

Changing dynamics of morbidity and mortality in rural Ghana

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Background

- Global changes in morbidity and mortality patterns in the developing world
 - Shift from acute communicable disease to chronic non-communicable (“life style”) disease
 - Non-communicable diseases expected to contribute increasingly to mortality
- Limited data on causes of deaths in specific populations
 - Data often assembled for different populations at different points in time
 - Poor and vulnerable populations often do not count in these



Objectives

- Examine trend in main causes of death in Navrongo HDSS from 1995-2009
- Identify changes in major causes of death
- Discuss implications of changes in causes of death
 - for health care delivery
 - for health research

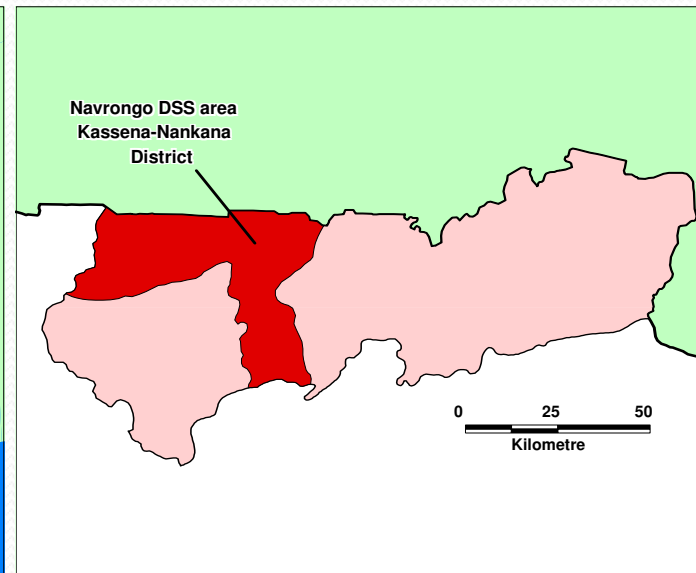


Methods

- Study Design
 - Analysis of verbal autopsy data from demographic surveillance
 - Verbal autopsy procedure
 - Death identified in routine surveillance
 - Verbal autopsy conducted
 - Interview reviewed by medical officers to establish cause of death
- Study sample
 - All deaths between 1995-2009 with cause of death determined
 - 24,698 deaths analyzed



Location of Navrongo HDSS



Profile of study area

- Area: 1675 km²
- Population: 152,000
- TFR: 3.8
- IMR: 41/1000 live births
- Economy: subsistence agriculture
- Malaria endemic
- One of poorest districts in Ghana
- Majority of births and deaths occur outside health facilities and don't get counted



RESULTS



Distribution (%) of Deaths by Broad Causes 1995-2009

Disease Category	Female	Male	All
Communicable	71.9	67.6	69.7
Non-communicable	23.3	25.2	24.3
Accidents/Injuries	4.8	7.2	6.0

