

## ABORTION WORLDWIDE REPORT: PART IV

### Data Sources, Compilation & General Issues

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This document summarizes how abortion data was compiled, data sources, principles applied in developing the data set, and some general and special data issues for the Abortion Worldwide Report. The entire data set covers 100 nations, territories and other regions, from their respective years of authorization through 2015, with a few exceptions. The cumulative total is 4,915 country-years of data, of which 3,596 are reported and 1,319 are estimated.

#### Goal and Background

The primary purpose of this report is to produce an objective, data-rooted estimate of the number of babies that have been aborted worldwide during the past 95 years, beginning with the first country to authorize abortion in 1920. Because of the nature of the data, this is a sacred accounting of their lives, presented from a moral perspective. This Report is the result of many years of meticulous effort to compile data and ensure its accuracy. Such a compilation also has many other applications, e.g., for relating to the demographic, health, and other policy consequences of abortion.

This data set merges two efforts to compile historical abortion statistics, those by Dr. Wm. Robert Johnston and by Thomas W. Jacobson. Dr. Johnston began collecting international abortion statistics in 1983, and began posting compilations online at Johnston's Archive in 2001. Currently (2016), this abortion data collection includes 511 web pages representing abortion data for 112 countries and 26 territories or regions of special status, including sub-national region data for 49 countries. These draw on a database of over 91,000 data values compiled from over 1,500 sources. Sources for Dr. Johnston's database include (with percentage of 2013 international database entries):

- Government statistics and health agencies (12%);
- United Nations and other international organizations (78%);
- Non-governmental organizations (1%);
- Academic publications (9%); and
- Supplementary media or other secondary sources (0.2%).

For Dr. Johnston's collection, see: <http://www.johnstonsarchive.net/policy/abortion/>.

Mr. Jacobson began collecting abortion data on nations during the years he served as Representative to the United Nations for Focus on the Family, USA (2001-2010). Some of the

major obstacles faced included distinguishing between reliable data and unsubstantiated estimates, inconsistent reporting, and under-reporting. Regarding estimates, he finally concluded that any estimates not anchored to actual reported abortions were not trustworthy. In the studies, reports, and literature on international abortion, there is a preponderance of estimates, but too often no actual reported data cited to enable verification of those figures. Thus the data in Mr. Jacobson's database are primarily from three sources: United Nations and its agencies (which gather data from governments), national and regional governments, and Dr. Johnston's compilation. Upon his departure, Focus on the Family entrusted the project to him.

## Data Sources and Compilation

Data sources were categorized as preferred, acceptable or unacceptable. The goal was to develop, for each nation, time series of abortions that are grounded in objective reported data. Therefore, a **restrictive approach** was adopted in which officially reported figures were preferred, and where estimates (either published or by the authors) were only accepted if they were well-constrained with limited uncertainties resulting from assumptions, even if that resulted in incomplete figures. Estimates based on sampling of a small fraction of a country's population and/or non-empirical assumptions were viewed as unacceptable and were consequently rejected.

The data are primarily from reported numbers of abortions (3,596 country-years of data). To provide complete data sets for each country, missing data years were supplemented with estimates deemed reliable (1,319 country-years). The authors developed these estimates using the methodologies described in the next brief (Methodologies for Estimating Missing Data), with the exception of a small number of estimates from government or academic sources.

Preferred data are those from official sources. Most (but not all) jurisdictions with legal abortion gather statistics on abortions. These are typically reported by government statistics agencies and/or health agencies. The data may be published directly, although in some cases it is only available through secondary sources. At least 57 countries and 13 territories directly publish abortion statistics or have in the past. Links to such sources are available on line and may be found at (Johnston, 2016).

Of the reported data published in this Report, 27.0% is from official governmental sources. This includes cases where data is merged from multiple reporting regions within a country when national-level figures are not necessarily reported, but the respective regions do report statistics (cases include Australia, Bosnia and Herzegovina, Mexico, the United Kingdom, and the United States).

The primary intergovernmental organization source of abortion statistics is the United Nations, including the demographic division, the World Health Organization, and other subsidiary agencies. The UN and its agencies systematically collect data information directly from national governments and other sources, though reporting is voluntary and very non-uniform. UN-compiled data is published in multiple venues (e.g. UN, 2004, 2015, 2016; UNICEF, 2016; WHO,

2012, 2016), and includes some data not directly published by the respective countries. UN sources account for 38.0% of the reported data in this Report.

