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Introduction

Countries with limited civil registration and vital statistics (CRVS) system rely on national household surveys to measure mortality or morbidity. But these data are not able to generate recent and timely mortality indicators. Innovative approaches are needed to support countries to effectively evaluate recent program implementation effects.

Methods

The Government of Mozambique is implementing a nationwide sample registration system to record pregnancies, births and deaths and cause of death (CoD) in 700 communities randomly distributed across all provinces. Community surveillance agents (CSA) collect events using mobile phone. Trained interviewers visit family members to collect CoD information using verbal autopsy (VA) tools.

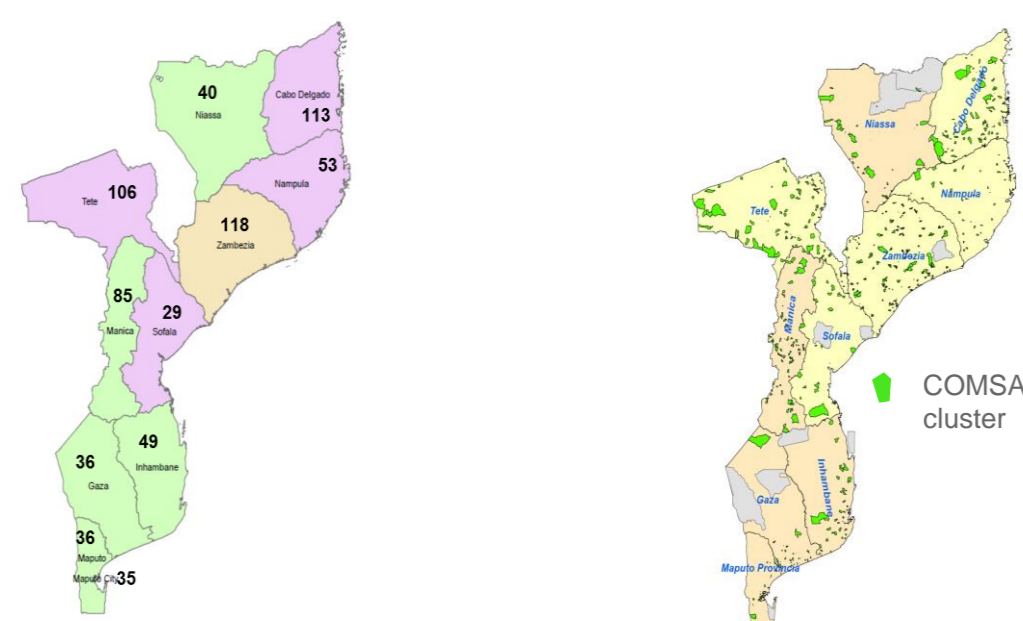


Fig 1. COMSA clusters per province

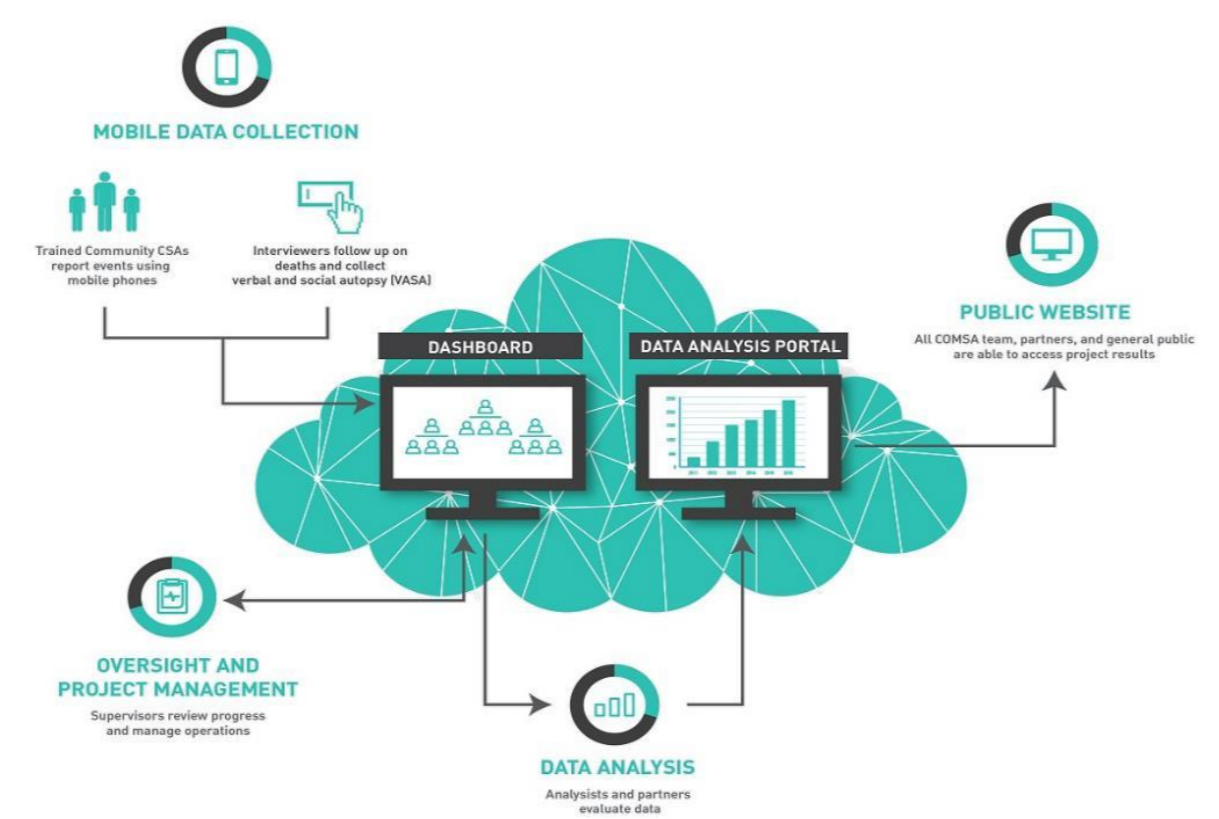


Fig 2. COMSA data reporting and analysis system

Data Analysis

We assess the misclassification of events reported by CSA compared to VA information (reference dataset), using χ^2 tests of association.

