Unsafe Abortion: Global and Regional Incidence, Trends, Consequences, and **Challenges**

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Abstract

Objective: This review aims to provide the latest global and regional estimates of the incidence and trends in induced abortion, both safe and unsafe. A related objective is to document maternal mortality due to unsafe abortion. The legal context of abortion and the international discourse on preventing unsafe abortion are reviewed to highlight policy implications and challenges in preventing unsafe abortion.

Methods and Data Sources: This review is based on estimates of unsafe abortion and maternal mortality ratios. These estimates are arrived at using the database on unsafe abortion maintained by the World Health Organization. Additional data from the Demographic and Health Surveys and the United Nations Population Division are used for further analysis of abortion and mortality estimates.

Results: Each year 42 million abortions are estimated to take place. 22 million safely and 20 million unsafely. Unsafe abortion accounts for 70 000 maternal deaths each year and causes a further 5 million women to suffer temporary or permanent disability. Maternal mortality ratios (number of maternal deaths per 100 000 live births) due to complications of unsafe abortion are higher in regions with restricted abortion laws than in regions with no or few restrictions on access to safe and legal abortion.

Conclusion: Legal restrictions on safe abortion do not reduce the incidence of abortion. A woman's likelihood to have an abortion is about the same whether she lives in a region where abortion is available on request or where it is highly restricted. While legal and safe abortions have declined recently, unsafe abortions show no decline in numbers and rates despite their being entirely preventable. Providing information and services for modern contraception is the primary prevention strategy to eliminate unplanned pregnancy. Providing safe abortion will prevent unsafe abortion. In all cases, women should have access to post-abortion care, including services for family planning. The Millennium Development Goal to improve maternal health is unlikely to be achieved without addressing unsafe abortion and associated mortality and morbidity.

Key Words: Safe abortion, unsafe abortion, maternal mortality, abortion law, global levels and trends, regional levels and trends

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Résumé

Objectif: Cette analyse vise à fournir les dernières estimations mondiales et régionales quant à l'incidence et aux tendances en matière d'avortement provoqué, tant dans des conditions salubres qu'insalubres. Un des objectifs connexes est de documenter la mortalité maternelle attribuable aux avortements pratiqués dans des conditions insalubres. Le contexte légal de l'avortement et le discours international sur la prévention des avortements pratiqués dans des conditions insalubres sont analysés en vue de souligner les implications pour ce qui est des politiques et les défis à surmonter pour assurer la prévention des avortements pratiqués dans des conditions insalubres.

Méthodes et sources de données : Cette analyse est fondée sur des estimations quant aux taux d'avortement pratiqué dans des conditions insalubres et de mortalité maternelle. Ces estimations sont élaborées en fonction de la base de données sur les avortements pratiqués dans des conditions insalubres qui est maintenue par l'Organisation mondiale de la santé. Des données additionnelles issues des enquêtes démographiques et sanitaires et de la United Nations Population Division sont utilisées pour approfondir l'analyse des estimations quant à l'avortement et à la mortalité.

Résultats : Chaque année, on estime que 42 millions d'avortements sont pratiqués : 22 millions, dans des conditions salubres, et 20 millions, dans des conditions insalubres. L'avortement pratiqué dans des conditions insalubres est à l'origine de 70 000 décès maternels chaque année et fait également en sorte que cinq millions d'autres femmes connaissent une invalidité temporaire ou permanente. Les taux de mortalité maternelle (nombre de décès maternels par 100 000 naissances vivantes) attribuables aux complications de l'avortement pratiqué dans des conditions insalubres sont plus élevés dans les régions pourvues de lois restrictives quant à l'avortement que dans les régions ne présentant que peu ou pas de restrictions pour ce qui est de l'accès à l'avortement en toute sécurité et légalité.

Conclusion: Les restrictions juridiques visant l'avortement pratiqué dans des conditions salubres n'entraînent pas de baisse de l'incidence de l'avortement. La probabilité qu'une femme subisse un avortement est pratiquement la même, qu'elle vive dans une région où l'avortement est disponible sur demande ou dans une région où l'avortement fait l'objet d'un grand nombre de restrictions. Bien que le nombre d'avortements pratiqués en toute sûreté et légalité ait récemment connu une baisse, les taux et le nombre des avortements pratiqués dans des conditions insalubres ne connaissent aucune baisse, et ce, malgré le fait qu'ils soient entièrement évitables. L'offre de renseignements et de services quant à la contraception moderne constitue la principale stratégie de prévention en vue d'éliminer les grossesses non voulues. L'offre d'avortements pratiqués dans des conditions salubres

permettra de prévenir la pratique d'avortements dans des conditions insalubres. Dans tous les cas, les femmes devraient avoir accès à des soins post-avortements, y compris des services de planification familiale. L'atteinte de l'objectif du Millénaire pour le développement visant l'amélioration de la santé maternelle est peu probable, si l'on ne parvient pas à traiter de la question des avortements pratiqués dans des conditions insalubres et de leurs taux connexes de mortalité et de morbidité.