Other intergovernmental organizations that have compiled and published abortion statistics for member countries include the Council of Europe (e.g. COE, 2004), the European Union (e.g. Eurostat, 2016), the Pan American Health Organization (e.g. PAHO, 1998), and the World Bank (e.g. World Bank, 2002). These organizations account for 8.9% of reported data in this Report.

Where official or intergovernmental organization data are not available, data was obtained from peer-reviewed academic publications. In many cases, official government statistics are not widely available apart from publication in secondary academic sources. This is often the case for historical data, either more than a few decades old and/or from countries which no longer exist following the collapse of Soviet communism. Where actual data are reported (as opposed to estimates), these figures were adopted unless there was information to the contrary. A number of such sources are themselves significant compilations (e.g. Avdeev et al., 1995; Sachdev, 1988; Tietze, 1963, 1969, 1979, 1981; Williams, 1996). Such sources account for 23.3% of reported figures in this Report.

Other possible sources of abortion statistics are organizations that monitor abortion numbers because of their advocacy positions on this issue. The primary non-governmental organization source of abortion statistics is the Alan Guttmacher Institute (AGI). This organization, and related groups such as Planned Parenthood, advocate wider access to and utilization of abortion. Some data products from AGI are reliable by virtue of their direct access to abortion providers and the greater willingness of providers to share data with them, as is the case within the United States. For some countries, pro-life organizations serve as sources of otherwise unpublished official statistics. Such cases include situations in which government data are compiled but not published, and pro-life organizations obtain data through freedom of information requests and publish the data. Advocacy organizations account for 1.7% of reported figures in this Report.

In some cases, abortion numbers are reported in the news media. Typically these are news reports covering officially reported abortion statistics that are not directly published by the relevant government agency. These reports account for 1.1% of reported figures in this Report.

Peer-reviewed publications on abortion statistics are dominated by authors who have a perspective approving or urging greater abortion access and utilization. The majority of articles and studies in these publications do not include actual reported data. The family planning and medical literature contain estimates and conclusions that are often not adequately justified with actual reported data or examples. For an analysis of many of the problems with these estimates, see Antkowiak and O'Bannon, 2003, who analyzed the deficiencies in AGI published estimates. This particularly affects studies based on surveys of limited scope in sample size, geographic coverage, or socioeconomic representativeness, which are then extrapolated to national figures based on one or more assumptions. When these estimates are combined to produce global estimates, they are equally invalid, and these are addressed in Part VII. Such

estimates are not used in this Report.

The Report does have completeness issues in some cases, but its conservative approach yields results that are justifiably accurate, and are not overestimates.

Are there some abortions not captured by the official statistics? Yes, this is likely. It may be more of an issue in recent years with the promotion and proliferation of readily available chemical abortifacients. Some of those are not tracked or reported. Yet, in the absence of hard data showing otherwise, this alone does not justify guesses about additional use or clandestine abortions where nothing is shown.

## **Additional Compilation Methods & General Issues**

**Data by Country of Occurrence:** To maximize data completeness and reliability, reported data was compiled by country/region of occurrence, that is, where the abortion occurred. Most jurisdictions do not report (and often do not even collect) data by residency of the women obtaining abortions. Consequently any compilation by residency would suffer from incomplete reporting, inconsistent both in time and from country to country. For a few cases, abortion figures by country/region of residency are provided, where a majority of known abortions are obtained abroad: this is the case for Ireland, Malta, Isle of Man, Guernsey, and Jersey.

**Variance in Reported Data:** For the same region and year, there are often differences in reported abortions between the above official or UN sources, even between different publications by the same source. These discrepancies were resolved by:

- Selecting the most recent published number, as updated;
- Identifying cases of likely typographical errors;
- Removing spontaneous miscarriage data where known;
- Preferring figures for all abortion occurrences regardless of residency;
- Sorting out differences in geographic reporting;
- Sorting out differences in coverage of types of abortion providers (e.g., hospitals versus private facilities); or
- Reconciling different reporting periods (e.g., by fiscal year or incomplete year).

In cases where the nature of the disagreement cannot be resolved, the higher value was adopted under the assumption that it represents the most complete reporting. An example is where different agencies report abortions for the same country, typically with overlapping coverage but one being more complete than the other.

