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Kenya Medical  
Research Institute



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# What is killing women of childbearing age in a rural community of coastal Kenya? Insights from verbal autopsy in the Kilifi HDSS?

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Indepth Conference, Maputo, Mozambique

24-27 October

Evasius Bauni



**INDEPTH Network**

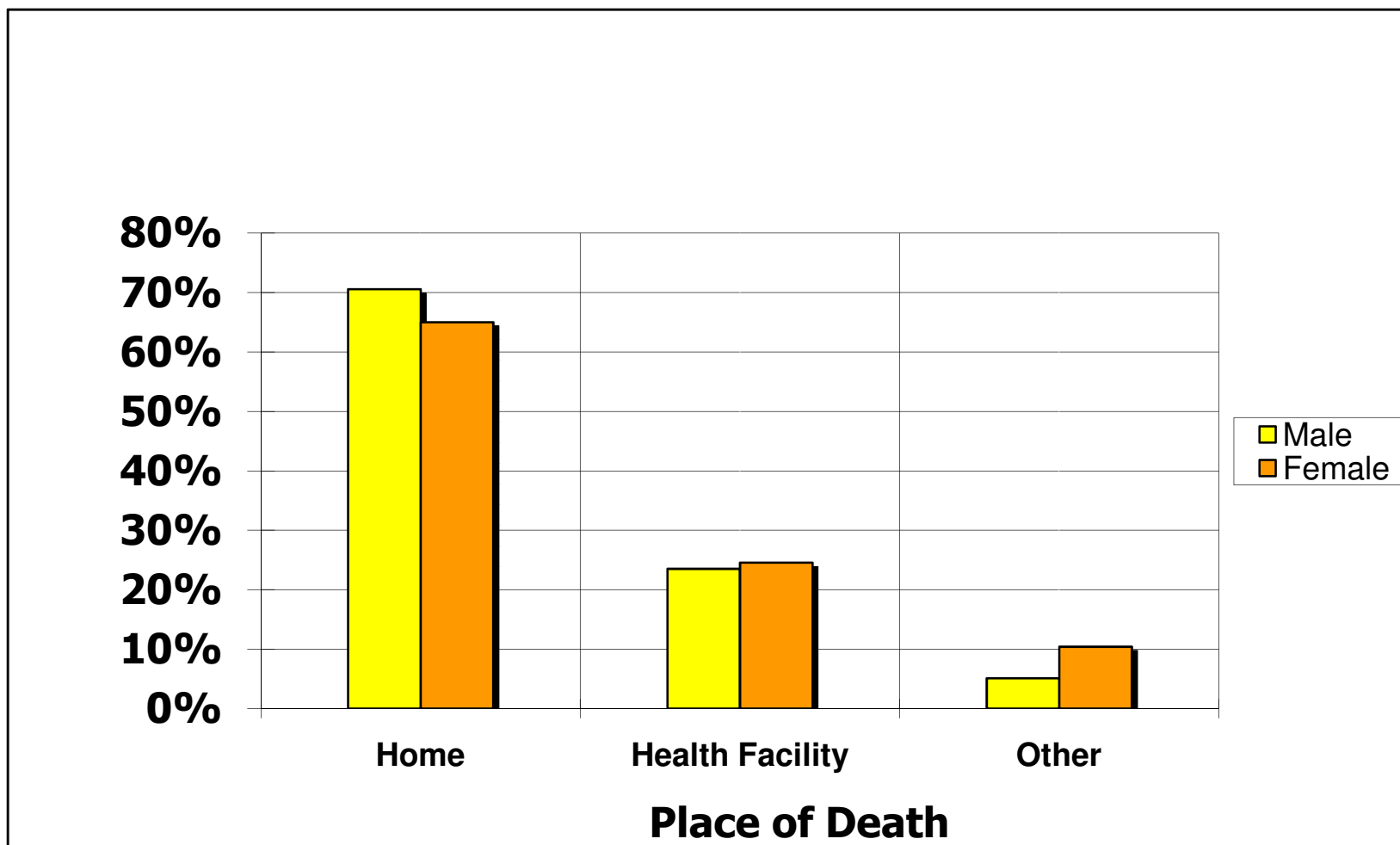
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# Maternal Health: Scope of Problem

- Millennium development goal 5 --- reduce maternal deaths by 75% between 1990 and 2015.
  - Globally about 350,000 (UN) women die annually from preventable causes related to pregnancy and child birth, majority (99%) from developing countries.
  - Vital registration systems non-existent or grossly inaccurate.
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# Maternal Health: Place of Death



