastern Europe						East Asia					
Moldova	2003 2005††	13,600 30,600	16 35	37 62	0.5** 1.1**	China	2003 1996	7,215,400 8,834,200	23 29	41 44	0.7** 0.9**
Romania	2003 2004†† 1999††	166,700 134,100 374,100	35 28‡‡ 74	78 64 150	1.0 0.8 2.2**	Hong Kong	2003 1996	17,400 25,000	10 15	37 40	0.3 0.5
Ukraine	2003 1999††	315,800 589,200	30 54	77 110	0.9** 1.6	Japan	2003 1996	319,800 338,900	13 13	28 28	0.4 0.4
Northern Europe Ireland§§	2003	6,300	7	10	0.2	Mongolia	2003	10,500	16	18	0.5**
		,	•			South Korea	1999††	212,300	26‡‡	38	0.7
Northern Ireland§§	2003	1,300	4	6	0.1	South/Southeas Bangladesh*§	t Asia 2000	119,600	4	3	0.1**
Southern Europe Albania	2003	6,900	9	15	0.3**	India	2001	723,100	3	3	0.1**
Croatia	2003	5,900	7	15	0.2		1996 2002†*	570,900 2,400,000	3 10	2 9	0.1** 0.3**
Macedonia	2000*†	11,400	25	39	0.7**	Vietnam	2003 1996	540,400 1,520,000	26 83	33 78	0.8** 2.5**
Serbia and Montenegro	2002	33,600	15	26*‡	0.5**		2002†† 1997††	367,500	20## 18##	22 17	0.6 0.5
Spain	2003	79,800	8	18	0.2**	Western Asia					
Central Asia Kazakhstan	2003 1999††	127,200 176,100	35 47	51 76	1.0** 1.4	Armenia	2003 2000††	7,800 61,500	10 81	22 156	0.3** 2.6**
Kyrgyzstan	2003*†	19,200	15##	17	0.5**	Azerbaijan	2003 2001††	12,000 244,400	6 116	11 203	0.2** 3.2
, 3,	1997††	54,300	51	27	1.5	Georgia	2003*†	-,	14	30	0.4
Tajikistan	2003	10,500	7	7	0.2**		2005†† 1999††	,	103‡‡ 135	224 264	3.1 3.7
Turkmenistan	2000††	28,500	26	27	0.9	Turkey	2003††	,	12‡‡	10†‡	0.4
Uzbekistan	2003 2002††	27,700 166,200	4 28	5 28	0.1** 0.9		1998††	270,600	18‡‡	19	0.4

*Rounded to the nearest 100. †Abortions per 1,000 women aged 15–44. ‡Abortions per 100 live births. §The number of abortions that the average woman would have during her reproductive lifetime, given present age-specific abortion rates. **Estimated by dividing the general abortion rate by 1,000 and multiplying by 30. ††Based on a nationally representative survey of all women aged 15–44, except in South Korea (married women aged 20–44), Vietnam (ever-married women aged 15–49). The estimated number of abortions in South Korea assumes that the rate for married women applies to all women aged 20–44. Data reflect average annual incidence and rates for the three years preceding the survey, except in South Korea, Vietnam and Turkey (preceding five years) and in Ukraine (preceding one year). Total number of abortions was calculated from the abortion rate and may include illegal abortions. ‡‡Estimated by multiplying the total abortion rate by 1,000 and dividing by 30. §§Abortions in England and Wales obtained by women who gave Irish addresses. *†May include spontaneous abortions. ‡‡Based on live births in 2001. *§Menstrual regulations. †*Based on a survey of health facilities. †‡Abortions obtained by married women per 100 live births to all women. *Notes*: Estimates are known to be incomplete for all countries except the following, for which the level of completeness is uncertain: Albania, China, Croatia, Japan, Macedonia, Moldova, Mongolia, Romania (2003), Serbia and Montenegro, Spain and Tajikistan. For each country, official statistics precede survey-based estimates where both are available.

15–44 were reported in official statistics for 2003, but the 2001 fertility survey estimated an annual rate of 116.* Official statistics are likely to also seriously undercount abortions in some countries with incomplete reporting but without survey data.