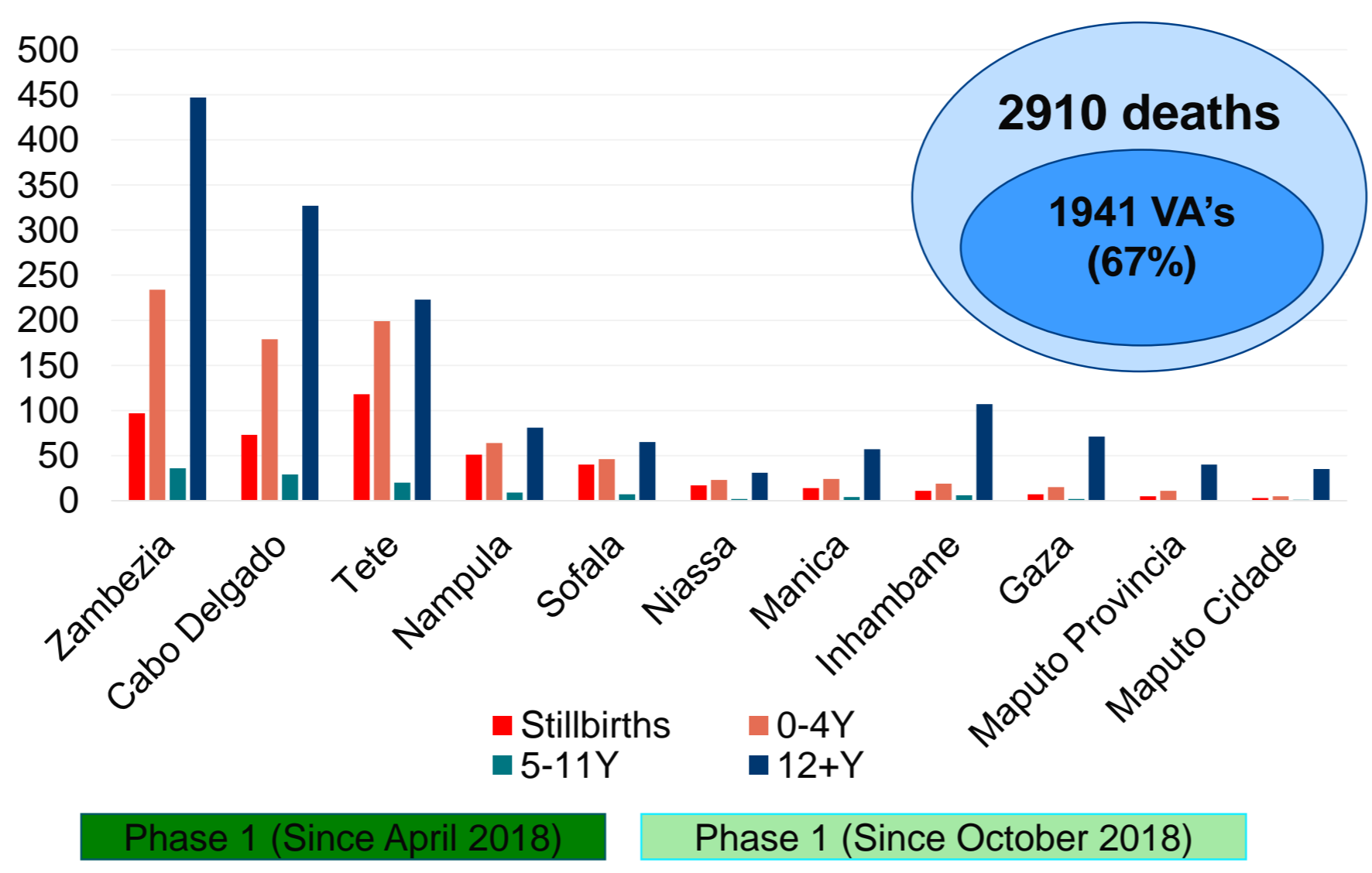
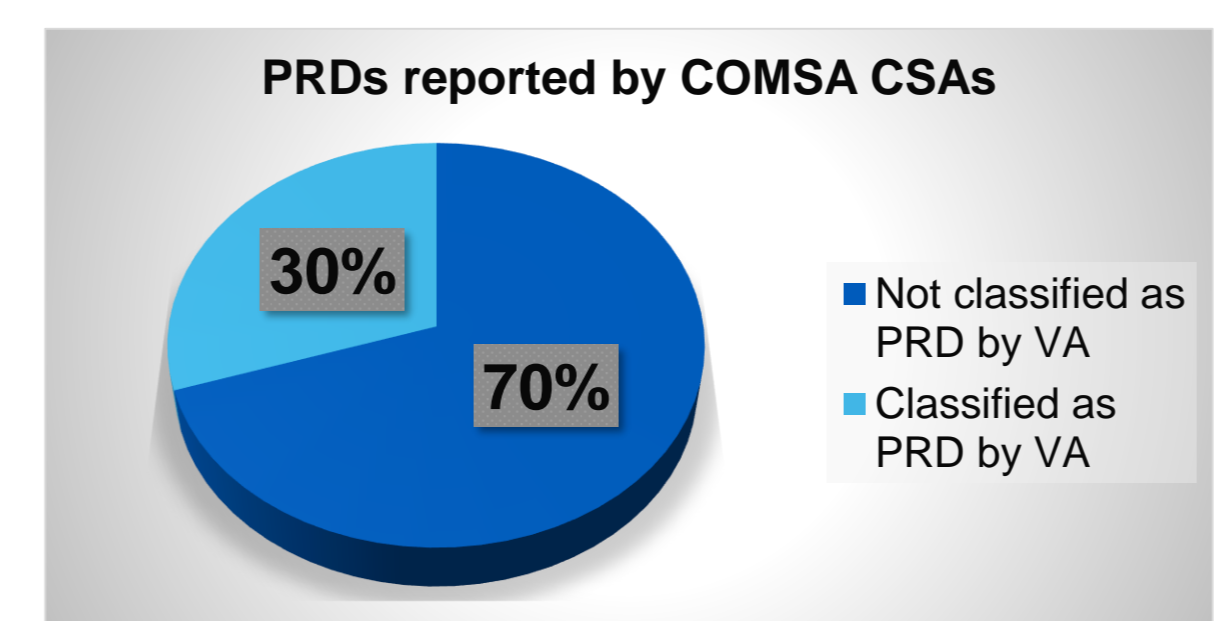