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INTRODUCTION

Induced abortion, safe or unsafe, is a universal phenome-**⊥**non and has existed throughout recorded history.¹ Yet it continues to be a highly charged, controversial issue, raising extreme passions among lay people, as well as politicians, religious leaders, and health and rights advocates. Induced abortion is generally stigmatized and potentially lifethreatening, both for women seeking abortion and for those providing it. An estimated 70 000 women die each year because of complications of unsafe abortion; the recent killing of Dr George Tiller is a stark reminder that providers of abortion also suffer grave consequences.2 This trend persists against the backdrop of major advances in the medical profession, especially in terms of the availability of safe and effective technologies and skills for induced abortion. Unsafe abortion presents one of the most critical global public health and human rights challenges of the present times.

Each day 192 women die because of complications arising from unsafe abortion; that is one woman every eight minutes, nearly all of them in developing countries. These women are likely to have had little or no money to procure safe services; many of them are young, perhaps in their teens, living in rural areas and having little social support to deal with their unplanned pregnancy. Some of them have been raped, and some have experienced an accidental pregnancy due to the failure of the contraceptive method they were using or the incorrect or inconsistent way they used it. Some of them lacked knowledge of methods to prevent unintended pregnancy or did not have the means to obtain them. Some may have found contraceptive services hard to reach, while others may have been turned away by judgemental or insensitive providers. A large percentage of them may have first attempted to self-induce the abortion and failing that, they may have turned to an unskilled, but relatively inexpensive and affordable provider.

Induced abortion can be provided safely on request or on broad grounds or it can be provided unsafely, especially when it is clandestine. The World Health Organization (WHO) defines "unsafe abortion" as a procedure for terminating an unintended pregnancy either by individuals without the necessary skills or in an environment that does not conform to minimal medical standards or both.3 Induced abortions may be performed within or outside the prevailing legal framework. When performed within the legal framework, the safety of the procedure depends on the requirements of the law and on the resources and medical knowledge and skills available. In countries that lack human and technical resources, abortions may not be sufficiently safe by international standards even though they may meet the legal and medical requirements of the country. Legal authorization is, nevertheless, a necessary step to eliminate unsafe abortion.

Induced abortions outside the legal framework are frequently performed by unqualified and unskilled providers or are self-induced; such abortions often take place in unhygienic conditions and involve dangerous methods or incorrect administration of medications. Even when performed by a medical practitioner, but outside the conditions of the law, a clandestine abortion generally carries additional risk: medical back-up is not immediately available in an emergency, the woman may not receive appropriate postabortion attention and care, and, if complications occur, the woman may hesitate to seek medical care. The risk of unsafe abortion differs with the skills of the provider and the method used, but is also linked to the de facto application of the law.4,5

The primary objective of this review is to provide the latest global and regional estimates of the incidence and trends in induced abortion, safe or unsafe, and to describe the consequences of unsafe abortion.

METHODS AND DATA SOURCES

Induced abortion may be the most difficult indicator of women's health to measure. Where induced abortion is restricted and largely inaccessible, or legal but difficult to obtain, it is hard to quantify and classify. The available information is, therefore, not completely reliable, because of legal, ethical, and moral considerations that hinder reporting. Occurrence tends to be under-reported in surveys and unreported or under-reported in hospital records. Of course, there are no records for women who do not seek post-abortion care in hospitals or other facilities, including private clinics and pharmacies. Only the tip of the iceberg, therefore, is visible in the number of deaths and the number of women who suffer severe trauma, infection, or severe blood loss and seek medical care.

