

LETTER TO THE EDITOR

In response to “missed opportunities and potentially misleading results in maternal mortality study”

Sir,

We thank Dr. David C. Reardon for drawing attention¹ to our publication “Maternal mortality in Italy: results and perspectives of record-linkage analysis”² and for asking for a disaggregation of results by different types of pregnancy outcome. We agree with Dr. Reardon that it is important for researchers and health policy makers to explore discrepancies relative to different reproductive health experiences in order to design and apply targeted interventions for maternal mortality reduction.

Unfortunately, record-linkage based studies do not always allow this sort of analysis. In Italy, for example, hospital discharge register (HDR) and births register are not linkable. Information on pregnancy outcome can therefore be deduced only by the ICD-9 CM codes used in HDR, which does not include information on gestational age at delivery. Information on the vitality of the newborn is also not always available. In those circumstances we were only able to disaggregate maternal deaths (during pregnancy or within 42 days after pregnancy) for the pregnancy outcomes shown in Table 1.

The calculation of the appropriate denominators is also challenging, therefore the number of live births is conventionally used as proxy measure of the total number of pregnancies worldwide.³

Based on data sources available in our country, we estimated disaggregated maternal mortality ratio (MMR) for induced abortion and for maternal deaths occurring during pregnancy and after delivery. Induced abortions are in fact identified by specific ICD-9 CM codes and by a dedicated surveillance system in place in Italy since 1982. The number of deliveries was computed through the national HDR.

The MMR after induced abortion is 1.20 per 100 000 induced abortions (95% confidence interval [CI] 0.52-2.37), whereas MMR after pregnancy and delivery is 8.49 per 100 000 deliveries (95% CI 7.48-9.61). Therefore, our results suggest that the risk associated to


pregnancy and to delivery is much higher than the risk related to induced abortion within 42 days after pregnancy.

In line with the theme-based approach to maternal mortality we have adopted in our publication, we are now finalizing a specific record-linkage study on maternal deaths by suicide occurring during pregnancy and within 1 year from pregnancy outcome using further data sources (eg HDR, Drug Claims Register, Mental Health Registers). The data analysis on suicide after pregnancy, inspired by a seminal paper on the topic,⁴ includes a disaggregation by pregnancy outcome. We hope that this analysis will add further knowledge which may contribute to the prevention of avoidable maternal mortality.

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TABLE 1 Distribution of maternal deaths by pregnancy outcome

Pregnancy outcome	n	%
Induced abortion	8	2.9
Miscarriage	17	6.1
During pregnancy	46	16.6
After birth	205	74.0
Missing	1	0.4
Total	277	100.0

REFERENCES

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APPENDIX 1

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