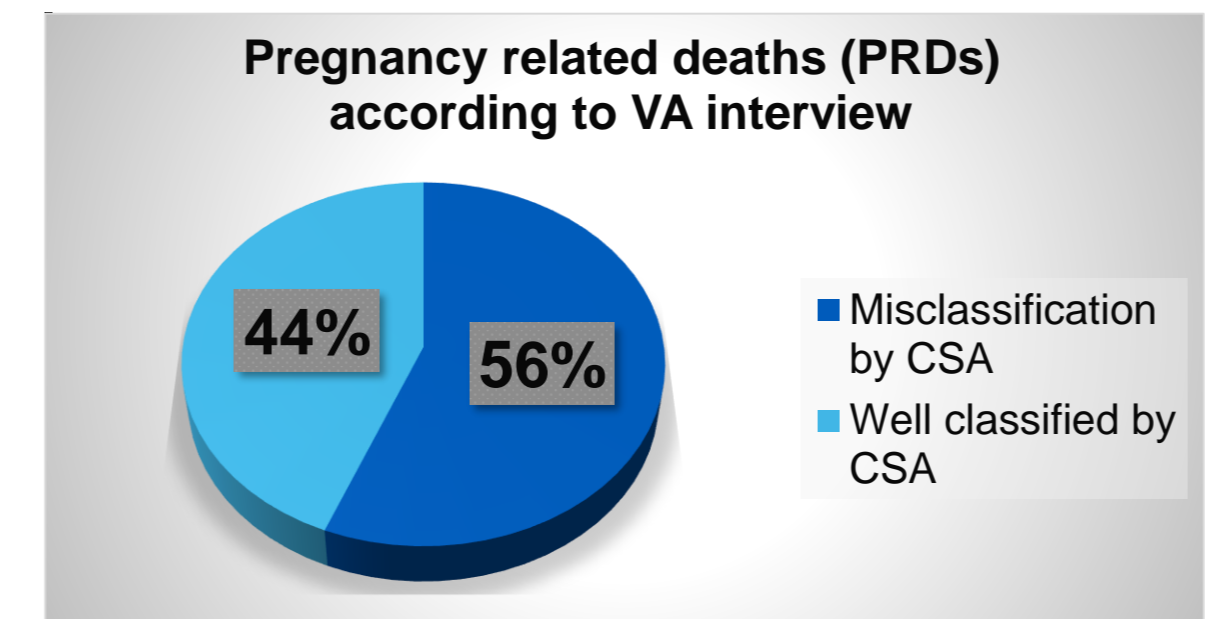