Whether legal or illegal, induced abortion is generally stigmatized and frequently censured by religious teaching or ideologies. Women are often reluctant to admit to an induced abortion, especially when it is illegal, and under-reporting occurs even where abortion is legal.⁶⁻⁹ When abortions are clandestine, they may not be reported

Table 1. Global and regional estimates of induced abortion, 1995 and 2003

	Number of abor	tions (millions)	Abortion rate*	
Region and Sub-region 2003	1995	2003	1995	2003
World	45.6	41.6	35	29
Developed countries	10.0	6.6	39	26
Excluding Eastern Europe	3.8	3.5	20	19
Developing countries	35.5	35.0	34	29
Excluding China	24.9	26.4	33	30
Estimates by region				
Africa	5.0	5.6	33	29
Asia	26.8	25.9	33	29
Europe	7.7	4.3	48	28
Latin America and the Caribbean	4.2	4.1	37	31
North America	1.5	1.5	22	21
Oceania	0.1	0.1	21	17

*Abortions per 1000 women aged 15-44 years.

at all or they may be reported as spontaneous (miscarriage). ^{10–12} The language used to describe induced abortion reflects this ambivalence: terms include "induced miscarriage" (*fausse couche provoquée*), ¹³ "menstrual regulation," and "regulation of a delayed or suspended menstruation." ¹⁴

For the past 25 years, the WHO has maintained a database on unsafe abortion and associated mortality, which today has over 3000 articles, mainly related to developing countries. The database contains both quantitative and qualitative reports. Information relevant to understanding and measuring unsafe abortion covers data from hospital records, surveys, and studies on abortion providers, unsafe abortion methods, abortion-seeking behaviour, postabortion care, and legal developments. Using corroborating data mainly from the Demographic and Health Surveys and from the United Nations Population Division tabulations of contraceptive use and number of live births, the WHO has developed regional and global estimates of unsafe abortion and related maternal mortality.

This review draws upon the estimates recently developed by the WHO and provides new information on maternal mortality related to unsafe abortion. Published reports and databases are the main sources. A detailed account of the methodology of estimating unsafe abortion and related mortality is provided in the WHO's global and regional estimates of the incidence of unsafe abortion and associated mortality in 2003 (published 2007).⁵

INCIDENCE AND TRENDS IN INDUCED ABORTION

The worldwide number of induced abortions, both safe and unsafe, declined from nearly 46 million in 1995 to approximately 42 million in 2003 (Table 1).15 This corresponds to a decline in the abortion rate from 35 abortions per 1000 women aged 15 to 44 in 1995 to 29 in 2003. In developed countries, where nearly all abortions are safe and legal, abortion rates fell from 39 to 26 per 1000 women aged 15 to 44, compared with a decline from 34 to 29 per 1000 women aged 15 to 44 in developing countries, where abortion is by and large restricted and 55% of all abortions in 2003 were estimated to be unsafe. More abortions take place in developing countries than in developed countries (35 million and 7 million respectively in 2003), largely reflecting relative population sizes. However, a woman's chance of having an abortion is similar whether she lives in a developed or a developing region: in 2003 the rates were 26 abortions per 1000 women aged 15 to 44 in developed areas and 29 per 1000 in developing areas. The main difference is in safety, with abortion being safe and easily accessible in developed countries and generally restricted and unsafe in most developing countries.

Eastern Europe, where abortion is largely legal and safe, has experienced the most rapid fall in abortion rate, from 90 abortions per 1000 women aged 15 to 44 in 1995 to 44 in 2003. This contributed to an overall rate for Europe that fell from 48 to 28 abortions per 1000 women aged 15 to 44. However, the abortion rate continues to remain higher in Eastern Europe than in any other region. In contrast, the lowest abortion rate of 12 per 1000 women aged 15 to 44 is noted for Western Europe, where contraceptive prevalence

Table 2. Estimated number of safe and unsafe induced abortions and abortion rates by region and sub-region, 2003

	Number of abortions (millions)		Abortion rate*			
Region and Sub-region	Total	Safe	Unsafe	Total	Safe	Unsafe
World	41.6	21.9	19.7	29	15	14
Developed countries†	6.6	6.1	0.5	26	24	2
Developing countries	35.0	15.8	19.2	29	13	16
Developing countries excl. China	26.4	7.2	19.2	30	na	na
Africa	5.6	0.1	5.5	29	‡	29
Eastern	2.3	§	2.3	39	‡	39
Middle	0.6	§	0.6	26	‡	26
Northern	1.0	§	1.0	22	‡	22
Southern	0.3	0.1	0.2	24	5	18
Western	1.5	§	1.5	27	‡	28
Asia†	25.6	15.8	9.8	29	18	11
Eastern†	9.7	9.7	§	29	29	‡
South-central	9.6	3.3	6.3	27	9	18
South-eastern	5.2	2.1	3.1	39	16	23
Western	1.2	0.8	0.4	24	16	8
Latin America and the Caribbean	4.1	0.2	3.9	31	1	29
Caribbean	0.3	0.2	0.1	35	19	16
Central America	0.9	§	0.9	25	‡	25
South America	2.9	§	2.9	33	‡	33
North America	1.5	1.5	§	21	21	‡
Europe	4.3	3.9	0.5	28	25	3
Oceania†	0.02	§	0.02	11	‡	11

^{*}Abortions per 1000 women aged 15-44.

na: not available

is high (75%) and abortion is easily accessible on request. Abortion rates are also low in other regions with similar characteristics. For example, the rates are 17 per 1000 in Northern Europe and 21 in North America (Canada and the United States).

