

Out-of-hospital Mortality in Rural Areas of Mozambique in 2019: Trends, Patterns, and Risk Factors

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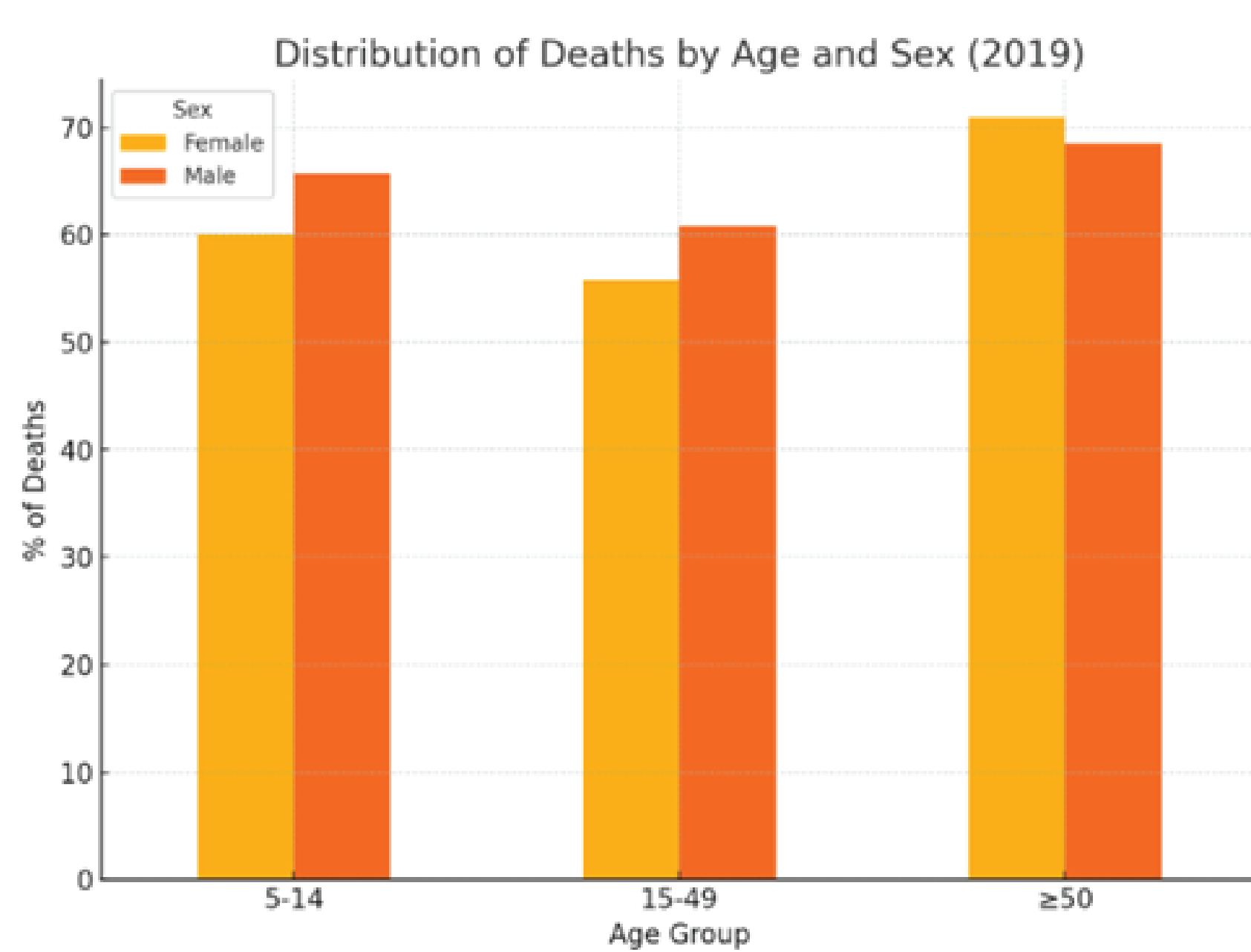
1 BACKGROUND

Out-of-hospital mortality in rural areas is a critical indicator of population health, especially in regions with limited healthcare access. In Mozambique, 70% of deaths in 2018 occurred outside hospitals, particularly in rural areas.

2 METHODS

A cross-sectional, retrospective analysis using secondary data from the Mozambican Vital Events and Cause of Death Surveillance System (SIS-COVE). Deaths in 2019 were analyzed by variables including age, sex, education, occupation, residence (urban/rural), and province. Statistical analyses, including univariate analysis and adjusted logistic regression, were performed using Stata 17 to identify factors associated with out-of-hospital mortality.