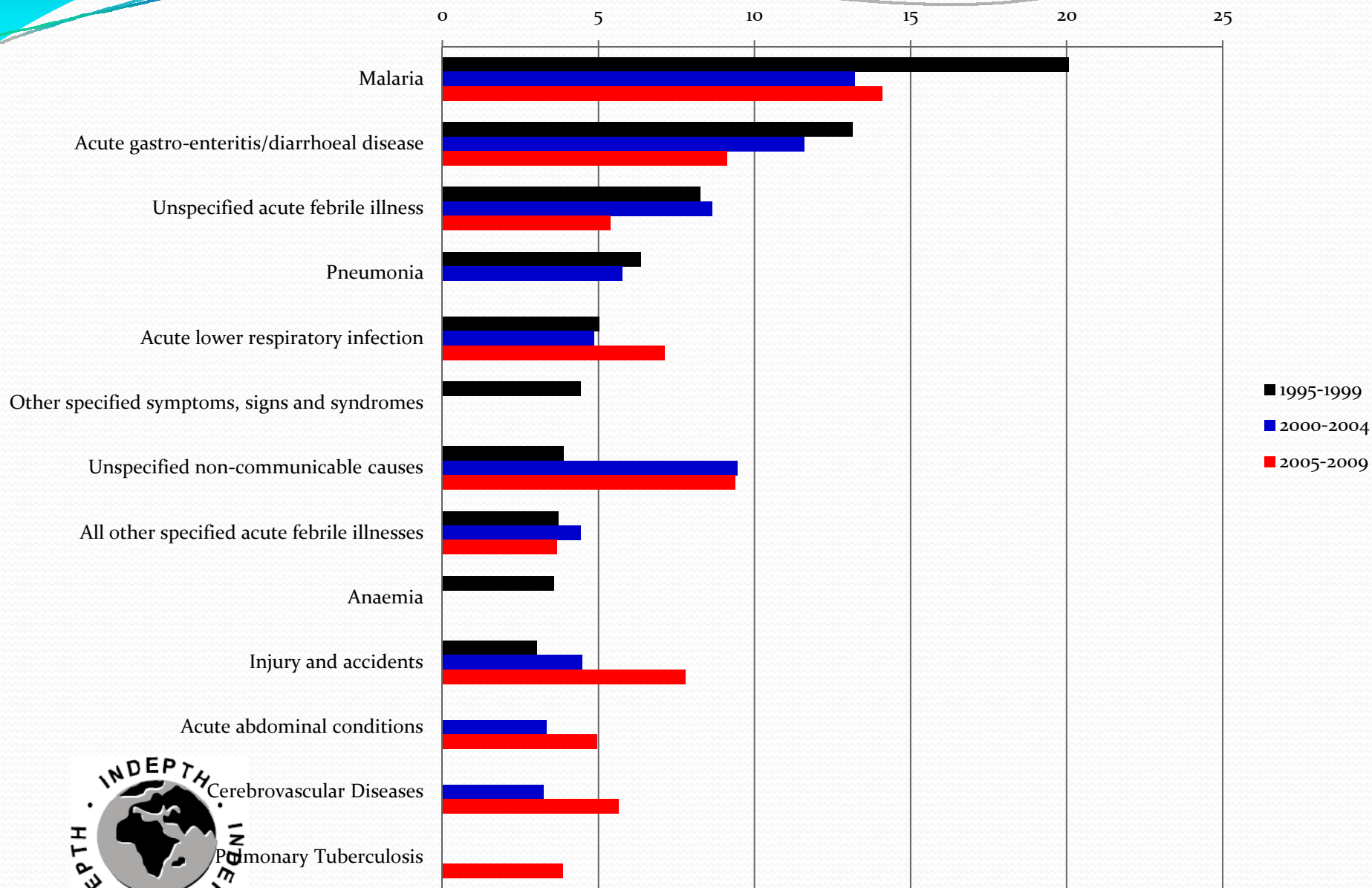


Top 10 causes of death: 1995-2009

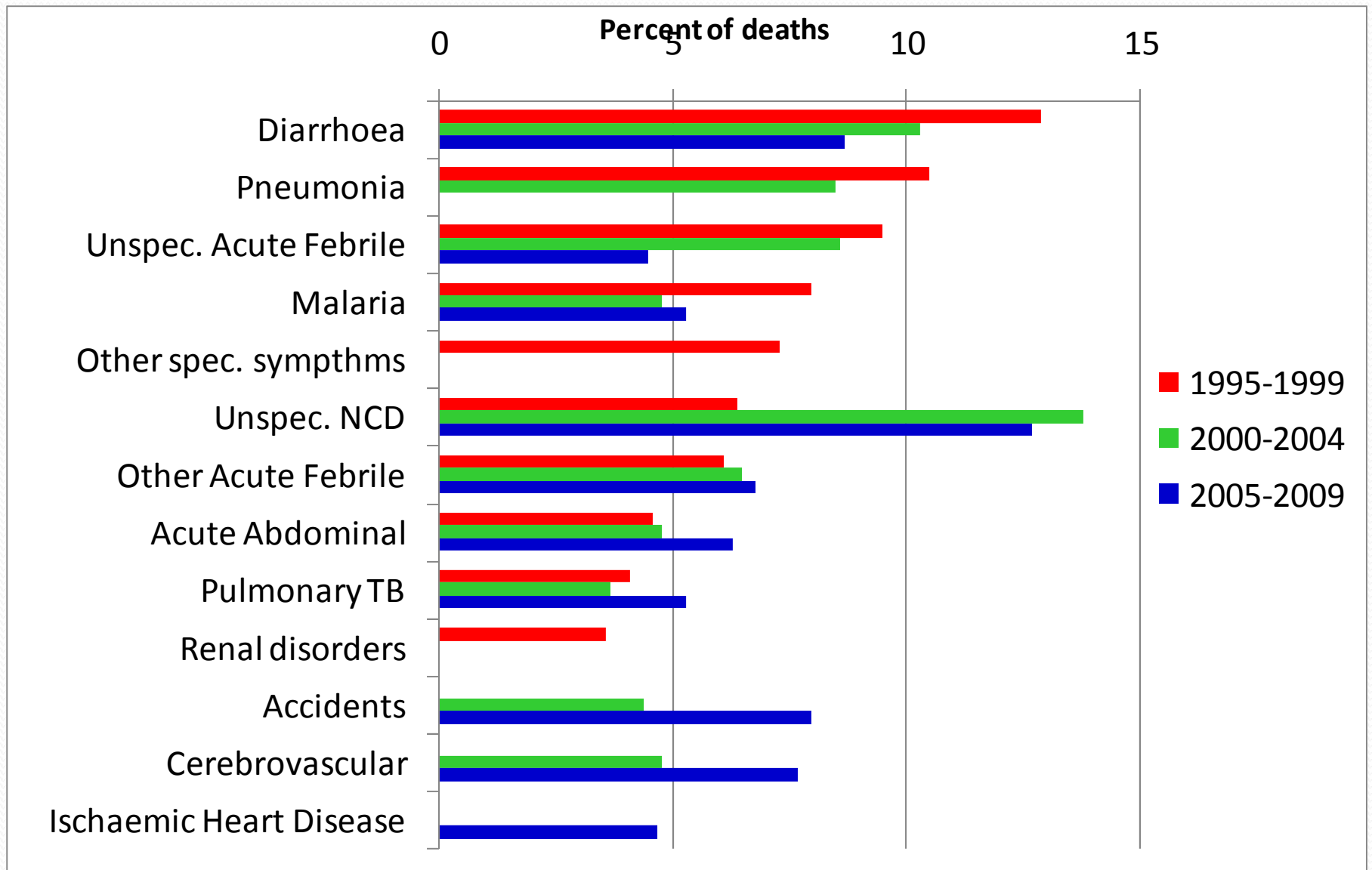
Disease Category	Percent of Deaths
Malaria	13.8
Acute gastro-enteritis/diarrhoeal disease	9.9
Unspecified acute febrile illness	6.6
Unspecified Non-communicable	5.9
Pneumonia	5.2
Accidents & Injuries	3.7
Acute lower respiratory infection	3.6
Acute abdominal conditions	2.9
Other specified acute febrile illness	2.8
Cerebrovascular diseases	2.4