Modest declines were noted in Africa, Asia, and Latin America and the Caribbean, but abortion rates remain higher in these regions than in developed regions. In 2003, abortion rates in Africa and Asia were the same (29 per 1000), while the rate was slightly higher in Latin America and the Caribbean (31 per 1000 women aged 15-44 years).

In Oceania, the rate was low in 1995 (21) and dropped further (to 17 per 1000 women aged 15-44 years) in 2003.

INCIDENCE AND RATES OF SAFE AND UNSAFE ABORTION IN 2003

Overall regional estimates mask sub-regional variations. Also, overall abortion incidence or rates do not reveal the relative distribution of safe and unsafe abortion. Further analysis of 2003 estimates indicate that of the total 42 million abortions, 22 million were within the national legal system and safe, and 20 million were outside the legal system and unsafe (Table 2). Worldwide, 48% of all induced

[†]Japan, Australia, and New Zealand have been excluded from the regional estimates, but are included in the total for developed countries.

^{‡ &}lt; 0.5

^{§ &}lt; 0.05

Table 3. Percent of all unsafe abortions, by age of women and region, 2003

Age, years	Africa	Asia	Latin America and the Caribbean	All regions
15–19	25.3	8.5	14.3	13.5
20–24	32.0	22.5	28.6	25.9
25–29	20.0	27.5	24.9	25.3
30–34	12.3	22.0	15.7	18.5
35–39	7.8	12.9	10.5	11.2
40–44	2.6	6.6	6.0	5.5
All ages	100	100	100	100

abortions are unsafe. However, in developed regions, nearly all abortions (92%) are safe, whereas in developing countries, more than half (55%) are unsafe. When China is excluded from the estimate, unsafe abortions amount to 73% of all abortions in developing regions. More than 95% of abortions in Africa and Latin America are performed under unsafe circumstances, as are almost 60% of abortions in Asia, excluding China.

UNSAFE ABORTION BY AGE

Unsafe abortion poses serious health risks to all women. However, young women are especially vulnerable to immediate and long-term disability and death. In 2003, about 40%, or two in five, of all unsafe abortions in developing regions were among young women under 25 (Table 3). In Africa, 25% of all unsafe abortions are among adolescents aged 15 to 19 and about 60% among young women under 25. No other region shows such a high percentage of adolescent and young women exposed to the risk of unsafe abortion. The age pattern of unsafe abortion differs by developing region: in Africa, abortion is sought primarily to terminate pregnancy in young women, probably premarital or a result of non-consensual sex; in Asia it is often sought to terminate childbearing after the desired number of children is achieved. One in two unsafe abortions in Asia is in women in age groups 25 to 29 and 30 to 34. The limited access to contraception among young women, especially in Africa, seems to expose them to unsafe abortion and the resultant high risk of death and disability.

ABORTION LAW AND UNSAFE ABORTION

While the legal status of abortion does not completely predict its incidence, there is however an important distinction between developed and developing regions in the circumstances and the safety of induced abortion. Abortion laws are largely restrictive in developing regions (Table 4), with the exception of Eastern Asia and a few countries in other developing regions.¹⁶ Where abortion is legally available on request or under broad conditions, it is generally safe, and where it is highly restricted, it is often unsafe. As a result, three out of four induced abortions in developing countries, excluding China, are carried out in unsafe conditions. In these countries, few women meet the legal conditions, or know their right, to receive safe abortion services to the full extent of the law.

Nearly all countries allow abortion to save the woman's life, while other reasons are variable. There may also be discrepancies between the wording of the law (de jure) and its application (de facto). This means that common practice can help or hinder the procurement of legal abortion, or the law may be interpreted to hinder any induced abortion, pushing women towards more clandestine providers and increasing the risks associated with unsafe abortion.