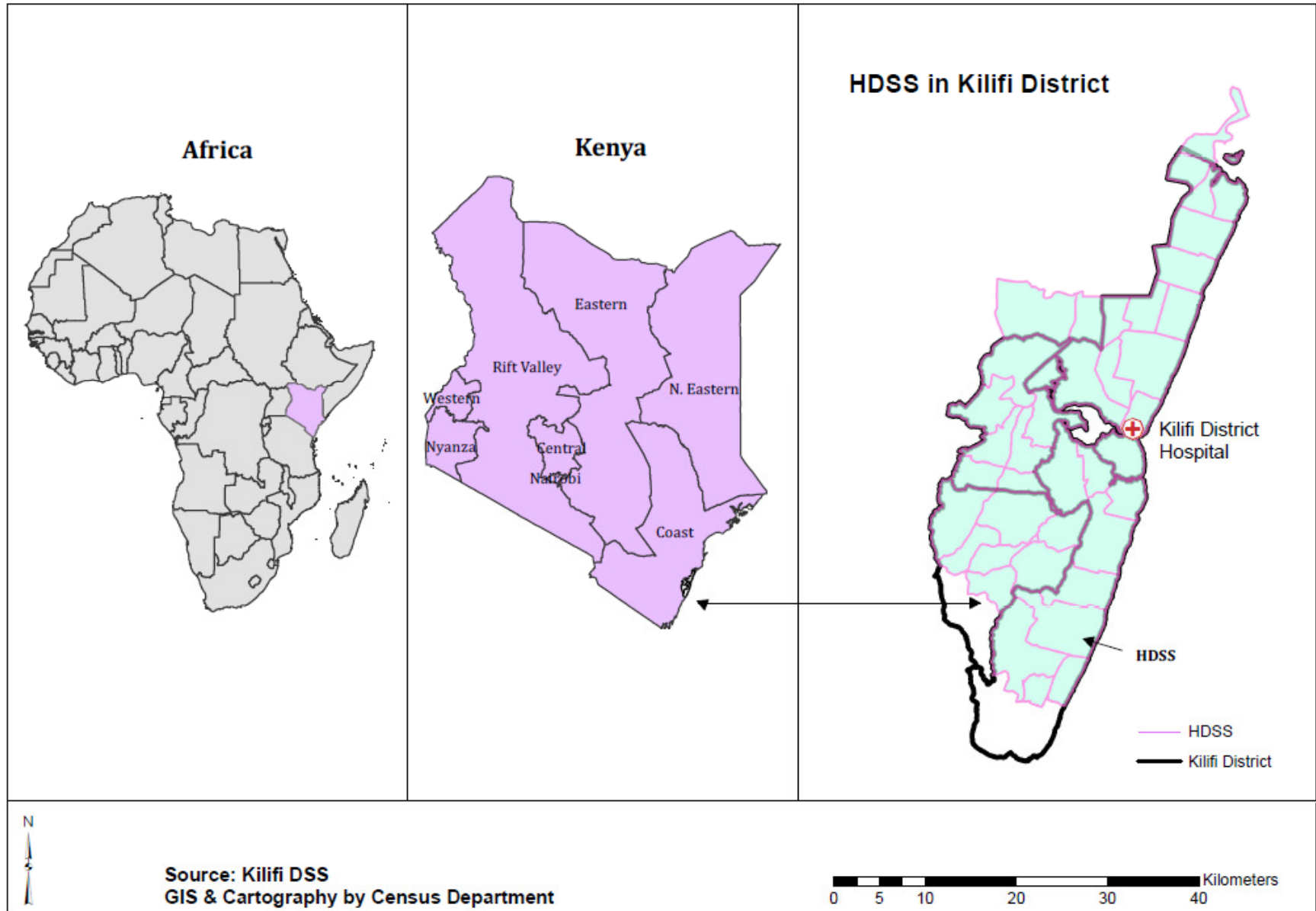
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# Maternal Health: Rationale of the study

- In KHDSS, most people, including childbearing women die at home and the cause of death is not known, hence difficult to know maternal deaths
- VA is used to determine maternal deaths and the causes of death to women of childbearing age (15-49) living in the Kilifi HDSS
- MMR (millennium development goal 5 indicator) for resident deaths in KHDSS is estimated