3 RESULTS (1/2)

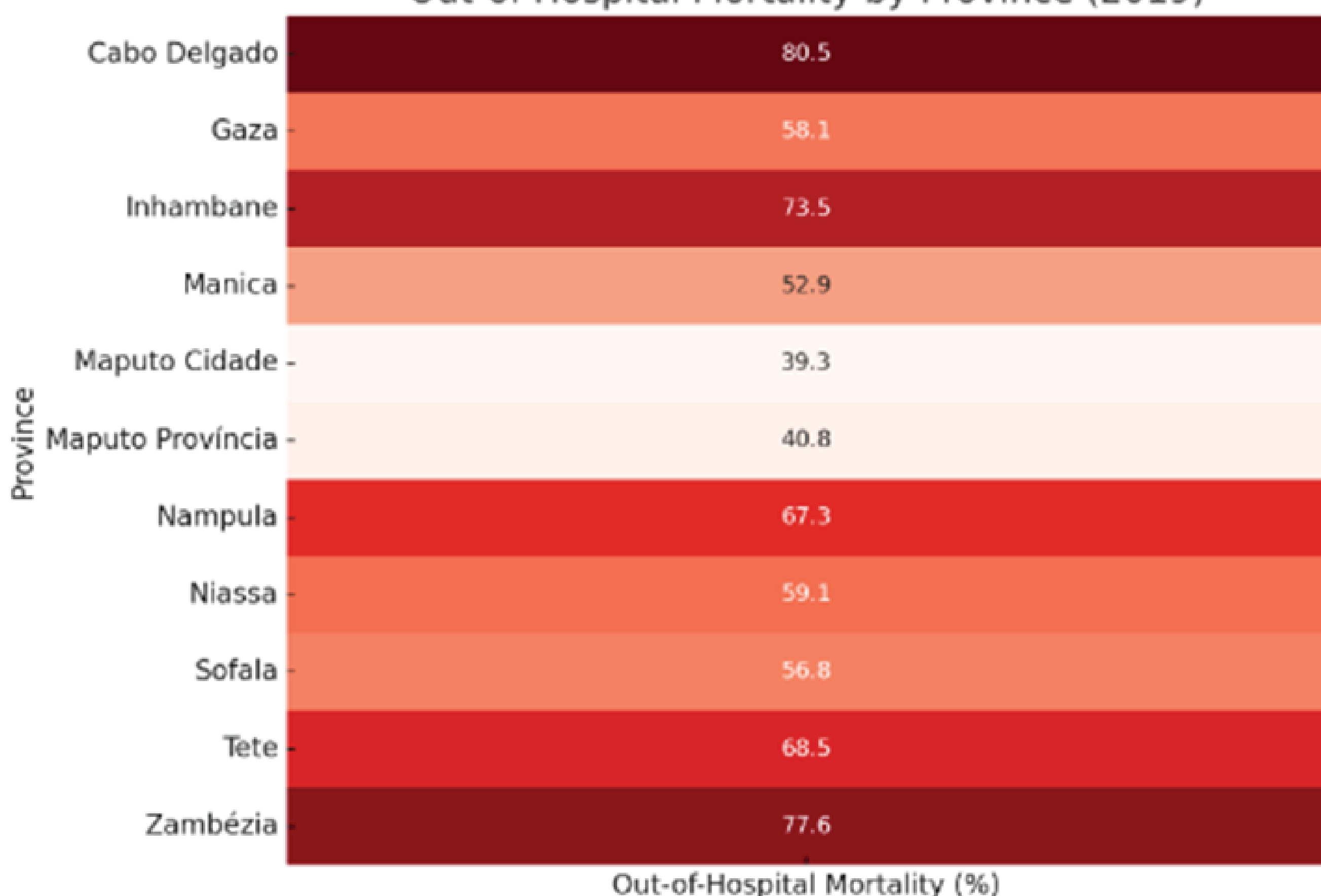


66.0% of deaths occurred in rural areas, with the majority being females (65.7%) and individuals aged 50+ (49.1%). Education level was a key factor: individuals with secondary or higher education had a significantly lower risk of out-of-hospital death (ORa 0.369, CI 0.265-0.515). Cabo Delgado (80.5%), Zambezia (77.6%), and Inhambane (73.5%) showed the highest out-of-hospital mortality rates,

with odds ratios of 3.361 (CI 1.679-6.725) for Cabo Delgado, 2.648 (CI 1.376-5.095) for Zambezia, and 2.103 (CI 1.037-4.265) for Inhambane, compared to Maputo City. Unemployed individuals had the highest rates of out-of-hospital deaths (68.8%), while students (ORa 0.756, CI 0.425-1.343) and pensioners (ORa 0.924, CI 0.451-1.896) showed reduced odds compared to employed individuals (ORa 0.723, CI 0.531-0.984).