Whether legally restricted or not, a woman's chance of having an abortion is about the same. The legal restrictions, however, force women to seek abortion from unskilled providers, or under unhygienic conditions, or both, exposing them to a high risk of death or disability. The maternal mortality ratio (MMR) per 100 000 live births due to unsafe abortion is higher in countries with major restrictions and lower in countries where abortion is available on request or under broad conditions. The scatter plot of countries by level of MMR and legal restrictions on abortion shows lower MMRs associated with fewer legal restrictions (Figure 1)17. The accumulated evidence shows that the removal of restrictions on abortion results in the reduction of maternal mortality due to unsafe abortion and, thus, in the reduction of the overall level of maternal mortality. 18,19

CONSEQUENCES OF UNSAFE ABORTION

Twenty years after the Nairobi Safe Motherhood Conference, unsafe abortion continues to kill or cause serious adverse health consequences. Among women who have

Table 4. Grounds on which abortion is permitted (% of countries) by UN regions and sub-regions, 2007¹⁶

Region and Sub-region	To save the woman's life	To preserve physical health	To preserve mental health	Rape or incest	Fetal impairment	Economic or social reasons	On request	Number of countries
All countries	97	67	64	48	45	34	28	194*
Developed countries	96	88	86	84	84	78	67	49
Developing countries	97	60	57	37	32	19	15	145*
Africa	100	58	55	30	30	8	6	53
Eastern	100	71	65	18	24	6	0	17
Middle	100	33	22	11	11	0	0	9
Northern	100	50	50	33	17	17	17	6
Southern	100	80	80	60	80	20	20	5
Western	100	56	56	44	38	6	6	16
Asia†	100	67	62	49	56	40	38	45*
Eastern	100	100	100	100	100	75	75	4
South-central	100	64	57	50	57	50	43	14
South-eastern	100	60	50	40	30	30	30	10*
Western	100	65	65	41	59	29	29	17
Latin America and the Caribbean	91	58	58	42	18	15	6	33
Caribbean	100	69	69	38	23	23	8	13
Central America	75	38	38	25	13	13	0	8
South America	92	58	58	58	17	8	8	12
Oceania†	100	50	50	7	0	7	0	14

^{*}Status of the law in Timor-Leste is not known and is therefore not included in the table

had an unsafe abortion, over 5 million, approximately one in four, are likely to face severe complications, and they will seek hospital care.²⁰ This contrasts starkly with the fact that induced abortion is one of the safest procedures in contemporary medical practice, and the availability of manual vacuum aspiration and medical (non-surgical) abortion can further reduce abortion-related complications.

Unsafe abortion, an entirely preventable cause of maternal deaths and ill health, continues to account for 13% of maternal deaths and 20% of the overall burden of maternal death and long-term disability as measured in disability adjusted life-years. Compared with developed countries, the burden per 1000 unsafe abortions is more than six times as high in sub-Saharan Africa and four times as high in Asia.

Unsafe abortions are estimated to have accounted for approximately 70 500 maternal deaths in 2005 (Table 5). Almost all of these occurred in developing countries: over half of these are in Africa and 34% in the least developed countries. Unsafe abortions are also estimated to have accounted for 30 100 maternal deaths in Asia in 2005. The

number of deaths due to unsafe abortion and the maternal mortality ratios do not always correspond perfectly to the incidence of unsafe abortion because of mediating factors such as health care seeking in the case of complications, health infrastructure, transport, quality of care, the type of abortion method used, or the degree of risk. Maternal deaths due to unsafe abortion in developing countries fall within a narrow range from 9% to 17% of all maternal deaths. Both the lowest and the highest figures are found in Africa (9% in Southern Africa and 17% in Eastern Africa), reflecting the combined impact of the legal and health systems, with more liberal access to abortion and better equipped health systems in the former than in the latter sub-region.

The relatively high risk associated with unsafe abortion in Africa is also manifested in Africa's estimated 650 deaths per 100 000 unsafe abortions in 2003, compared with 10 per 100 000 in developed regions.⁵ Additional consequences of unsafe abortion include loss of productivity, economic burden on public health systems, stigma, and long-term health

[†]Japan, Australia and New Zealand have been excluded from the regional count, but are included in the total for developed countries

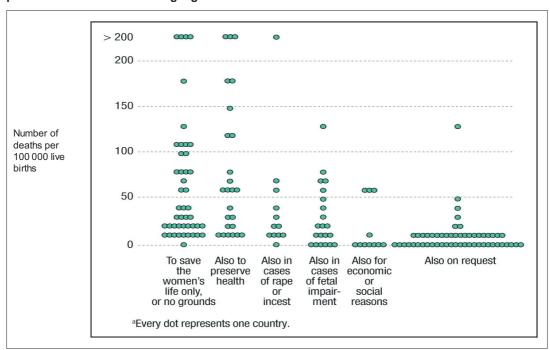


Figure 1. Distribution of countries by number of deaths attributable to unsafe abortion per 100 000 live births and legal grounds for abortion 17

problems, such as infertility. Among the 5 million women who are estimated to suffer temporary or permanent disability each year because of unsafe abortion, more than three million are likely to suffer from the effects of reproductive tract infections and 1.7 million are estimated to develop secondary infertility.5 Overall, some 24 million women are estimated to be currently suffering from secondary infertility due to an unsafe abortion.