Abortion rates estimated from surveys of women in Armenia, Azerbaijan and Georgia (81, 116 and 103, respectively) were the highest rates recently reported for any country with complete or incomplete data. Women in these countries will have an average of three abortions each if cur-

rent levels prevail throughout their reproductive lives. These persistently high rates are explained by small desired family size, early completion of childbearing and continued reliance on traditional methods of family planning, which have high failure rates. ³⁰ Use of modern contraceptives is low in these countries relative to use in other countries of the former Soviet Union. ¹⁶

Abortion estimates are available for earlier years for Georgia, Romania and Turkey. According to reproductive health surveys in Romania, the abortion rate decreased by more than 60% from 1999 to 2004, while the total fertility rate remained stable at about 1.3 births per woman. 31 Although the downturn in abortion in these countries is generally as-

^{*}This is an annual rate, based on abortions reported in the three years preceding the survey.

sociated with increased contraceptive use, the rise in modern contraceptive use from 48% to 58% among Romanian women aged 15–44 is unlikely to fully account for a decline of this magnitude. An increase in the effectiveness of contraceptive use may partly explain the large decline in abortions, but data are not available to assess this hypothesis. Changes in the administration of the survey might have caused a decline in the completeness of abortion reporting over time. Furthermore, the reporting of abortion experiences in face-to-face interviews might have decreased if opinion regarding abortion has become more conservative.

Similarly, recent surveys indicated a modest increase in the use of modern contraceptives in Turkey between 1998 and 2003, from 38% to 43% among ever-married women aged 15–44, but this does not seem to account for the 31% decrease in abortions among these women, particularly since the total fertility rate also decreased over this period, from 2.6 to 2.2.³² Informants have suggested that the effectiveness of method use, including the use of traditional methods, has increased over time. It is also possible that reporting has become less complete.

• Southern and Northern Europe. In Southern Europe, the official abortion rate was moderate in Macedonia (25 per 1,000 women) and low in Serbia and Montenegro (15) and Albania (nine). Local experts indicate that the true abortion level is much higher in Albania, and a 2002 survey showed that the use of traditional contraceptives prevails over modern method use. ³³ The low abortion rate in Croatia (seven) has been attributed to the influence of conservative forces, state efforts to restrict access to abortion and high fees for the procedure, in addition to incomplete reporting. ³⁴

Estimates of abortion rates for Ireland (seven) and Northern Ireland (four) were limited to data on women who obtained abortions in England and Wales and gave addresses in Ireland or Northern Ireland. They excluded Irish women who gave non-Irish addresses, those who had abortions in other countries and the probably small number of women who had legal abortions in Northern Ireland.

• South Asia. According to Ministry of Health official statistics, the legal abortion rate remained unchanged in India between 1996 and 2001 (three per 1,000), even though the absolute number of abortions increased dramatically during that time. Abortion is legal under broad grounds in India, but regulations require that they be performed by registered physicians in certified facilities, and official statistics include only procedures that meet these regulations. Because of the difficulties in meeting all official requirements, a large number of safe abortions by qualified physicians are not reported.³⁵ It is also likely that some physicians who are certified to perform legal abortions do not report or underreport the number of procedures they perform. According to estimates using findings from a facility-based survey conducted in six states, 35 about 2.4 million safe abortions are performed annually in India by formally trained providers in approved facilities, and the safe abortion rate is 10 per 1,000 women. However, the survey also estimated that nearly two-thirds of abortions are not performed at approved facilities, indicating that the overall abortion rate is about three times the safe abortion rate.

The abortion rate for Bangladesh was based on official

statistics and included only menstrual regulation procedures, which are legally permitted. Surgical abortions past 10 weeks' gestation are prohibited under most conditions and are not registered. Menstrual regulation procedures are estimated to account for more than half of all abortions in Bangladesh,36 but most go unreported.37 Hence the official abortion rate of four per 1,000 women likely is an underestimate; the actual rate, including safe and unsafe abortions, was estimated to fall between 26 and 30 in 1995.³⁶ • East and Southeast Asia. Abortion counts for China were obtained from the Ministry of Health. (In the past, abortion data were also collected by the Family Planning Commission; however, experts indicate that reliable estimates are no longer available from this source.) Medication abortions, which are estimated to account for up to a third of induced abortions in China, are missing from the abortion statistics for at least some provinces, and they may be missing from the national count altogether. Informants also indicated that some private clinics that do not have government permission to perform abortions do not report the abortions they perform, and some providers or districts might overreport abortions to meet quotas or obtain government compensation. The year-to-year fluctuations in the number of abortions reported (not shown) suggest that there is some error in the data.

