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Maths and miscommunications

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Colm OBoyle and Joan Lalor explore maternal death reporting in Ireland

February 2015 marked the joint launch in Ireland of the MBRRACE-UK report (which now includes Irish cases in its confidential enquiry) and the Irish Maternal Death Enquiry (MDE).

National maternal death statistics allow us to recognise patterns and make comparisons about the ongoing quality of maternity services overtime. Statistics, however, can only tell you so much. In-depth enquiry into individual deaths reveals much more and allows focused recommendations for the improvement of services.

Recent cases in Ireland[1,2] demonstrate that internal enquiries into maternal deaths and serious incidents in Irish maternity settings have been entirely inadequate. In the UK, maternal death statistics have been presented alongside in-depth, confidential enquiries into individual deaths as part of the national confidential triennial enquiry process. The issue of confidentiality might be seen by the bereaved family as a failure of transparency and a denial of responsibility and accountability. It is argued, however, that confidential enquiries encourage openness on the part of staff and enable an objective examination of the circumstances surrounding each mother's death. This year, for the first time, confidential enquiries into maternal deaths in Ireland, as distinct from the Irish maternal death statistics, have been included in the MBRRACE-UK confidential enquiry into maternal deaths and morbidity report, [2] while the Irish statistics themselves appear only in the Maternal Death Enquiry Ireland (MDE)[1]

It is perhaps unfortunate that these Irish statistics are reported under the title Confidential Maternal Death Enquiry Ireland (MDE). The inclusion of 'confidential' and 'enquiry' in the title has led to much confusion, because it could be inferred that all Irish maternal deaths are subject to this same process of enquiry that has been established for a very long time in the UK. An overriding problem is capturing data on all maternal deaths. Although the MDE reports Irish maternal death statistics, albeit more accurately than those available from the Irish civil death registration system, it may very well be that as few as one in four of these tragic deaths are included in the review. This commentary focuses on two aspects of the system for finding, investigating and reporting of maternal deaths in Ireland: mathematics and miscommunication.

The mathematics of calculating maternal death statistics In order to make meaningful comparisons and to allow for very different population sizes, health indicators need to be collected and reported in the same way. Simple fractions will be used to illustrate this point. In fractions, the numerator is the number

above the line and the denominator is the number below. To determine how safe a maternity service is, we need to know how many women died (the numerator) out of the total number of women cared for by that service (the denominator). Differences in how the numerator and the denominator are determined will undermine fair international comparison.

Identifying the numerator

The authors of the MDE Report in Ireland have stated that as many as four times the number of maternal deaths reported by the Central Statistics Office (CSO) have been discovered through their 'active case ascertainment'. This entirely undermines any claims to the 'safety' of Ireland's maternity services[4]

Ascertainment here, basically means the ability to search for and find cases of maternal death. It is worrying however, that despite being more effective at identifying maternal deaths than the statutory mechanism of death certification, the accuracy of the MDE's data still depends on the individual drive and enthusiasm of the MDE group as well as goodwill from service providers toward the initiative.

Determining the denominator

The number of deaths needs to be presented with a common denominator, often per one hundred (that is percent) or per thousand people. Maternal deaths, are quite rare and so the international standard for reporting maternal death rates is per 100,000 live births. The UK and Ireland have adopted 100,000 'maternities' as the most appropriate denominator. One should remember that there are always more pregnancies (or 'maternities') than live births. Using a larger denominator (maternities) than is usual internationally (live births), gives an unfair impression in that UK and Irish maternal death rates may 'look' better. (For example, 1/4 is bigger than 1/5, the only difference is the denominator, but 1 in 4 deaths is certainly worse than 1 in 5). Consequently, comparisons using different denominators is inappropriate.

The UK and Ireland's use of maternities might falsely give the impression of improvement from prior years (where live births had been used as the denominator) and a false impression of better outcomes compared to countries still using live births as the denominator. Furthermore, live births may be relatively easily determined in most countries, but 'maternities' are somewhat more difficult. Think, for example, that most pregnancy miscarriages happen before health personnel, epidemiologists or even women, know about it.

As data are available to calculate maternal death rates based on either denominator (maternities or live births) we suggest that both should be presented in future MDE reports, so that Irish maternal death rates can be fairly compared not only with the UK, but also internationally. Communication and miscommunication - a central theme in maternal deaths

The MDE group recommends therefore that all maternal deaths 'should' be reported to the group.

However, we suggest that this measure alone will not result in the detection of all maternal deaths.

Postmor tem reports alone are also inadequate because while they identify the cause of death (such as haemorrhage), they do not investigate the circumstances surrounding the death. It seems from the MDE report, that too often they even fail to identify the death as a maternal death at all.

In Ireland, when a death due to unnatural causes occurs, an inquest is required by law (Coroner's Act 1962). We suggest that this requirement should be broadened to include all cases of maternal death, so that the circumstances of all maternal deaths can be investigated fully. Although the inclusion of Irish data in the MBRRACE-UK enquiry is to be welcomed, it will not, nor is it intended to, assist Ireland with the identification of suboptimal care within its maternity service. If all maternal deaths were subject to a Coroner's inquiry, each case could be reported to the Minister of Health for surveillance purposes, without breaching the confidentiality of those involved. A precedent exists for such ministerial oversight in Irish maternity services, as under the Protection of Life During Pregnancy Act (2013), data on all cases of termination of pregnancy under the Act must be forwarded to the minister.

The authors of the MDE report state that women born outside of Ireland were over-represented in reported deaths. They indicate that this reflects UK reports of increased risk of maternal death among migrant ethnic minorities. Their recommendation that interpretation services should be used to avoid miscommunication would, at first sight, appear to be aimed at the over representation of non-Irish women in Irish statistics. Language difficulties however were not implicated in the deaths of many of the recent and prominent cases of maternal deaths of non Irish born women. As ethnicity would seem to be a recurrent theme in Ireland and in the UK, a more focused and penetrating enquiry into the possible causes of this association is urgently required.

Conclusion

Improved ascertainment, that is, the ability to search for and find all maternal deaths, is critical to an accurate calculation of the maternal death rate in Ireland. The public requires reassurance that a mechanism to ensure accurate and systematic recording is in place. The MDE authors need to identify in future reports HOW missed cases have been missed, and propose HOW those loopholes can be closed. The absence of statutory and infrastructural support for national reporting undoubtedly means that the identification of cases will continue to be challenging. Without the continued commitment of the MDE team, the determination of cases would be significantly worse and our national statistics would continue to be appallingly unreliable. We wish therefore, despite this critical commentary, to declare our full support for the MDE in the difficult and essential work that it undertakes on our behalf.

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