**Miscarriages:** Regarding inclusion of miscarriages, Table 1 identifies countries where this is a known or possible issue.

**Table 1. Whether Miscarriages are Excluded from Abortion Statistics, by Country/Territory**

Abortion figures are for induced abortions only?	Countries or territories
Yes for recent years; No or uncertain for earlier years	Bosnia and Herzegovina, Croatia, Estonia, Kosovo, Kyrgyzstan, Macedonia, Montenegro, Serbia, Slovenia
Mostly Yes	Australia, Turkey, Vietnam
Uncertain	Albania, Armenia, Azerbaijan, Belarus, Bulgaria, Comoros, Cuba, Czech Republic, Czechoslovakia, East Germany, Georgia, Guyana, Hungary, Kazakhstan, Latvia, Lithuania, Moldova, Mongolia, Nagorno-Karabakh, Poland, Romania, Seychelles, Slovakia, Tajikistan, Transnistria, Turkmenistan, Ukraine, Uzbekistan, Yugoslavia
No	Bahrain, U.S.S.R.

**Restrictive Use of Estimates:** Abortions estimates were used restrictively, both for missing data and for incomplete data. It is certainly the case that abortion reporting is significantly incomplete in many countries that permit the practice, and that illegal abortion occurs at significant levels in many other countries. It is also true that many published estimates of abortion suffer from questionable reliability due to underlying assumptions biased by an advocacy position. Estimates were adopted only if they are nationally representative, as in the case of government survey-based estimates in South Korea (e.g. Hong, 1988).

The same principle was applied to the authors’ estimates, which address gaps in time or completeness for a given year. By examining historical abortion statistics across countries, regions within countries, and time periods (Johnston, 2016), it became evident that abortion figures are often similar from year-to-year. Such a trend generally holds despite much greater variations between the subnational regions within a country. This is significant because many survey-based national estimates in the literature involve incomplete sampling within the country, such that the assumption of uniformity across regions leads to flawed estimates. In contrast, the authors’ estimates, which effectively assume general uniformity across time in total national abortions, tend to be more accurate, as shown in section 2 of the next brief pertaining to missing data intermediate to reported data. Also, these estimates for missing years are based on data that is relatively complete for years of reported figures, whereas survey-based methods are typically extrapolated from very sparse data.

For years of missing data in country time series, estimation methods developed and tested for accuracy, as described separately in the next brief of this Report. These methods are strictly empirical to eliminate as much as possible the subjective assumptions that could affect the estimates. For several countries (Australia, Austria, Canada, South Africa, South Korea, U.S.S.R. and successor states, United States, Yugoslavia and successor states), estimates were developed based on incomplete time series for sub-national regions (e.g., states, provinces, territories), and/or by examination of trends of induced abortions versus spontaneous miscarriages. For 1,319 country-years of data for which estimates were made, about half (656)

are well-constrained and accurate within 20%; and the other half (663) are less well constrained and accurate within a factor of 2. The estimates in these two categories are identified as such in the tabulation.

**Illegal Abortions:** Where reported data on illegal abortions exists, those figures are included and called out in the final country tallies. No estimates (e.g. interpolations) were made for illegal abortions, and published estimates of illegal abortions were generally rejected because they are prone to exaggeration. Illegal abortions in the U.S.S.R. are a special case addressed in the U.S.S.R. note below. The fact that illegal abortions occur is not in question; but they are likely to be overestimated and overemphasized by those advocating abortion authorization, and may be underestimated and underemphasized by those seeking to maintain protective policies.

**Data Limitations:** To be clear, this Report's data set is limited by the completeness of available official reporting, which affects some countries more than others. This limitation is common to other such data sets, including as cited above. Countries are identified where the data tabulation is likely to be nearly complete or where it is known incomplete. Given the objective and scope of the Report, the resulting data set is sufficient to bear on the moral and demographic consequences of abortion, as well as to provide a tool for examining indirect consequences such as health and social impacts.

## Special Data Issues

**Australia** only reports national-level data for Medicare funded abortions, and these data may include some procedures other than induced abortions. Two regions report data that include privately funded abortions.

**Bosnia and Herzegovina** comprises two autonomous regions: the Federation of Bosnia and Herzegovina and Republic Srpska. Abortion data for the Federation are limited.

**Canada** ceased uniform collection of national-level data in recent years. Level of reporting subsequently varies among provinces and territories.