Abortion incidence appears to have decreased in China, which accounted for more than a third of legal abortions worldwide in 1996.1 According to Ministry of Health reports, the rate declined by 21%, from 29 to 23 per 1,000 women, between 1996 and 2003, though the fertility rate also declined slightly during this interval.³⁸ Contraceptive prevalence was already high at the start of this period, yet contraceptive failure rates were also high, 39 and 70% of abortions in China were attributed to contraceptive failure. 40 The failure rate associated with the IUD-the most prevalent method in China-decreased significantly in the 1990s, when the copper IUD was introduced and began to replace less effective devices. 40 Therefore, the abortion and fertility rates might have declined simultaneously. The decline in abortion incidence has also been linked to the Family Planning Commission's increased emphasis on quality of care in family planning services, including the expansion of contraceptive options, in the past decade. 41 In addition, some research has indicated that greater use-effectiveness, stemming from the growing desire for small families and stronger motivation among couples to prevent births, could explain some of the decline in the abortion rate.⁴²

According to official reports, more than half a million abortions were performed in Vietnam in 2003, and the abortion rate was 26 per 1,000 women. Official statistics show a 69% decline in the rate over seven years, from 83 in 1996. However, the total fertility rate declined from 2.7 to 1.9 births per woman, and contraceptive prevalence did not change substantially in that time. ⁴³ The total abortion rate among

Country	Year	≤19*	20-24	25–29	30-34	35–39	≥40†
	ieai	<u> </u>	20-24	23-29	30-34	33-33	2401
Eastern Europe	2002	0	1.4	1.5	16	12	7
Czech Republic	2003 1996	8 12	14 27	15 31	16 28	13 19	7 10
	1990	12	21	31	28	19	10
Hungary	2003	20	33	33	31	24	9
	1996	30	47	49	44	31	13
Russian Federation	2003	25	69	70	58	38	15
	1996	44	144	145	94	55	31
Northern Europe	2002	15	21	10	17	12	_
Denmark	2003 1996	15 15	21 23	18 21	17 20	13 13	6 6
	1990	13	23	21	20	13	O
England and Wales‡	2003	23	31	22	15	10	4
ziigiaiia aiia iraico;	1996	22	28	20	14	9	3
Estonia	2003	28	53	51	43	32	14
	1996	43	93	83	63	43	19
Finland	2003	15	17	12	11	8	3
	1996	11	15	14	11	7	3
Latria	2002	17	42	42	27	26	11
Latvia	2003	17	42	42	37	26	11
Lithuania	2003	7	21	23	21	15	7
Litituariia	2003	,	21	23	21	13	,
Norway	2003	16	27	19	15	11	4
,	1996	16	26	21	16	10	4
Scotland	2003	20	23	15	9	5	2
	1996	18	21	14	9	5	2
Sweden	2003	25	31	24	21	16	7
	1996	18	28	25	21	15	7
Southern Europe							
Italy	2003	7	15	14	12	10	5
italy	2003	,	13	17	12	10	5
Slovenia	2003	9	18	21	21	19	9
	1996	11	26	28	32	27	15
Western Europe							
Belgium	2003	8	13	11	9	6	2
	1996	7	11	10	8	5	2
C	2002	7	12	11	0	_	2
Germany	2003 1997	7 6	13 11	11 11	9 9	6 7	3
	1997	O	11	11	9	,	3
Netherlands‡	2003	9	14	12	9	7	3
Tretterial as ;	1996	5	9	9	8	5	2
North America							
Canada	2003	17	31	21	14	9	3
	1996	23	34	23	14	8	3
11.5.16:	222-				10	4.0	
United States§	2003	22	43	31 22	19 10	10	4
	1996	29	49	32	18	10	3
Oceania							
New Zealand	2003	27	41	26	18	12	5
Lealand	1996	22	31	23	15	9	4
						-	•
Western Asia							
Israel**	2003	11	15	15	16	15	9
	1996	10	16	17	17	16	10

*Based on abortions obtained by women aged 19 or younger and the female population aged 15–19. †Based on abortions obtained by women aged 40 or older and the female population aged 40–44. ‡Residents only. \$Based on total abortion incidence presented in Table 1 and age distributions reported to the U.S. Centers for Disease Control and Prevention. **Based on abortion applications approved, as reported to the Central Bureau of Statistics.