Fig 3. COMSA reported deaths by age group and by province

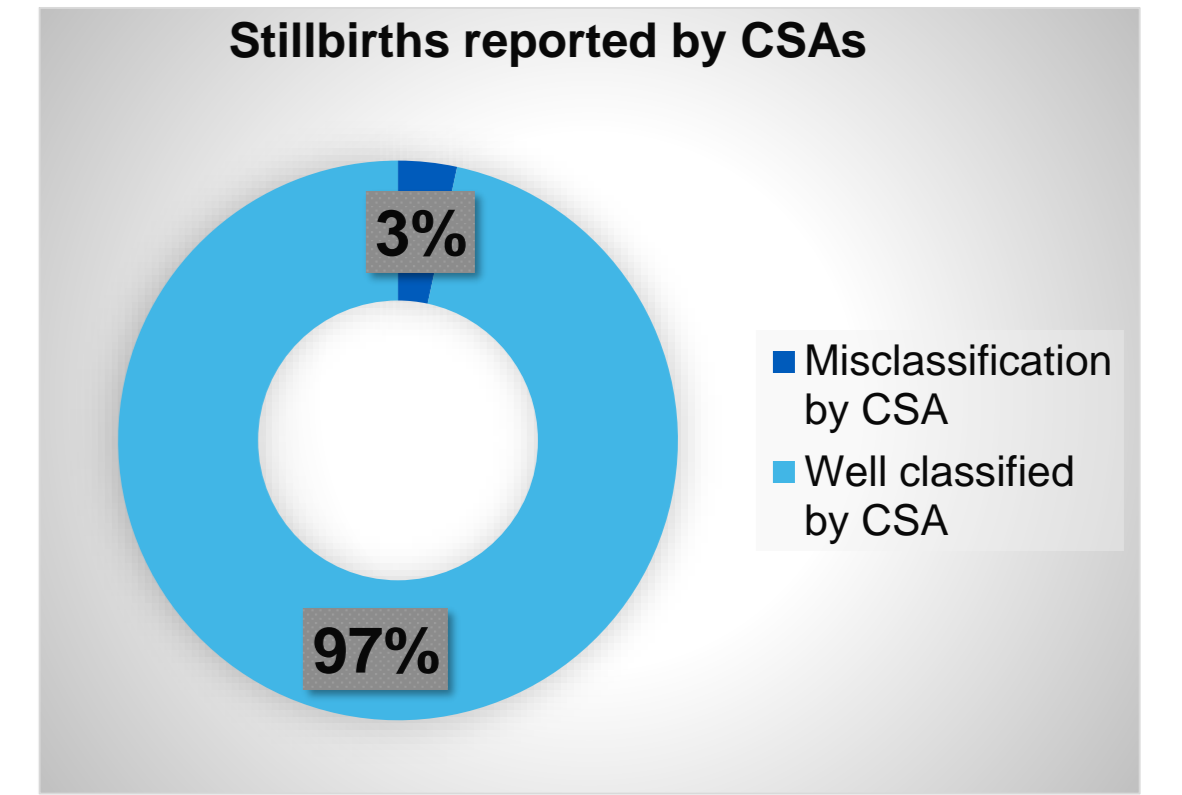
Results

In March 2018-March 2019, CSA reported 2910 deaths (including 82 pregnancy-related deaths, PRD and 604 stillbirths). The VA team has successfully interviewed 67% of reported deaths (n=1941). The VA interviewers reported 41 PRD while the CSAs have reported 60 PRD. About 56% (n=23) of PRD from VA interview were misclassified by CSA. Nearly 70% (n=42) of PRD reported by CSA were not classified as PRD by the VA interview ($p < 0.001$). Among 59 stillbirths reported in the VA interview, the CSA had correctly classified 57 (97%) ($p < 0.001$). However, CSA had reported 45 stillbirths that were classified as neonatal deaths.



Most of the PRDs reported by the CSAs are NOT real PRDs according to the VA interview

Most of the deaths classified as stillbirths by the CSAs were confirmed to be well classified during the VA interview



Conclusion

The accuracy of reporting PRD by the CSA was very low and 70% of PRD reported by CSA were not related to pregnancy. The deployment of community workers to report real-time data can help to evaluate prospectively health programs. However, well trained community workers are needed to provide accurate information to not bias indicators.

Acknowledgment

To all COMSA CSAs for their hard work regardless the challenges. To all VA teams in all provinces for the great quality of their work. For INE, INS and JHU teams for all technical and scientific contributions. Special thanks for the thousands of household members for being part of this system.