

Minimally invasive autopsies in lower-income countries: Reliability, acceptability

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High concordance rates were observed between diagnoses obtained using a simplified minimally invasive autopsy method and those determined from complete autopsies in a series of deceased adult patients in Mozambique, according to research published in *PLOS Medicine* by Jaume Ordi and colleagues from ISGlobal, Universitat de Barcelona, Barcelona, Spain. In a linked research article, Khátia Munguambe and colleagues from the Centro de Investigação em Saúde da Manhiça, Universidade Eduardo Mondlane, Maputo, Mozambique, observed that the hypothetical acceptability of the minimally invasive autopsy and willingness to know the cause of death were high across five settings in Gabon, Kenya, Mali, Mozambique, and Pakistan.

While complete autopsies are considered the gold standard for the determination of cause of [death](#), they are poorly accepted and difficult to perform in low- and middle- income countries. The simplified minimally invasive autopsy, which consists of histological and microbiological analyses of blood samples, cerebrospinal fluid samples, and tissue samples from solid organs using biopsy needles, could be an alternative method to the complete autopsy. In the first study, the researchers compared the cause of death identified in 112 deceased adult patients using a minimally invasive method with the cause of death identified from a complete autopsy. They observed 75.9% concordance rates between the diagnosis obtained with the minimally invasive autopsy and the gold standard diagnosis, with a particularly high agreement for infectious diseases.

In the second study, a mixed-methods approach was used to conduct 504 interviews with different informants, including those who had recently lost a family member, in five different countries. They found that 75% of the participants would be willing to know the cause death of a relative and that the overall hypothetical acceptability of minimally invasive autopsy on a relative was 73%.

Overall, these two studies provide support for the feasibility and validity of the minimally [invasive autopsy](#) method to be used in low-and middle-income settings to allow reliable estimates of cause of death.

In a linked Perspective, Peter Byass of Umeå University, Umeå, Sweden reflects on the potential challenges for minimally invasive autopsies to become routinely used for determining cause of death in low- and middle-income countries. He says "MIA shows signs of being an important addition to the world's available range of cause-of-death assignment methods."

More information: Castillo P, Martínez MJ, Ussene E, Jordao D, Lovane L, Ismail MR, et al. (2016) Validity of a Minimally Invasive Autopsy for Cause of Death Determination in Adults in Mozambique: An Observational Study. *PLoS Med* 13(11): e1002171. [DOI: 10.1371/journal.pmed.1002171](#)

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