BURDEN OF UNSAFE ABORTION AND RELATED MORTALITY BY REGION

Regions with greater percentage of the overall population of women in reproductive ages or with a higher percentage of the total number of unsafe abortions are intuitively expected to account for relatively more maternal deaths due to unsafe abortion. However, this does not appear to be the case. The burden of unsafe abortion deaths is disproportionately much higher in Africa than in other developing regions. For example, while Africa accounts for 25% of all births and 13% of all women of reproductive age in the world, its share of all unsafe abortions was 28% (Figure 2). More seriously, 54% of all unsafe abortion-related deaths occur in Africa. The risk of death due to unsafe abortion is much less in Latin America and the Caribbean as compared with the number of unsafe abortions in the region. Asia accounts for 50% of all unsafe abortions, but 43% of all maternal deaths due to unsafe abortion.

INTERNATIONAL DISCOURSE AND RESPONSE

The public health impact of unsafe abortion has long been recognized. As early as 1967, the World Health Assembly identified unsafe abortion as a serious public health problem in many countries.²¹ Discussions that grew out of the 1968 International Conference on Human Rights in Tehran culminated in the new concept of "reproductive rights," which was subsequently highlighted at the 1994 International Conference on Population and Development (ICPD). ICPD established a number of goals and targets, including universal access to reproductive health services by 2015. On induced abortion, the ICPD consensus statement noted:

All Governments and relevant intergovernmental and non-governmental organizations are urged to strengthen their commitment to women's health, to deal with the health impact of unsafe abortion as a major public health concern and to reduce the recourse to abortion through expanded and improved family-planning services. . . . In circumstances where abortion is not against the law, such abortion should be safe. In all cases, women should have access to quality services for management of complications arising from abortion. Post-abortion counselling, education and family-planning services should be offered promptly, which will also help to avoid repeat abortion.22

Table 5. Global and regional estimates of deaths due to unsafe abortion in 2005

Region and Sub-region	Number of maternal deaths due to unsafe abortion (rounded)	Deaths due to unsafe abortion (as % of all maternal deaths)	Deaths due to unsafe abortion per 100 000 live births (rounded)
World	70 500	13	55
More developed regions	< 60	4	*
Less developed regions	70 400	13	60
Least developed countries	24 000	10	85
Less developed regions, excluding China	70 400	13	70
Africa	38 400	14	115
Eastern	14 800	17	130
Middle	6600	11	130
Northern	1200	11	25
Southern	500	9	40
Western	15 300	13	140
Asia†	30 100	12	40
Eastern†	*	*	*
South-central	24 100	13	60
South-eastern	5000	14	45
Western	1000	12	20
Europe	60	6	٥
Latin America and the Caribbean	1800	12	15
Caribbean	300	12	35
Central America	400	11	10
South America	1100	12	15
North America	*	*	*
Oceania†	100	10	40
Australia/New Zealand	*	*	*

^{*}No estimates are shown for regions where the incidence is negligible.

The Special Session of the United Nations General Assembly in June-July 1999 urged countries that "in circumstances where abortion is not against the law, health systems should train and equip health-service providers and should take other measures to ensure such abortion is safe and accessible."23 The Reproductive Health Strategy of the WHO, approved in 2004, noted that "[a]s a preventable cause of maternal mortality and morbidity, unsafe abortion must be dealt with as part of the Millennium Development Goal on improving maternal health and other international development goals and targets."24 More recently, the Special Session of the African Union Conference of Ministers of Health, held in Maputo in September 2006, agreed on what is known as Maputo Plan of Action for the Operationalization of the Continental Policy Framework Sexual and Reproductive Health and Rights

2007–2010.²⁵ The following are among the strategic actions included in the plan of action:

- Enact policies and legal framework to reduce incidence of unsafe abortion.
- Prepare and implement national plans of action to reduce incidence of unwanted pregnancies and unsafe abortion.
- Provide safe abortion services to the fullest extent of the law.
- Educate communities on available safe abortion services as allowed by national laws.
- Train health providers in prevention and management of unsafe abortion.