ever-married women did not decrease according to the Demographic and Health Surveys of 1997 and 2002, although abortions were seriously underreported in those surveys. ⁴⁴ In Vietnam, the "semiprivate" sector, in which abortions are performed in public hospitals but not recorded, and the private sector, in which abortions are performed in private facilities, have grown in recent years. ^{45,46} Abortions performed in these sectors are said to offer greater anonymity, better options for pain control and shorter waiting times. ⁴⁵ Because information for these sectors is unavailable, it is difficult to assess abortion levels or trends in Vietnam.

In South Korea, the survey-based abortion rate of 26 per 1,000 women is for married women only, and the estimated number of abortions assumes that this rate applies to unmarried women as well. Official statistics in Japan suggest an abortion rate of 13; however, some researchers have indicated that the actual rate is likely higher than reported. Higher rates are possible given that an estimated 60% of married couples use modern contraceptives, and 80% of these couples rely on condoms, which generally have a high use-failure rate. He are the overall abortion level has been fairly stable since the early 1990s, following a long period of decline.

Age-Specific Abortion Rates

Age-specific abortion rates were calculated for 21 countries; for 18 of these, comparable rates could be estimated for 1996 and 2003 (Table 3).

In many countries, a general pattern emerged, in which the abortion rate was low for women younger than 20, peaked among those aged 20–24 and declined with each successive age-group. In Eastern Europe, abortion rates remained high for women aged 25–34 and descended more gradually with successive age-groups than rates in Western Europe and other developed countries. Survey findings for the Western and Central Asian countries, where abortion rates were among the highest in the world, show that rates tended to peak among women aged 25–34 (not shown). ¹⁴ The age-specific abortion pattern in these regions reflects that many women have abortions to limit family size rather than to delay the start of childbearing. ³⁰

The abortion rate among 20-24-year-olds was higher in the United States than in other developed countries; however, U.S. rates among women aged 30 or older were lower than those in many developed countries. By 2003, the teenage abortion rate in the United States (22 per 1,000 women) was comparable to that in England and Wales (23) and Sweden (25). This situation marks a change from the mid-1990s, when this rate was substantially higher in the United States (29) than in these countries (22 and 18, respectively); the change is due in part to a decline in the adolescent abortion rate in the United States between 1996 and 2003. Over the same period, however, the adolescent abortion rate rose in Sweden-a trend that Swedish researchers attribute partly to cuts in funding for sex education and increases in the incidence of casual sex without contraceptive use. 50 Nevertheless, the English-speaking developed countries have higher adolescent abortion rates than many other developed countries, with the exception of the former Soviet states. This difference is ascribed to the more pragmatic approach to adolescent sexuality in other developed countries, including easier access to contraceptive services for adolescents.^{51–53}

Trends in the abortion rate differed for various age-groups in some regions and countries. In the Netherlands, Finland and Sweden, rates increased by 33–65% among women aged 19 or younger; the rate also increased by about 50% among 20–24-year-olds in the Netherlands. In Eastern Europe, where abortions were especially prevalent among women aged 20–34, rates decreased dramatically throughout this age span. In North America, the teenage abortion rate declined by 23% in both the United States and Canada between 1996 and 2003.

DISCUSSION

The prevalence of legal abortion varies widely across the countries in which it is generally available. Where the abortion rate is high, it likely reflects that levels of contraceptive use are not sufficient to meet the fertility desires and family planning needs of women and couples.

Many abortion rates in Eastern Europe and Western and Central Asia remain among the highest in the world. In Armenia, Azerbaijan, Georgia and the Russian Federation, more abortions than births still occur each year; this may also be the case in other countries of these regions with incomplete reporting. Abortion levels in Northern Europe and parts of Western Europe are among the lowest in countries with legal abortions. Abortion rates in the United States, while moderately low, are higher than rates in many developed countries outside of the former Soviet region, particularly among women younger than 30.

