
THE EFFECT OF DISTANCE TO FORMAL HEALTH FACILITY ON CHILDHOOD MORTALITY IN RURAL TANZANIA.

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Background

The objective of UN Millennium Development Goal 4 (MDG 4) is to reduce child mortality by two-thirds between 1990 and 2015.

Many countries especially in the south Asia and sub-Saharan Africa are not on track to meet this target

Gains made in the 1960s through 1980s have been eroded by the HIV/AIDS pandemic and other infectious diseases



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Improvements in coverage of essential interventions is still required in order to achieve MD4.

A number of key risk factors for child mortality in low income countries like Tanzania still exist.

One such factor among others is geographical accessibility of health facilities by the population.



Geographical accessibility of health facilities by the population has not been adequately assessed especially in terms of distance to health facilities.

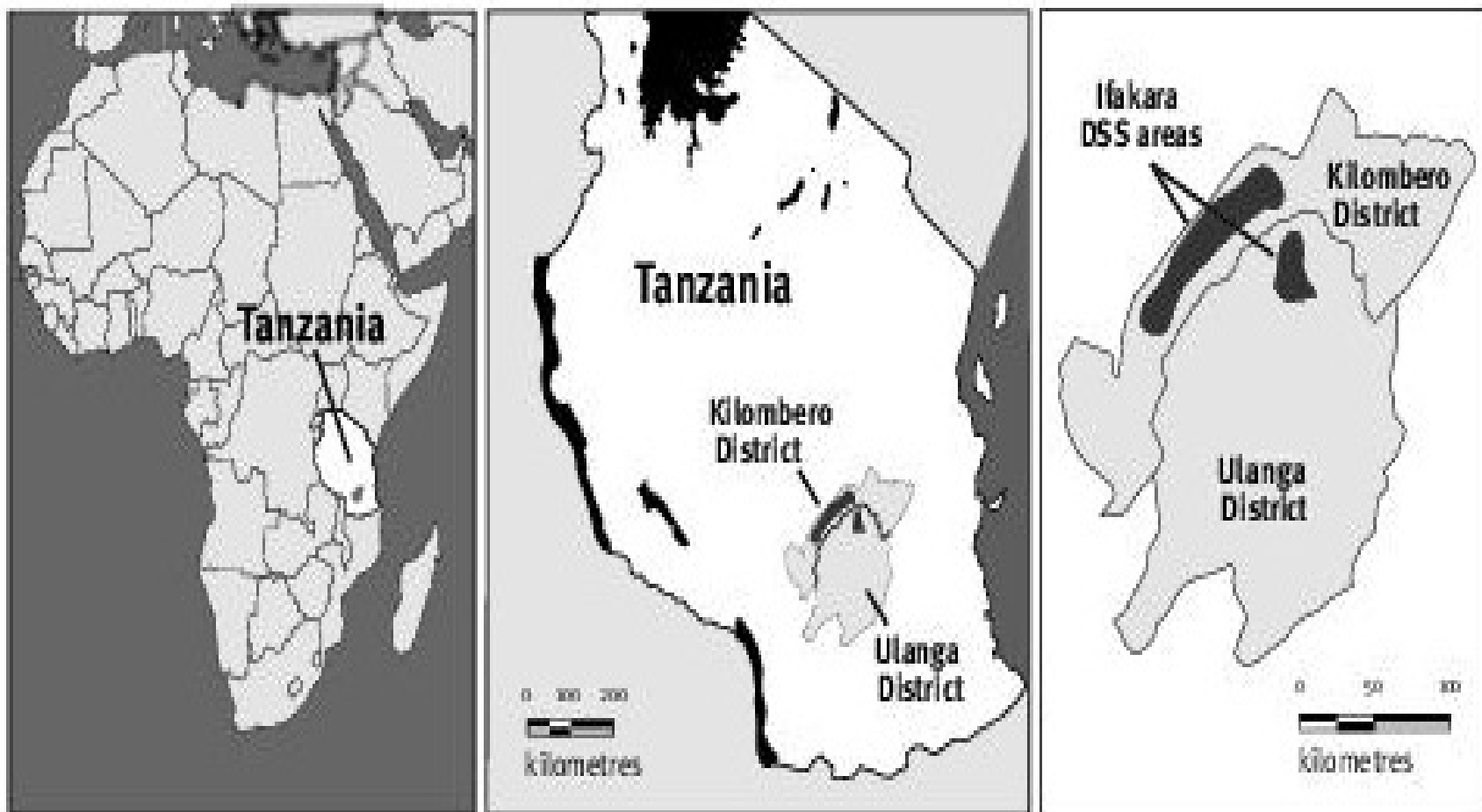


AIM

We investigated the effect of distance to formal health facilities on childhood mortality in rural Tanzania between 2005 and 2007.



Materials and Methods



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- Ifakara HDSS is about 320 km from Dar es Salaam in the south western region.
 - The DSA has a population of 84 000 people living in 19,000 scattered rural households.
 - Infectious diseases are the main causes of mortality and morbidity with malaria causing the biggest burden



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- There are a 13 dispensaries and 2 health centres in the DSA.
 - Included all children < 5 years between January, 2005 and December, 2007 and resident in the IHDSS.
 - Using the network analyst tool in ArcView, the shortest networked and Euclidean routes from households to the closest health facility were generated.