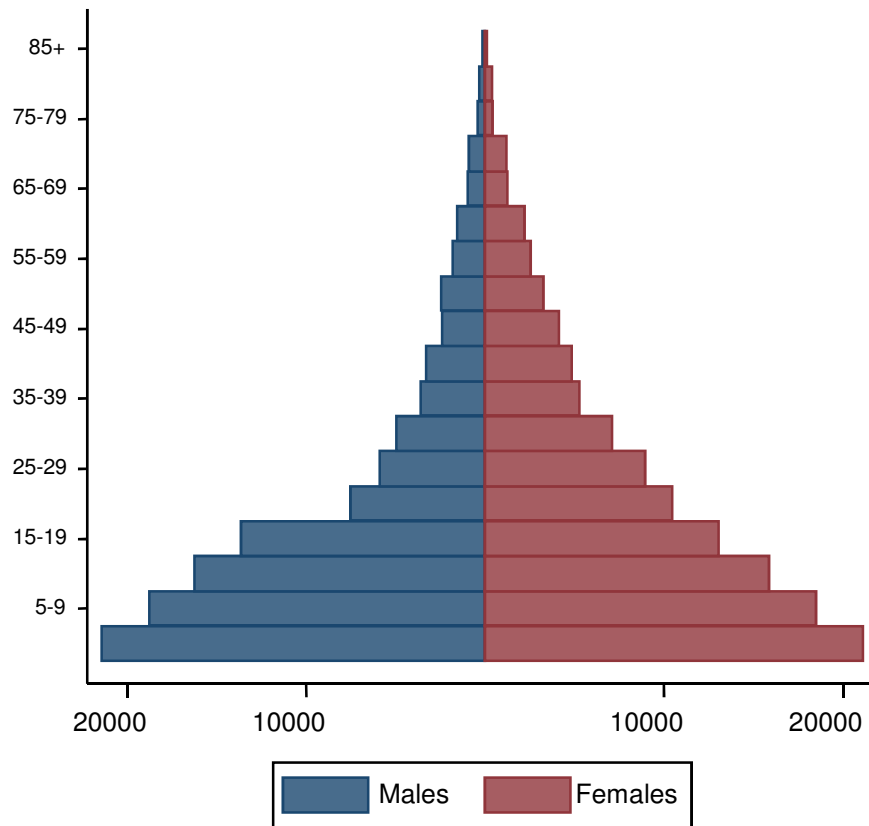


# Kilifi HDSS



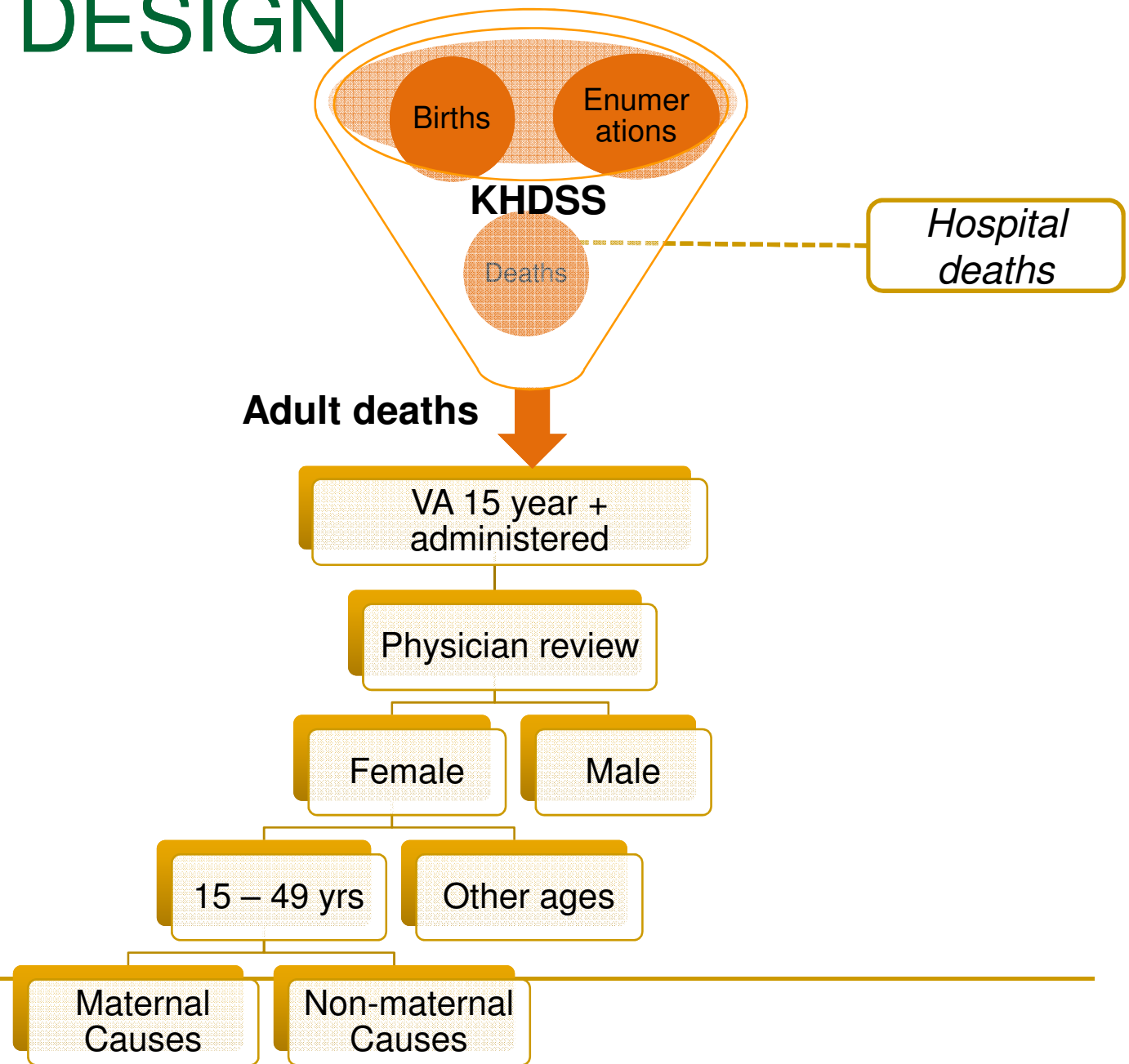
# Age-sex structure of the surveillance population