The international discourse and resolutions signed by countries show consensus that unsafe abortion is an important and preventable cause of maternal death and that safe

[†]Japan, Australia, and New Zealand have been excluded from the regional estimate, but are included in the total for developed countries

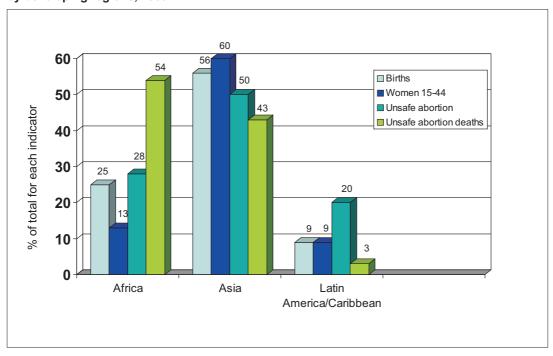


Figure 2. The percentage distribution of women, births, unsafe abortions, and related deaths by developing regions, 2003⁵

abortion services should be available to the full extent of the law. In addition, post-abortion care should be provided in all cases. Expanding access to family planning for prevention of unplanned pregnancy and unsafe abortion is also universally accepted. However, removing legal restrictions on access to safe abortion services remains a highly contentious issue. To identify reducing maternal mortality as a public health priority while failing to prevent unsafe abortions that cause deaths and disability among many women is inherently inconsistent. Similarly, much emphasis and support is given to providing post-abortion care, but relatively little attention is accorded to preventing unplanned pregnancies and unsafe abortion. While the public health impact of unsafe abortion has long been recognized, more needs to be done to remove the strategic and policy barriers to saving women's lives.

DEALING WITH THE PROBLEM

From 1995 to 2003, overall abortion rates declined, but much of the decline was in safe and legal abortion in developed regions. Unsafe abortions, however, 97% of which occur in developing countries, continue to prevail largely unabated. A woman's chance to have an induced abortion is about the same whether she lives in a region where abortion is available on request or where it is highly restricted.

Unsafe abortions account for 13% of all maternal deaths globally. Mortality due to unsafe abortion is disproportionately much higher in Africa than in any other developing region. In addition to the over 70 000 women who die from

unsafe abortion each year, 5 million women suffer temporary or permanent disability due to complications of unsafe abortion.

Unintended pregnancy is the root cause of induced abortion, whether safe or unsafe. More than one third of the approximately 205 million pregnancies that occur worldwide annually are unintended, and about 22% of all pregnancies end in induced abortion.5,15,16 Two thirds of unintended pregnancies in developing countries occur among women who are not using any method of contraception. An estimated 123 million married women in developing countries have an unmet need for contraception, that is, they do not want to have another child or they want to have one later, yet they are not using any method of contraception, either modern or traditional.²⁶ The use of contraceptives, especially of less effective traditional methods, does not entirely eliminate unplanned pregnancies. Each year an estimated 27 million unintended pregnancies occur as a result of method failure or ineffective use; of these, about 6 million occur even though the contraceptive method has been used correctly and consistently.²⁷

Given the broad recognition of unsafe abortion as a serious public health problem, it should be easy to agree on strategies and policies for addressing it effectively. However, the discourse is diverse, ranging from views of abortion as a human right and a woman's choice, to assertions that liberalizing abortion increases the incidence of abortion. Sometimes it is suggested that abortion is a taboo topic in certain cultural, social, or religious contexts or that there could be a public backlash against liberalizing the restrictions. Therefore, inaction is put forth as the best course of action. Much of the discourse has continued to be devoid of scientific evidence and informed discussion.

Prevention of unsafe abortion is key to achieving the Millennium Development Goal to improve maternal health. The interventions to prevent unsafe abortion include expanding access to modern contraceptive services, providing safe abortion to the full extent of the law, and tackling the legal and programmatic barriers to access to safe abortion. Countries experiencing shortage of physicians could allow trained mid-level health care providers to perform safe abortion during the first trimester.²⁸ An informed and objective discourse is also needed to prevent unsafe abortion and manage its consequences.