4 RESULTS (2/2)

Out-of-Hospital Mortality by Province (2019)



The study highlights a significant issue of high out-of-hospital mortality rates in rural areas of Mozambique, particularly among older adults and those with lower education levels or unemployed status. This underscores the need for customized health interventions addressing rural-specific health disparities.

5 CONCLUSIONS

The study highlights the significant concern of extra-hospital mortality in rural areas of Mozambique, emphasizing the need to consider the specific characteristics of these areas when developing health policies.

7 ADDITIONAL INFORMATION

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LOGISTIC REGRESSION MODEL

Features	% (n/N)	p-value	OR (CI95%)	Model 1		Model 2	
				p-value	ORa (CI95%)	p-value	ORa (CI95%)
Age in years (categorized)			Reference				Reference
5-14	60.0 (21/35)		Reference				Reference
15-49	55.8 (298/534)	0.628	0.841 (0.419-1.690)	-	-	0.911	1.051 (0.443-2.490)
≥50	70.9 (389/549)	0.177	1.620 (0.804-3.267)	-	-	0.325	1.575 (0.637-3.892)
Education Level			Reference				Reference
No formal education	80.1 (374/467)		Reference				Reference
Secondary/Higher	51.3 (334/651)	<0.001	0.262 (0.199-0.345)	<0.001	0.328 (0.243-0.442)	<0.001	0.369 (0.265-0.515)
Sex			Referéncia				Reference
Female	65.7 (383/583)		Referéncia				Reference
Male	60.8 (325/ 535)	0.087	0.808 (0.633-1.031)	-	-	0.431	1.122 (0.842-1.495)
Occupation			Reference				Reference
Unemploed	68.8 (443/644)		Reference				Reference
Student	51.6 (32/62)	0.007	0.484 (0.286-0.818)	0.340	0.756 (0.425-1.343)	0.669	0.864 (0.442-1.689)
Pensioner	59.5 (25/42)	0.214	0.667 (0.352-1.263)	0.830	0.924 (0.451-1.896)	0.393	0.726 (0.348-1.514)
Employed	56.2 (208/370)	<0.001	0.583 (0.447-0.759)	0.044	0.733 (0.542-0.991)	0.039	0.723 (0.531-0.984)
Province			Reference				Reference
Maputo Cidade	39.3 (33/84)		Reference				Reference
Maputo Província	40.8 (31/76)	0.846	1.065 (0.565-2.006)	0.310	0.704 (0.358-1.385)	0.292	0.694 (0.352-1.370)
Gaza	58.1 (61/105)	0.011	2.143 (1.194-3.845)	0.598	1.190 (0.623-2.272)	0.693	1.140 (0.594-2.188)
Inhambane	73.5 (72/98)	<0.001	4.280 (2.287-8.010)	0.035	2.123 (1.052-4.284)	0.039	2.103 (1.037-4.265)
Sofala	56.8 (21/37)	0.077	2.028 (0.926-4.443)	0.471	1.362 (0.587-3.161)	0.501	1.336 (0.574-3.111)
Manica	52.9 (90/170)	0.041	1.739 (1.022-2.958)	0.813	1.074 (0.594-1.945)	0.789	1.085 (0.596-1.976)
Tete	68.5 (113/165)	<0.001	3.358 (1.943-5.805)	0.499	1.245 (0.659-2.354)	0.566	1.213 (0.638-2.308)
Zambézia	77.6 (121/156)	<0.001	5.343 (3.000-9.516)	0.004	2.587 (1.360-4.933)	0.004	2.648 (1.376-5.095)
Nampula	67.3 (37/55)	0.001	3.177 (1.557-6.484)	0.064	2.074 (0.957-4.493)	0.072	2.041 (0.938-4.438)
Niassa	59.1 (26/44)	0.034	2.232 (1.061-4.696)	0.832	1.092 (0.484-2.465)	0.726	1.159 (0.508-2.642)
Cabo Delgado	80.5 (103/128)	< 0.001	6.367 (3.430-11.819)	0.001	3.138 (1.578-6.239)	0.001	3.361 (1.679-6.725)
Residence			Reference				Reference
Rural	72.6 (536/738)		Reference				Reference
Urban	45.3 (172/380)	< 0.001	0.312 (0.241-0.404)	<0.001	0.498 (0.363-0.684)	<0.001	0.494 (0.359-0.680)
Type of disease			Reference				Reference
non-infectious	61.9 (331/535)		Reference				Reference
Infectious	64.7 (377/ 583)	0.333	1.128 (0.884-1.439)	-	Reference	0.259	1.171 (0.890-1.541)