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## **Debunking a Critique of Guttmacher's Methodology To Estimate Unsafe Abortion**

Please note: This document summarizes key points of a detailed rebuttal (including full citations) that can be found here:

<http://www.guttmacher.org/media/resources/response-to-methodology-critique.pdf>

### **Background**

In a report published in the May 2012 issue of the journal *Ginecología y Obstetricia de México*, Elard Koch, of Chile's Catholic University of the Most Holy Conception, et al. criticized an approach developed by the Guttmacher Institute to estimate the number and rate of induced abortions and complications from unsafe abortions in countries where the procedure is highly legally restricted. Their critique focuses largely on a Guttmacher estimate of abortion and abortion complications in Colombia. Koch et al. also offer an alternative methodology for estimating abortion in Colombia and other countries.

As documented below and detailed in our [full rebuttal](#), the Koch et al. critique is characterized by pervasive distortions of Guttmacher's methodology, and their proposed alternative methodology is based on scientifically unsound and illogical assumptions and contains such serious errors that its results are not valid.

### **Koch et al.'s critique of the Guttmacher methodology is unfounded**

The Guttmacher-developed abortion incidence complications method (AICM) bases its estimates on country-specific data and has provided consistently reliable estimates. It follows a rigorous scientific and realistic approach. Studies using the AICM have been conducted in several countries, peer-reviewed by independent experts multiple times (that is, each study has undergone peer review) and published in a number of respected journals. This approach and the findings it has generated have also been used by international organizations such as the World Health Organization. The two main components of the AICM are the Health Facilities Survey, which is used to estimate the number of women who receive facility-based treatment for complications of induced abortion, and the Health Professionals Survey, which yields the proportion of all women having abortions who receive facility-based treatment for complications.

Koch et al. purport to criticize both components of the AICM. However, they do so mainly by resorting to misrepresentations and outright distortions. For instance:

- Koch et al. falsely assert that Guttmacher dismisses information available from hospital records. In reality, the AICM uses this information in countries that have hospital records of good quality. That was the case for our 2006 estimates for Mexico and 1989 estimates for Colombia. In contrast, a second study of Colombia, which produced estimates for 2008, used a Health Facilities Survey because the quality of the country's hospital records had deteriorated to an unacceptable level after the health system was decentralized in 1993.
- Koch et al. falsely state that the Colombia Health Facilities Survey is based on an unscientific "convenience" sample. In reality, it was a nationally representative sample selected through use of a multistage stratified cluster sampling technique, a widely accepted method ([explained in detail on pages 2-3](#)).
- Koch et al. further assert that the heads of hospital obstetrics and gynecology departments do not have any knowledge about postabortion patients seen in their facilities. It is difficult to imagine (and, frankly, disrespectful to claim) that heads of obstetrics and gynecology departments are ignorant of their departments' caseload of postabortion patients and unable to competently answer questions related to it.
- Koch et al. also make erroneous claims about the Health Professional Survey, stating that it is based on a convenience sample and that respondents are not equipped to provide the type of information requested. In reality, this survey is administered to a purposive sample of health professionals knowledgeable on the issue of abortion to obtain their professional judgment and a broad community-based perspective about the context of abortion provision and postabortion care ([explained in greater detail on page 3](#)).

While Guttmacher experts routinely work with other researchers to refine and improve various scientific methods, the Koch et al. critique cannot be viewed as a good-faith effort to move the scientific process forward. Rather, Koch et al. attempt to raise doubts about the AICM by seriously misrepresenting many aspects of it. Guttmacher rejects these false criticisms and stands by the validity of its methodology.

### **Koch et al.'s alternative methodology is deeply flawed and rests almost entirely on unfounded assumptions**

Not only does Koch et al.'s critique of Guttmacher's methodology fail to withstand scientific scrutiny, their proposed alternative methodology falls outside the bounds of rigorous and sound research. It consists of two components: estimating the number of women hospitalized for complications of induced abortion and estimating the total number of induced abortions.

However, the estimation methodologies they propose use incorrect assumptions that lead to erroneous findings and wrong conclusions ([a detailed discussion of the various errors by Koch et al. can be found on page 4](#)).