Since 1996, more countries have experienced a decline in abortion rates than an increase, among those with complete abortion counts and trend data. The downward trend in reported legal abortions is most marked in Eastern Europe, and the incomplete statistics suggest that this trend was also strong in Central and Western Asia. The actual decrease in abortion rates is probably smaller than suggested by the data, because in these regions, abortions are increasingly being paid for privately (in either public or private facilities), and such procedures are less likely than others to be reported. These countries, along with Cuba, have a legacy of an "abortion culture" that characterized the Soviet era, when abortion was freely available but contraceptive options were limited and supplies not always available.54 In recent years, contraceptives have become more accessible and use has increased, though supplies and the range of methods available are often limited and the cost is sometimes high. Changes in contraceptive use have been slowest in Western Asian countries, where use of modern methods is lower than it is in most of the other former Soviet areas.

Abortion incidence is also reportedly declining in China. Possible causes of such a decline include more effective contraceptive use and improvements in the quality of family

planning services. However, if medication abortions and abortions procured in the private sector are underreported, and if increasing proportions of abortions fall in either or both of these categories, the actual decline could be smaller than the statistics suggest.

In Vietnam, reported abortion incidence was very high in the mid-1990s (83 abortions per 1,000 women), even though reporting was incomplete. The sharp decline in officially reported abortions since 1996 conflicts with the small increase in incidence suggested by nationally representative surveys in the same interval. The surveys, however, appear to greatly underestimate abortion levels. As a result, no conclusions can be drawn regarding current abortion incidence or recent trends.

The abortion rate increased, albeit modestly, in the Netherlands and New Zealand. Demand for abortion increased among residents of non-European descent in the Netherlands, which may reflect lower levels of contraceptive use among immigrant women. ¹⁷ Similarly, the increase in abortions in New Zealand may be attributable to trends among women of Asian descent. ²²

Abortion rates have remained relatively stable in Northern and Western Europe. In most of these countries, abortion is available without restriction, and contraceptives are widely available at low cost and are considered acceptable to use. In North America, the abortion rate remained steady in Canada and declined by a little more than 1% annually in the United States.

Studies have demonstrated that abortion levels are strongly linked to contraceptive use patterns. ^{15,16} The past few decades have been a significant period in the history of family planning, marked by improved contraceptive technology and growing and widespread acceptance of contraception throughout many regions of the world. It appears that where couples desire to limit their fertility and services are available, contraceptive use is eventually widely accepted. This phenomenon has been borne out in the former Soviet bloc during the past 15 years. In the United States, improvements in use have been shown to account for most of the decline in adolescent pregnancy rates in recent years ⁵⁵

Where contraceptive use is widespread, unintended pregnancy and abortion rates will likely continue to decrease if the quality of contraceptive services improves and the effectiveness of use increases. This seems to be the case in China, where declines in abortion incidence coincided with increased use of a more effective IUD, and with other improvements in the quality of contraceptive services. Improvements in contraceptive technology could result in further reductions in abortion rates, even in countries where the most effective methods currently available are already widely used.

In societies or demographic subgroups in which contraceptives are not widely available or their use has not yet become a culturally accepted practice, but many women wish to avoid childbearing, abortions are likely to occur at higher-than-average levels. In traditional societies where

Since 1996,
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the age at marriage is increasing and sex before marriage is becoming more common, rates of unintended pregnancy and abortion could increase among young, unmarried women. Barriers to contraceptive use among unmarried women, including discomfort associated with seeking contraceptives, can exacerbate these circumstances. The European experience, however, demonstrates that societal acceptance of adolescent sexual relationships, combined with comprehensive information about contraceptives, can result in low pregnancy rates among young adults. ⁵³

In developed countries where contraception is accepted socially and family planning services are generally available, the abortion rate ranges from about seven to 20 per 1,000 women. In some subpopulations, the rate has been as low as 3–4 per 1,000, as among the Dutch-born population of the Netherlands in the recent past. ⁵⁶ Evidence suggests, however, that unwanted pregnancies and induced abortions occur to some degree in every society, for a number of reasons—contraceptive methods fail on occasion, couples do not always use their methods correctly or consistently, some women have partners who oppose contraceptive use, some become pregnant as a result of coerced sex and some seek abortion for health reasons or because of changes in their circumstances.

Unwanted pregnancies cannot be entirely avoided, but their incidence can be reduced through various means, such as improvements in the social acceptability of and access to contraception, the development of new contraceptive technologies, education and counseling to reduce partner violence and increase self-efficacy in contraceptive choice for women, and service improvements that facilitate continuous and effective contraceptive use.