KHDSS Population Pyramid

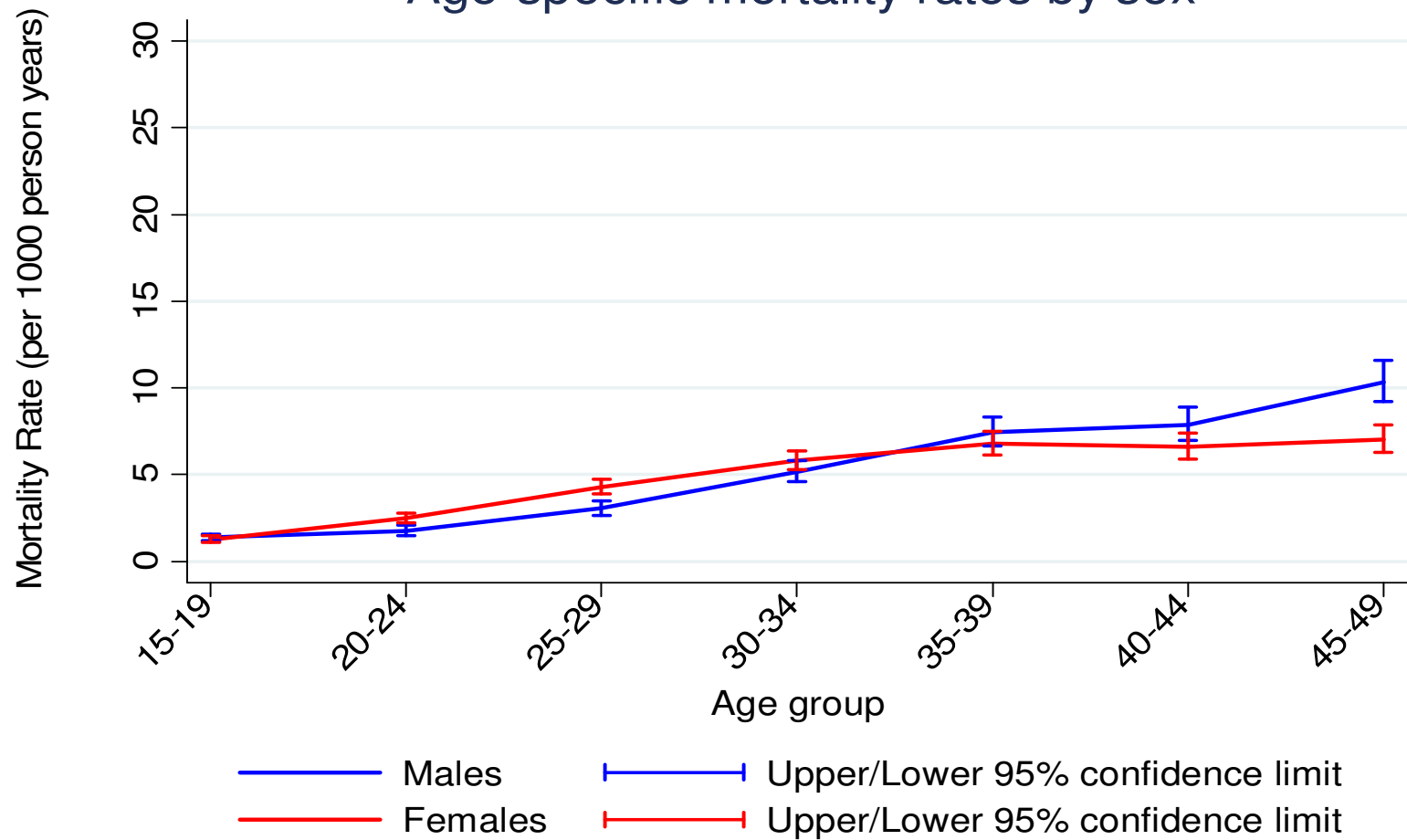


- Population: 260,000 (2010 mid year pop.)
  - 30,000 HH, 900km<sup>2</sup>
  - Males: 47%
  - Children <5 years: 19%
  - Children 5 -14years: 30%
  - Adults 15 – 49 years:39%
  - Female 15-49 years:22%
  - Elderly ≥50+: 12%
- Catchment area of Kilifi District Hospital (KDH)