Among their most egregious errors:

- Koch et al.'s erroneous assumptions inflate the number of spontaneous abortions (miscarriages) requiring treatment in hospitals. Because the symptoms are similar and women (and providers) rarely specify when postabortion care corresponds to induced rather than spontaneous abortions, the only way to estimate the cases of highly stigmatized induced abortions is to first remove the spontaneous ones. By falsely asserting that all women having spontaneous abortions after six weeks of pregnancy require and receive treatment in hospitals, Koch et al. grossly inflate the number of spontaneous abortions presented in health facilities and, based on that inflated figure, underestimate the corresponding number of women treated for complications from induced abortions. This, in turn, leads them to significantly underestimate complications from unsafe abortion.
- Koch et al. erroneously assume data from one country apply to other countries. This assumption is a fallacy for any demographic measure, as such measures are influenced by many country-specific factors; it is especially erroneous with regard to abortion in settings where the procedure is illegal and stigmatized, and occurs clandestinely, and where countries have widely varying socioeconomic conditions.
  - Koch et al. calculate the number of induced abortions in Colombia (and other Latin American countries) by applying the abortion rate for Spain in 1987, the year abortion was legalized there, to Colombia and other Latin American countries. Koch et al. fail to provide any sufficient justification for this assumption and ignore the vast differences between these countries.
  - In the case of Colombia, their methodology assumes that the country is identical or similar to Spain in key ways. However, the two countries differ significantly in many important respects: For instance, even in 1987, Spain was more developed than Colombia is today—it had a higher level of educational attainment, higher economic development, better access to health care and different public policies. The two countries also differ with respect to patterns of family building and contraceptive use, as well as family size preferences. In short, simply importing Spain's 1987 abortion rate into 2008 Colombia is wholly inappropriate.
  - Testing Koch et al.'s erroneous approach, we applied Spain's official rate of induced abortion for 1987 (2.02 abortions per 1,000 women of reproductive age) to the total number of women of reproductive age in Mexico City (just about 2.3 million in 2006), producing an estimate of 4,638 induced abortions in Mexico City. However, 4,638 is only 28% of the number of officially reported public-sector procedures in Mexico City (16,475 in 2009 and 16,495 in 2010), a number that does not include the large number of legal abortions provided in the private sector or clandestine abortions that continue to take place in Mexico City. This further demonstrates how inaccurate and untenable Koch et al.'s approach is.
  - Similarly, Koch et al. randomly apply the likelihood of hospitalization in one country to another. In the case of Colombia, where hospital records are not of good enough quality to be used to estimate the number of women treated for induced and spontaneous abortion complications in health facilities, Koch et al. base their estimate on hospital data from Chile. This approach is grossly

inappropriate and ignores the many important ways in which Chile and Colombia differ from each other—including coverage, quality and distribution of health facilities, and women’s educational attainment – and assume women in both countries respond in the same way to having an induced or spontaneous abortion.

- Koch et al.’s approach does not stand up to scrutiny when applied to countries with good hospital records, such as Brazil and Mexico. When tested in places with good hospital records, Koch’s alternative methodology yields grossly wrong results. Its estimates of the number of women treated in hospitals for complications of *spontaneous abortion alone* are higher than the recorded numbers of women hospitalized for any abortion complications: 78% higher for Brazil and 23% higher for Mexico. This demonstrates that Koch et al.’s assumptions are unreliable and that their claim—that the Guttmacher Institute’s AICM overestimates the number of induced abortion complications—is without basis.
- Koch et al.’s overall approach for Mexico is seemingly ignorant of the situation in that country. Koch et al. conflate Guttmacher’s estimate of the total number of abortions in Mexico with the number of legal abortions recorded in public-sector facilities in Mexico City. To appreciate the extent of their mistake, it is important to understand that abortion laws in Mexico are highly restrictive in most of the country, except in Mexico City (where first-trimester pregnancy termination was decriminalized in 2007). Women in all other states (that is, 93% of all women of reproductive age) still resort to clandestine procedures. As a result, the prevalence of illegal induced abortion continues to be high throughout the country. Only 3% of all women having terminations in Mexico City live outside the greater metropolitan area. In addition, there likely continue to be high levels of both legal, but unrecorded, private-sector procedures and unsafe abortions in Mexico City because of issues related to stigma, ignorance of the law and inadequate access to safe legal services.
  - Koch et al. ignore these factors when they claim the number of legal pregnancy terminations provided by the public sector in Mexico City represents the total number of induced abortions nationwide in Mexico. No one knowledgeable about the situation can reasonably believe that is the case. Doing so is incorrect and highly misleading.

## **Conclusion**

Koch et al. fail in both their attempt to discredit the AICM and their attempt to present a credible alternative for estimating abortion incidence in countries where the procedure is highly restricted. Their approach is simplistic, highly misleading and simply wrong. Its underlying assumptions have no scientific basis and show no respect for contexts, which is a significant problem. Their erroneous procedures and assumptions have led Koch et al. to inaccurate results and to an unfounded attack on the Guttmacher Institute’s AICM.

Koch et al. do a disservice to the scientific process. It is especially unfortunate that, at the same time, they are willing to downplay the problem of unsafe abortion and its consequences among women in Latin America.