

Evidence on abortion figures overestimated in Mexico fuels scientific debate in medical journal

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A detailed letter entitled "Methodological flaws in the estimation of abortion in Latin America: Author's reply to Singh and Bankole" was published today in *Ginecología y Obstetricia de México (Ginecol Obstet Mex)*, a Mexican peer-reviewed journal specialized in Obstetrics and Gynecology. The letter is a reply by researchers from the Institute of Molecular Epidemiology (MELISA) to researchers from the Alan Guttmacher Institute (AGI) regarding methodological flaws that led to a significant overestimation of induced abortions figures in the Federal District of Mexico (Mexico DF) before an after abortion legalization at this state. "Our letter is part of an intense scientific debate in *Ginecología y Obstetricia de México* that addresses issues raised in a previous article by Susheela Singh and Akinrinola Bankole in representation of AGI regarding our evaluation of the methodology employed to estimate abortion figures; we provide additional information supporting conclusions of our multinational collaborative study published two weeks ago in the *International Journal of Women's Health*, showing that abortion figures and maternal mortality rates were largely overestimated in Mexico" said Elard Koch, the Chilean epidemiologist leading the research.

An intense [academic debate](#) between Koch *et al* and researchers from AGI was initiated after a first original article published in May of this year in the same journal and entitled "Overestimation of induced [abortion](#) in Colombia and other Latin American countries", including a

thorough review of the methodology employed by AGI to estimate induced abortion figures in eight Latin American countries. The study showed that subjective opinion surveys used for obtaining abortion estimates were strongly exposed to recall and selection biases and were applied to a small sample of non-randomly selected individuals. Koch explained that "as opposed to relying on subjective opinion surveys that overestimate at least 10-fold the number of abortions, estimation of abortion figures by using objective vital statistics and readily available information allows for any interested party to reproduce and/or corroborate the data, which is essential to all scientific research; furthermore, it offers the advantage of quantifying the potential error of the estimation method, as we recently illustrated in the case of Mexico DF" said Koch.

The new article published this week in response to authors of AGI, also provides additional data illustrating the relative contribution of different causes of maternal death in Mexico during the last decade, when the adequate codes of the International Classification of Diseases are employed. The data, bound to refuel the abortion debate currently taking place in Mexico on account of the overestimation of Mexican maternal mortality rates by researchers of IPAS-Mexico. In fact, new complementary information shows that over 96% of total causes of maternal death were unrelated to induced abortion over the last decade. Koch additionally indicated that "discrepancies arising from the use of inappropriate numerators and denominators to construct mortality ratios not only have led to overestimate maternal mortality rates in Mexico, but also have led to the erroneous conclusion of a null progress in maternal health over the last two decades in this country".

The last studies on maternal health in Mexico have proved to be very controversial since Koch *et al* detected that a study conducted by Rafaella Schiavon and colleagues from IPAS-Mexico, employed fictitious numbers of live births instead of the readily available figures

of official registered live births for constructing maternal and abortion mortality ratios. Discrepancies arise when there is a significant difference between the projected (fictitious) and observed (actual) figures. Koch *et al.* found that projected figures of live births were between 300,000 and 700,000 lower than registered live births, in the period between 1990 and 2010. "It is very hard trying to understand why Schiavon *et al* used fictitious denominators when actual data of live births are readily available in Mexico. Clearly, dividing any number of deaths by a figure of live births (projected) substantially smaller than the figure of registered live births (official) will unavoidably lead to a large error and overestimation in maternal mortality ratios" explained Koch.

Interestingly, this new communication also provided a comparison of maternal mortality ratio (MMR) trends based on official data in the US and Chile during the last two decades. While Chilean MMR shows a downward trend, from 39.78 to 16.96 per 100,000 live births between 1990 and 2009, US MMR showed an upward trend, from 8.95 to 23.24 per 100,000 [live births](#) during the same period. "These data further support the notion that legal abortion restrictions do not have necessarily and univocally a deleterious effect on maternal mortality rates, in agreement with the conclusions of the Chilean natural experiment published in May this year in *PLoS ONE*. Taking this into consideration and our more recent study on maternal mortality, it is very unlikely that maternal health can be significantly improved by changes in abortion legislation, simply because there is not a cause-effect relationship between the legal status of abortion and maternal mortality. In addition, because the contribution of illegal induced abortion to [maternal mortality](#) causes is marginal in comparison with other causes, more comprehensive strategies such as increasing access to emergency obstetric care and specialized obstetric and perinatal care are urgently required." Koch concluded.

More information: Koch E, Bravo M, Gatica S, Stecher JF, Aracena

P, Valenzuela S, Ahlers I (2012) Methodological flaws in the estimation of abortion in Latin America: Author's reply to Singh and Bankole. *Ginecol Obstet Mex* 80(11):740-747. Available at www.melisainstitute.com/upload...13_deficiencias1.pdf (in Spanish).

An official translated version of this letter can be found here:
www.melisainstitute.com/upload...13_deficiencies.pdf

Koch E, Bravo M, Gatica S, Stecher JF, Aracena P, Valenzuela S, Ahlers I (2012) Overestimation of induced abortion in Colombia and other Latin American countries. *Ginecol Obstet Mex* 80(5):360-372 (in Spanish). Available at www.nietoeditores.com.mx/ginec...atinoamericanos.html

An official English version written by the authors can be found here:
www.melisainstitute.com/upload...5_overestimation.pdf

Koch E, Aracena P, Gatica S, Bravo M, Huerta-Zepeda A, Calchoun BC (2012) Fundamental discrepancies in abortion estimates and abortion related mortality: A reevaluation of recent studies in Mexico with special reference to the International Classification of Diseases. *Int J Women Health* 4: 613-623. Available at www.dovepress.com/articles.php?article_id=11688

Women's Education Level, Maternal Health Facilities, Abortion Legislation and Maternal Deaths: A Natural Experiment in Chile from 1957 to 2007. *PLoS ONE* 7(5): e36613.
doi:10.1371/journal.pone.0036613. Available at www.plosone.org/article/info%3Adoi%2F10.1371%2Fjournal.pone.0036613

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