# STUDY DESIGN

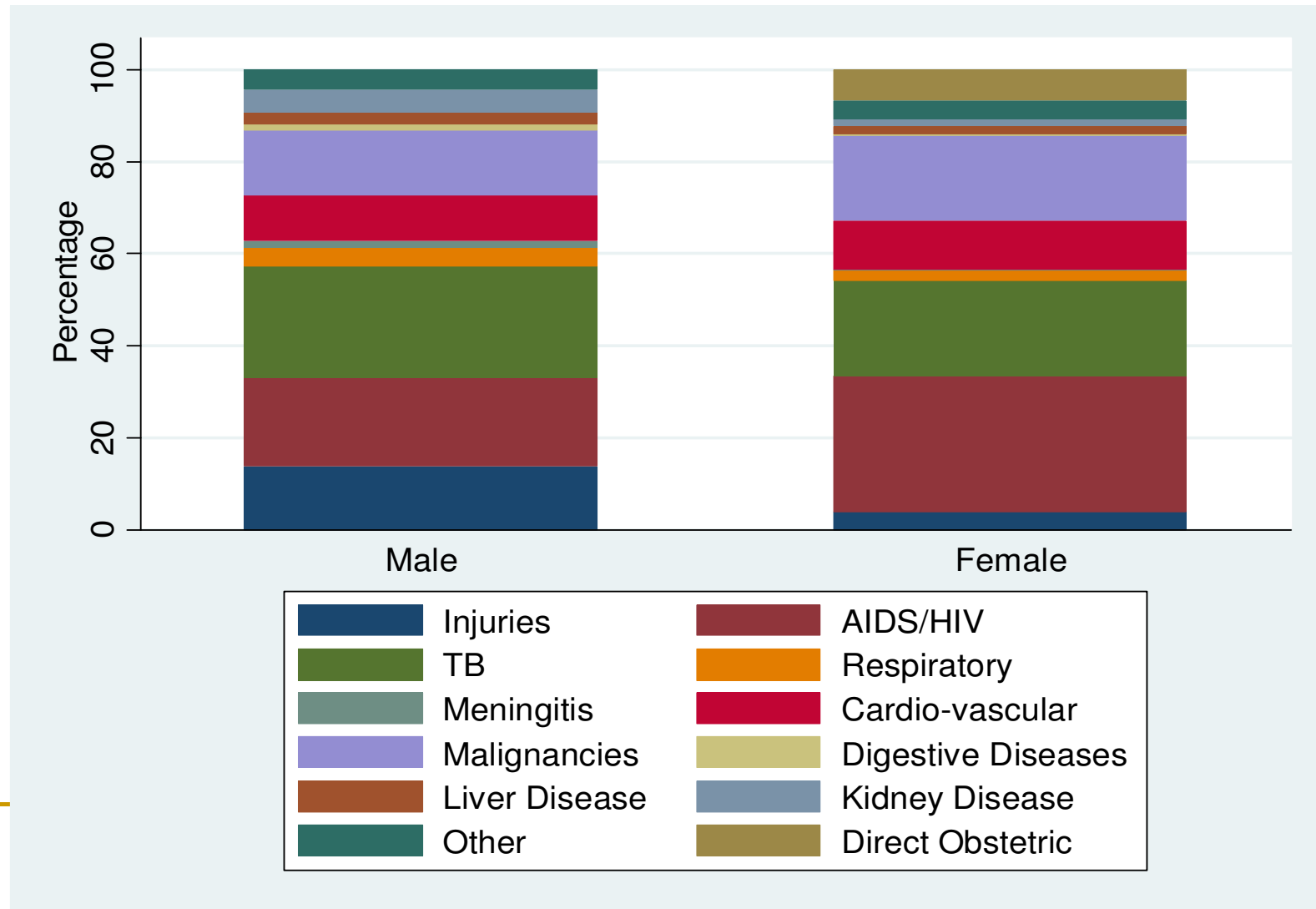


## Age-specific mortality rates by sex



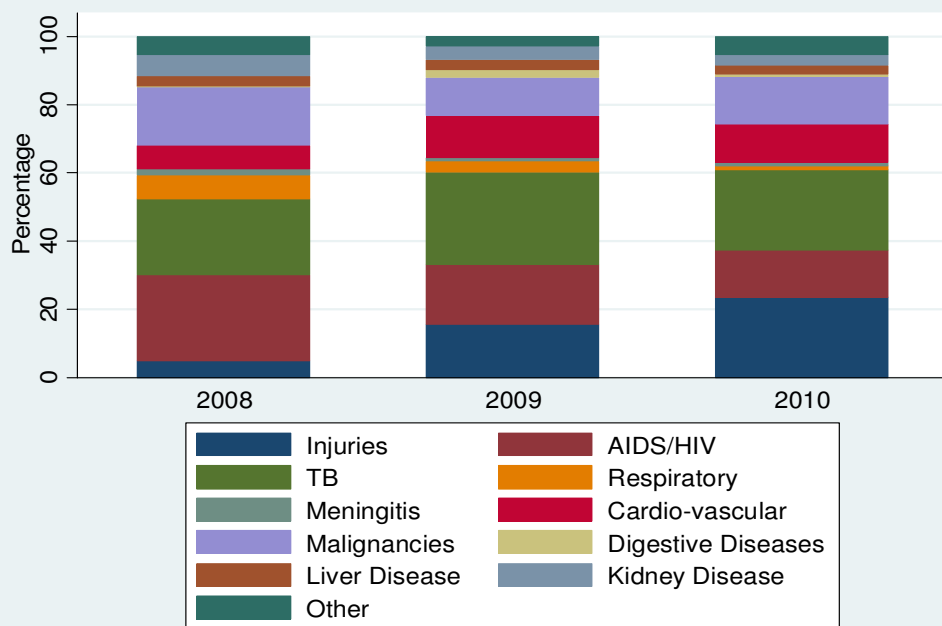


# Cause of adult deaths by sex (N=1567)

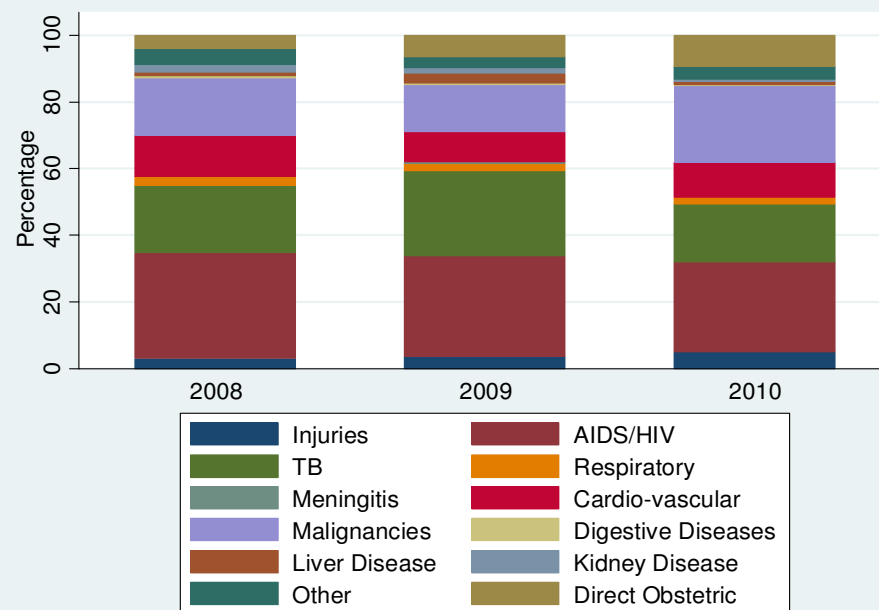


# Cause of adult deaths by sex and year (N=1567)

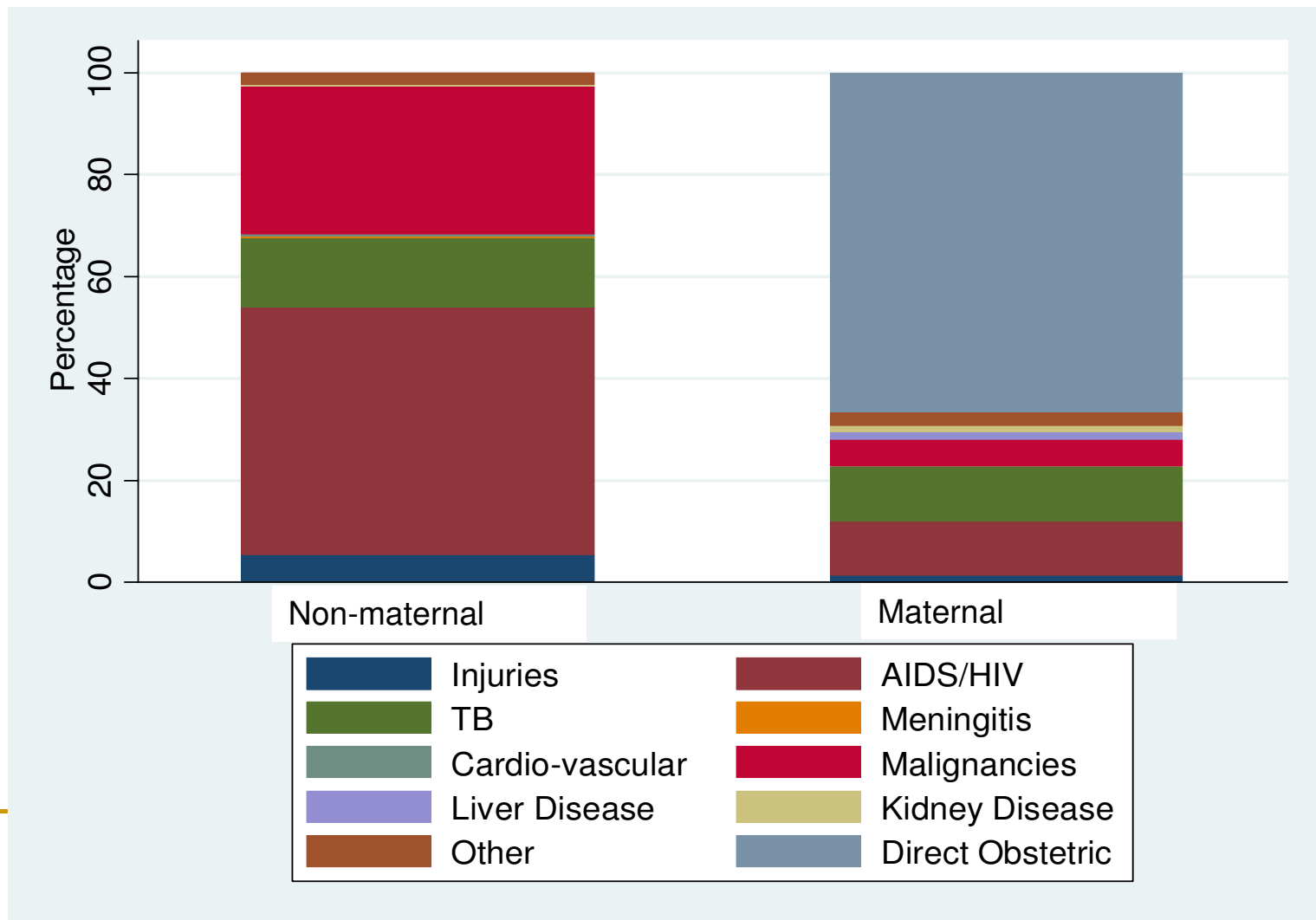
## Males



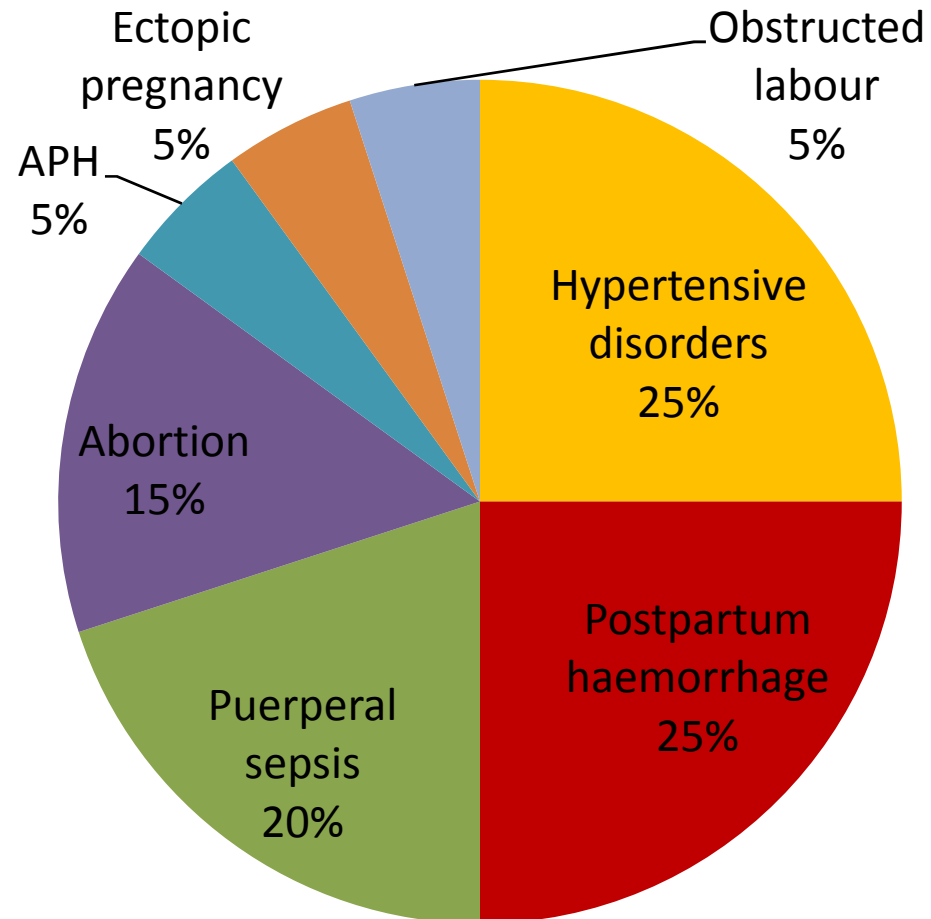
## Females



# Causes of death in women 15-49 years (n=325)



# Direct obstetric causes



# Maternal Mortality Ratio in KHDSS

	Deaths
Total number of pregnancy related deaths in women aged 15-49 years	85
Maternal deaths(Both direct and indirect causes)	61
Non maternal death in pregnancy (Any other cause)	24

Total births = 24,400

MMR = 250 per 100,000 births (2008-2010)



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# Discussion

- The VA component of KHDSS determined the cause of adult deaths
- Maternal deaths were largely due to preventable direct obstetric causes
- Childbearing women (15-49 yrs) largely died of HIV, TB and malignancies
- The cause of death due to HIV was relatively high and stable for women but relatively low and decreasing for men
- The cause of death due to injury for men was relatively high and increasing



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# Way forward

- Discuss results with stakeholders especially MOH to suggest ways to reverse trends in female HIV, direct obstetric and male injuries
- Investigate further why female deaths due to HIV have remained high despite availability of free ARV in Kenya (2003) and Kilifi (2004)

# Acknowledgements

- Kilifi HDSS community
- Kilifi HDSS staff



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# Thank You!



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