REFERENCES

- 1. Joffe C. Abortion and medicine: a sociopolitical history. In: Paul M, Lichtenberg ES, Borgatta L, Grimes DA, Stubblefield PG, Creinin MR, eds. Management of unintended and abnormal pregnancy: comprehensive abortion care. Oxford: Wiley-Blackwell; 2009:1-9.
- 2. Barstow D. An abortion battle, fought to the death. The New York Times, New York, July 26, 2009: A1.
- 3. World Health Organization. Prevention and management of unsafe abortion. Report of a technical working group. Geneva: World Health Organization; 1992.
- 4. Berer M. National laws and unsafe abortion: the parameters of change. Abortion law, policy and practice in transition. Reprod Health Matters 2004;12(24 Suppl):1-8.
- 5. World Health Organization. Unsafe abortion: global and regional estimates of the incidence of unsafe abortion and associated mortality in 2003. 5th ed. Geneva: World Health Organization; 2007.
- 6. Wilcox AJ, Horney LF. Accuracy of spontaneous abortion recall. Am J Epidemiol 1984;120(5):727-33.
- 7. Jones EF, Forrest JD. Underreporting of abortion in surveys of U.S. women: 1976 to 1988. Demography 1992;29(1):113-26.
- 8. Udry RJ, Gaughan M, Schwingl PJ, van den Berg BJ. A medical record linkage analysis of abortion underreporting. Fam Plann Perspect 1996;28(5):228-31.
- 9. Anderson BA, Vatus K, Puur A, Silver BD. The validity of survey responses on abortion: evidence from Estonia. Demography 1994;31(1):115-32.
- 10. Kimpouni D. Avortement. In: Centre National de la Statistique et des Études économiques (CNSEE) and ORC Macro. Enquête démographique et de santé de Congo 2005. Calverton, MD: CNSEE and ORC Macro;2006.
- 11. Osis M-J, Hardy E, Faúndes A, Rodrigues T. Dificuldades para obtener informações da população de mulheres sobre aborto ilegal. Rev Saude Publica 1996;30(5):444-51.
- 12. Canto de Cetina TE, Colven CE, Hernández Cano JM, Vera Gamboa L. Aborto incompleto: caracteristicas de las pacientes tratadas en el Hospital O'Horan de Merida, Yucatán. Salud Publica Mex 1985;27(6):507-13.

- 13. Ravolamanana Ralisata L, Rabenjamina FR, Razafintsalama DL, Rakotonandrianina E, Randrianjafisamindraokotroka NS. Les péritonites et pelvi-péritonites post-abortum au CHU d'Androva Mahajanga: à propos de 28 cas. J Gynecol Obstet Biol Reprod (Paris) 2001;30(3):282-7.
- 14. Nations MK, Misago C, Fonseca W, Correia LL, Campbell OM. Women's hidden transcripts about abortion in Brazil. Soc Sci Med 1997;44(12):1833-45.
- 15. Sedgh G, Henshaw S, Singh S, Åhman E, Shah IH. Induced abortion: estimated rates and trends worldwide. Lancet 2007;370:1338-45.
- 16. United Nations Department for Economic and Social Affairs. Population Division. World abortion policies 2007. (Wallchart). (ST/ESA/SER.A/264) New York: United Nations;2007.
- 17. The World Health Organization. The World Health Report 2008—primary health care (now more than ever). Geneva: WHO;2008:65. Available at: http://www.who.int/whr/2008/en/index.html. Accessed September 24, 2009.
- 18. David HP. Abortion in Europe, 1920-91: a public health perspective. Stud Fam Plann 1992;23:1-22.
- 19. Jewkes R, Brown H, Dickson-Tetteh K, Levin J, Rees H. Prevalence of morbidity associated with abortion before and after legalisation in South Africa. BMJ 2002;324(7348):1252-3.
- 20. Singh S. Hospital admissions resulting from unsafe abortion: estimates from 13 developing countries. Lancet 2006;368(9550):1887-92.
- 21. World Health Organization. World Health Assembly resolution: health aspects of family planning. Geneva: World Health Organization; 1967.
- 22. United Nations Population Fund. Programme of action adopted at the International Conference on Population and Development, Cairo, 5-13 September 1994. (ST/ESA/SER.A/149) New York: United Nations Population Fund;1995.
- 23. United Nations Population Fund. Key actions for the further Programme of Action of the International Conference on Population and Development, adopted by the twenty-first special session of the General Assembly, New York, 30 June-2 July 1999. New York: United Nations Population
- 24. World Health Organization. Reproductive Health Strategy to accelerate progress towards the attainment of international development goals and targets. Geneva: World Health Organization; 2004.
- 25. African Union. Universal access to comprehensive sexual and reproductive health services in Africa. Maputo plan of action for the operationalisation of the Continental Policy Framework for Sexual and Reproductive Health and Rights 2007-2010. Special Session: The African Union Conference of Ministers of Health: Maputo, Mozambique; 18-22 September 2006. Addis Ababa: African Union;2006.
- 26. Ross JA, Winfrey WL. Unmet need for contraception in the developing world and the former Soviet Union: an updated estimate. Int Fam Plan Perspect 2002;28(3):138-43.
- 27. World Health Organization. Safe abortion: technical and policy guidance for health systems. Geneva: World Health Organization;2003.
- 28. Warriner IK, Meirik O, Hoffman M, Morroni C, Harries J, My Huong NT, et al. Rates of complication in first-trimester manual vacuum aspiration abortion done by doctors and mid-level providers in South Africa and Vietnam: a randomised controlled equivalence trial. Lancet 2006;368:1965-72.