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EDITORIAL

Does the Medical Insurance Siglo XXI have the potential to reduce neonatal and under-5 mortality rate in Mexico?



Public health insurance programs designed specifically to deliver financial protection to families outside the social security systems were implemented in Mexico 10 years ago. Evaluations of these programs have focused on economic and some health outcomes, but few studies have analyzed the contribution of the mentioned programs to the reduction of neonatal and under-5 mortality rate. In this volume of the *Boletín Médico del Hospital Infantil de México*, the work presented by Flores-Huerta et al. is an interesting attempt to this purpose resulting in new questions to be investigated.¹ The authors used data from the Medical Insurance Siglo XXI Survey. They used the percentage of families with out-of-pocket health spending as an effectiveness measure of the program because affiliated families should be receiving financial protection against disease events as well as for prevention. Among the surveyed subjects that reported children's deaths, the authors found a significantly high proportion of households with out-of-pocket health spending, being more pronounced for the post-neonatal stage onwards. However, out-of-pocket data could be interpreted as a result of inadequate operation of the program leading to incomplete information about the benefits that affiliated families have to face health problems, coupled with the poor quality of care at the public healthcare facilities. The correlation between out-of-pocket health spending and mortality as presented by the authors does not help to understand the contribution of the Medical Insurance Siglo XXI to the reduction of neonatal and under-5 mortality rate.

The authors highlighted the methodological limitation to accurately estimate mortality rates from the survey data, but there are some strategies to overcome these difficulties. In a recent paper, Pfütze estimated the effects of Mexico's Seguro Popular health insurance on infant mortality during its first 5 years of implementation. The author used data on births reported in the microsample from Mexico's 2010 general population census, addressing the problem that births of surviving children are more likely to be observed than births

of non-survivors by means of the weighted exogenous sampling maximum likelihood estimator, originally developed for the case of choice-based samples.² Using a weighted probit estimation, Pfütze's results indicate that the program can be expected to reduce Mexico's infant mortality by close to 5 out of 1000 births.

Flores-Huerta et al. also discussed the role of the quality of care of medical facilities to deliver neonatal care to newborns covered by the program.¹ Unfortunately, they did not analyze this factor within a multiple regression model to determine its contribution to mortality reduction. Regarding to this, the effects of health-system strengthening on under-5, infant, and neonatal mortality have been analyzed for low-income countries,³ showing that health workforce density and maternal and child health nurse density were both associated with reduced under-5 mortality rate, as were institutional birth coverage and government financing per head. Higher population per health facility was associated with increased under-5 mortality rate and neonatal mortality rate was most strongly associated with institutional birth attendance, maternal and child nurse density, and overall health workforce density.

Finally, a valuable contribution from Flores-Huerta et al. comes from the analysis of neonatal causes of death. There is no information about this subject in Mexico, although this issue deserves an in-depth study to determine the potential contribution of a program like the Medical Insurance Siglo XXI to ameliorate preventable causes of death in newborns, through incorporating evidence about cost-effectiveness of interventions for the treatment of congenital and perinatal diseases that require a great amount of medical resources.¹ In Mexico, health authorities and legislators are now discussing the next political reform to the health system, proposing the universalization of the healthcare system. Therefore, it is relevant to carry out a second survey to evaluate the effects of the Medical Insurance Siglo XXI on infant mortality, before the beginning of the reform to the Mexican health system.

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