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- Cox proportional hazard regression models were constructed to determine the association between distance to the nearest health facility and child mortality.

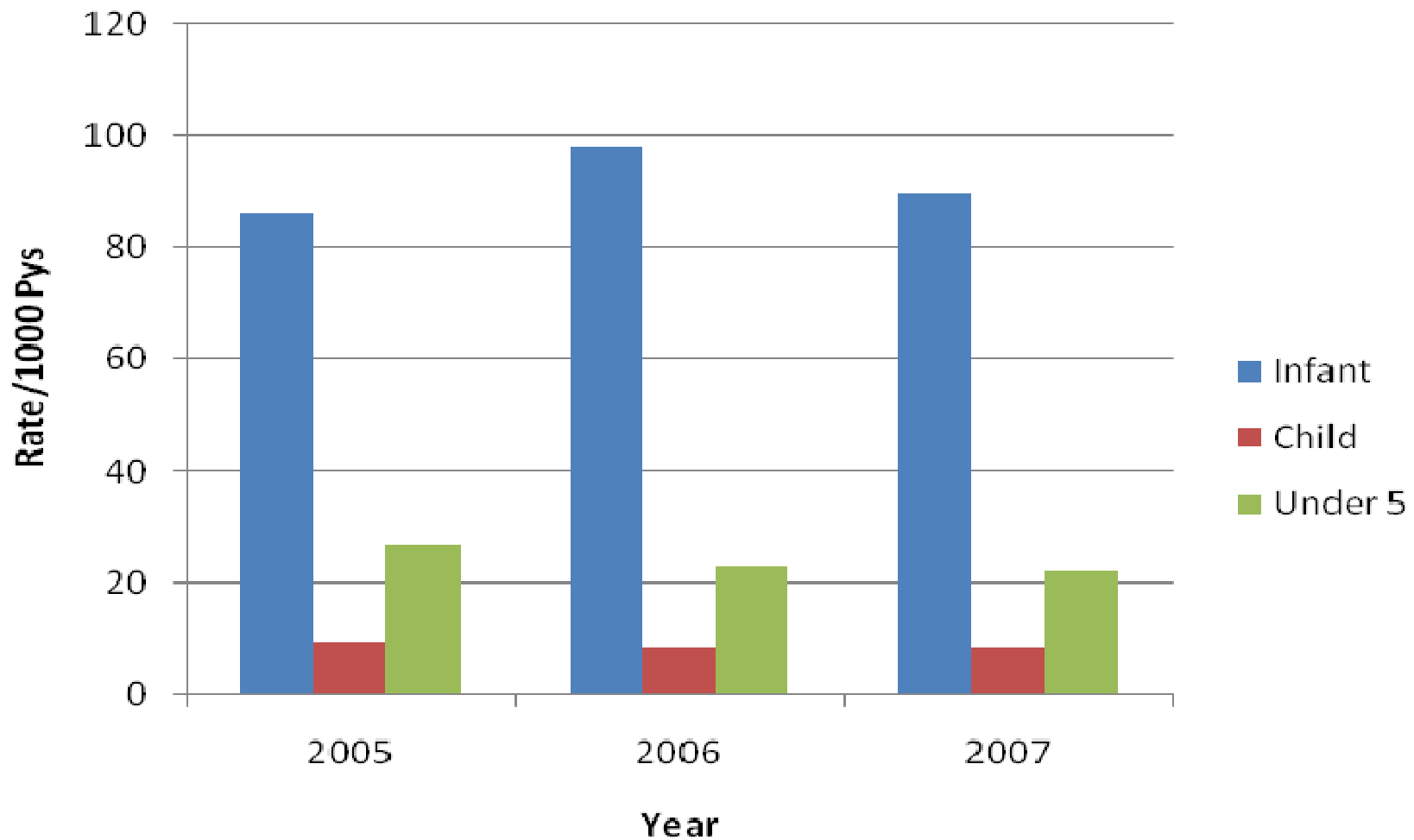


Results

- Included 23,823 children living in 13,845 households between 2005 - 2007
- 917 (3.8%) child deaths were recorded in both districts, 748 (81.6%) infant deaths and 169 (18.4%) child (1-4) deaths



Infant, child and under 5 mortality rates by year



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- Networked distance to the nearest health facility was strongly associated with child mortality.
 - Residing more than 5KM networked distance to the nearest health facility was associated with 17% (95% CI: 1.02, 1.38) increased child mortality.



Death of a mother [HR=5.87; 95% CI 4.11-8.40], death of preceding sibling [HR=1.9; 95% CI 1.37-2.65] and multiple births [HR=2.9; 95% CI 2.27-3.74] were the strongest independent predictors of child mortality.



Conclusion

This study highlights the importance of physical access to health facilities as a determinant of child mortality in rural Tanzania.

It's apparent that addressing barriers like distance to health facility could greatly improve child survival in low cost settings.



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Thank You!



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