Research on the association between abortion trends and trends in unmet need for contraception, availability of family planning services, desired family size and fertility rates can provide further evidence of how these factors may influence abortion levels at the regional and national levels, as well as among subgroups in each country.

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RESUMEN

Contexto: La información sobre los niveles y tendencias de aborto pueden sustentar investigaciones y políticas que afectan la salud materna y reproductiva, pero la incidencia del aborto legal no ha sido evaluada en cerca de una década.

Métodos: Se realizó una compilación de estadísticas sobre abortos legales en 2003 para 60 países en los que el procedimiento es legal en términos generales; y, cuando fue posible, las tendencias fueron evaluadas. Las fuentes de datos incluyeron informes publicados y no publicados generados por sistemas oficiales de información nacional, cuestionarios enviados a agencias gubernamentales y encuestas de población representativas a nivel nacional. Funcionarios involucrados en la recolección de datos y expertos nacionales y regionales evaluaron qué tan completas eran las estimaciones para cada país.

Resultados: En años recientes, en los países para los que las estadísticas están completas y hay disponibilidad de datos sobre tendencias, se registró que hubo más países que experimentaron una disminución que un aumento en las tasas de aborto legal. Las disminuciones más dramáticas ocurrieron en Europa Oriental y Asia Central, en donde, sin embargo, las tasas permanecen entre las más altas del mundo. Los niveles estimados más altos se encontraron en Armenia, Azerbaiyán y Georgia, en donde las encuestas indican que, en promedio y a lo largo de su vida, cada mujer tendrá cerca de tres abortos. La tasa de aborto en los EE.UU. disminuyó en 8% entre 1996 y 2003, pero continúan siendo más alta que las tasas observadas en muchos países de Europa del Norte y Occidental. Las tasas aumentaron en los Países Bajos y Nueva Zelandia. En China, país que representó un tercio de los abortos legales del mundo en 1996, la tasa de aborto oficial disminuyó en 21% a lo largo de siete años. En algunos países, las tendencias en las tasas de aborto difirieron entre los grupos de edad.

Conclusiones: La tasa de aborto varía ampliamente entre los países en los que el aborto legal está disponible en términos generales y ha disminuido en muchos países desde mediados de los años noventa.

RÉSUMÉ

Contexte: L'information relative aux taux et tendances de l'IVG peut être utile à la recherche et aux politiques de santé maternelle et génésique, mais l'incidence de l'avortement légal n'a pas été évaluée depuis près de 10 ans.

Méthodes: Les statistiques relatives aux IVG pratiquées légalement en 2003 ont été compilées pour 60 pays dans lesquels la procédure est largement admise et les tendances ont été évaluées dans la mesure du possible. Les données de l'étude proviennent des rapports publiés ou non de systèmes statistiques officiels nationaux, de questionnaires adressés aux autorités gouvernementales et d'enquêtes démographiques nationalement représentatives. Les responsables de la collecte des données et des experts nationaux et régionaux ont évalué la complétude des estimations des différents pays.

Résultats: Ces dernières années, parmi les pays pour lesquels les statistiques sont complètes et des données de tendance sont disponibles, on enregistre plus souvent une baisse plutôt qu'une hausse des taux d'IVG légaux. Les régressions les plus spectaculaires ont été observées en Europe de l'Est et en Asie centrale, où les taux demeurent parmi les plus élevés du monde. Les plus hauts taux estimés concernent l'Arménie, l'Azerbaidjan et la

Géorgie, où les enquêtes révèlent, en moyenne, trois IVG durant la vie de chaque femme. Aux États-Unis, le taux d'IVG s'est réduit de 8% entre 1996 et 2003, mais il demeure supérieur à celui de nombreux pays d'Europe du Nord et de l'Ouest. Les taux sont en hausse aux Pays-Bas et en Nouvelle-Zélande. Le taux d'IVG officiel a baissé de 21% sur une période de sept ans en Chine, qui représentait un tiers des avortements légaux pratiqués dans le monde en 1996. Les tendances des taux d'IVG diffèrent d'un groupe d'âge à l'autre dans certains pays.

Conclusions: Les taux d'IVG varient largement parmi les pays où l'avortement légal est généralement accessible. Ils sont en baisse, depuis la moitié des années 1990, dans de nombreux pays.

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