**The Peoples Republic of China** has two often-differing sources for abortion statistics: the State Birth Planning Commission (SBPC) and the Ministry of Health (MOH). These official statistics are reported to be significantly incomplete in recent years.

The **Republic of China (Taiwan)** Ministry of Health reports abortion figures which are widely understood to be incomplete, though estimates in the literature claiming abortion totals 5-10 times higher than reported figures appear to be unsupported.

The **Republic of Korea** (South Korea) has little available reported abortion data, but estimates for many years are available from government or other surveys with large samples. These estimates are considered credible.

In **Mexico** abortion policy varies at the state level; available abortion statistics are primarily those reported from the Federal District, which has the most permissive abortion policy.

The **Netherlands** has provided abortions to significant numbers of foreigners for many years. For some years of the 1970s, more abortions in the Netherlands were for foreigners than for residents. Data for non-resident abortions is missing for some years; no attempt was made to estimate these as such numbers fluctuate significantly as a result of policy changes in other countries.

**South Africa** abortion statistics are reported for different reporting years by two different agencies, with completeness varying over time from state to state.

**Turkey** has reported abortion statistics for some years, but these only include hospital abortions and are consequently incomplete. More complete estimates of abortions have been published for a few years and these figures are included, but no attempt was made to estimate underreporting for other years due to significant variations in abortion policies over time.

In the **United States**, individual states have widely varying policies regarding abortion data collection. National-level data are collected by the Centers for Disease Control on a voluntary basis from the state agencies and are thus incomplete. The Guttmacher Institute periodically publishes estimates based on state agency data and surveys of providers; these are generally considered the most reliable national-level figures.

The **former U.S.S.R., Yugoslavia, and Czechoslovakia** each dissolved into a number of successor states based on pre-dissolution republics or regions. Pre-1971, and especially pre-1960, data for those republics/regions often have limitations. Consequently for some early years in these cases, only national-level (e.g., U.S.S.R.) abortion figures and estimates are included, with some incomplete republic and regional data.

The **U.S.S.R.** Ministry of Health (MOH) was principally responsible for compiling abortion statistics, but sometimes other government entities reported figures not included in the MOH figures. U.S.S.R. abortion figures for the 1930s-1940s are often ambiguous as to whether they include illegal abortions; consequently some derived estimates may effectively include some illegal abortions.

For **Vietnam**, official abortion figures (where available) are significantly incomplete. For a few years, estimates of total abortions are available which are significantly higher than government figures. These are included but no attempt is made to estimate underreporting for other years.

A number of **communist countries** reported large numbers of illegal abortions for certain time periods.

Many countries of **Eastern Europe** do not consistently separate induced abortions from



miscarriages (spontaneous abortions).

Many of the **developing countries** that do report abortion statistics have incomplete reporting, particularly in regard to clinic abortions. Such underreporting is likely significant in several Asian countries where sex-selection abortions are discouraged or prohibited.

Since abortion reporting is largely through the respective governing authority, statistical coverage is impacted by de facto status of **contested regions**. Reported data by such regions is included without necessarily recognizing the status claims of (or on behalf of) such regions.

These cases include:

- The Georgian regions of **Abkhazia** and **South Ossetia** have not been under control of the central government for some time, including prior to the Russian invasion in 2008. Georgia has not been able to report statistics for these regions for some years.
- The occupation and annexation of **Crimea** by Russia in 2014 is not generally recognized by the international community. Unless the situation changes, it is likely that Ukraine will not be able to report statistics for Crimea whereas Russia will likely report such statistics.
- The occupation and annexation of **Estonia**, **Latvia**, and **Lithuania** by the U.S.S.R. in 1940 was never recognized by some countries. Statistics for these regions were reported by the U.S.S.R. until its dissolution.
- The region of **Nagarno-Karabakh** has proclaimed itself a republic but this is not generally recognized by the international community; it is instead generally recognized as part of Azerbaijan. Azerbaijan has been unable to report statistics for this region since the 1990s, whereas local Nagarno-Karabakh authorities do report statistics.
- The **Transnistria** region of Moldova has proclaimed itself the Pridnestrovian Moldavian Republic, but this is not generally recognized by the international community. Moldova has not been able to report statistics for Transnistria since the 1990s, whereas Transnistria has reported some statistics.

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