Top 10 causes of death in Navrongo DSS: 1995-2009

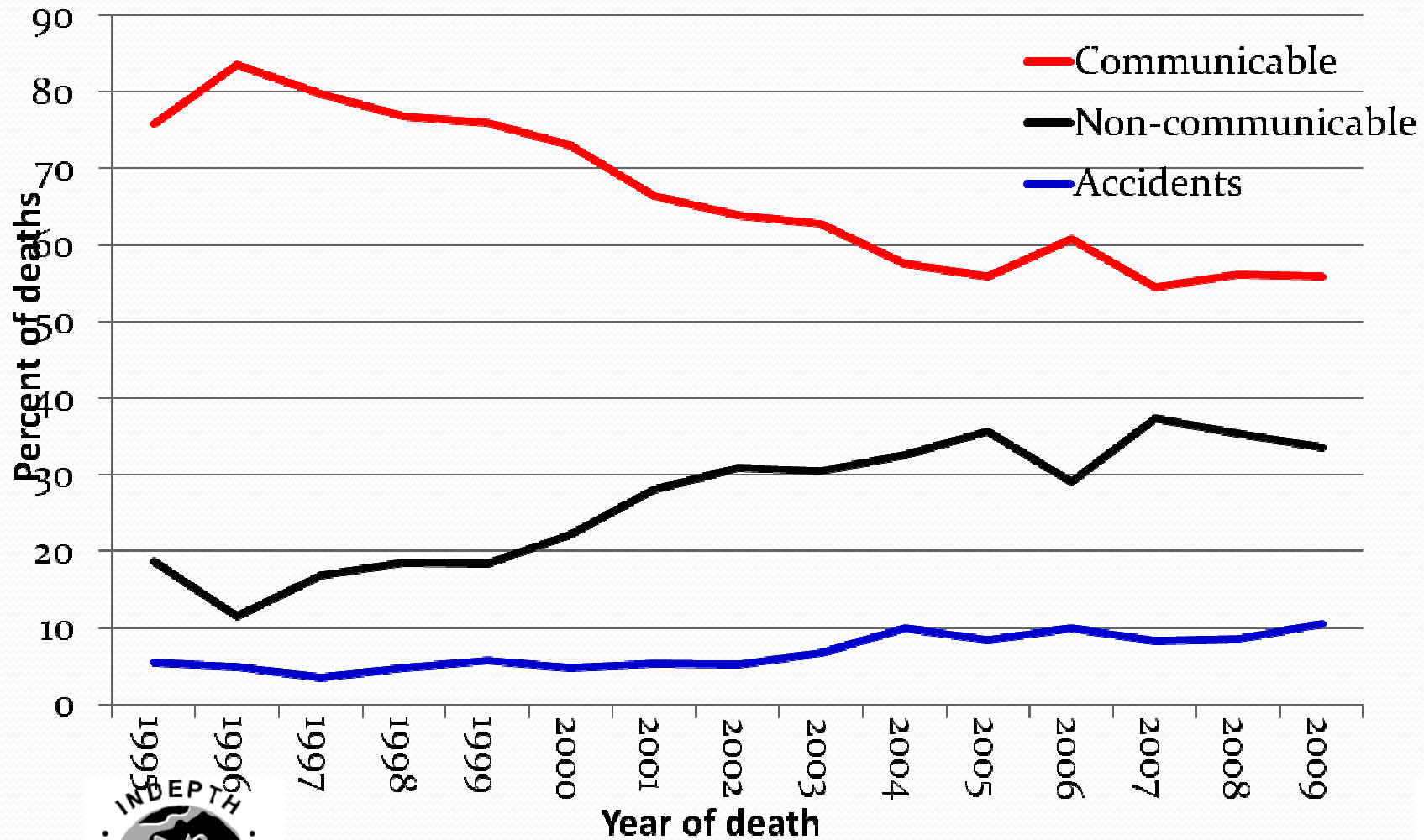
Percent of deaths (%)



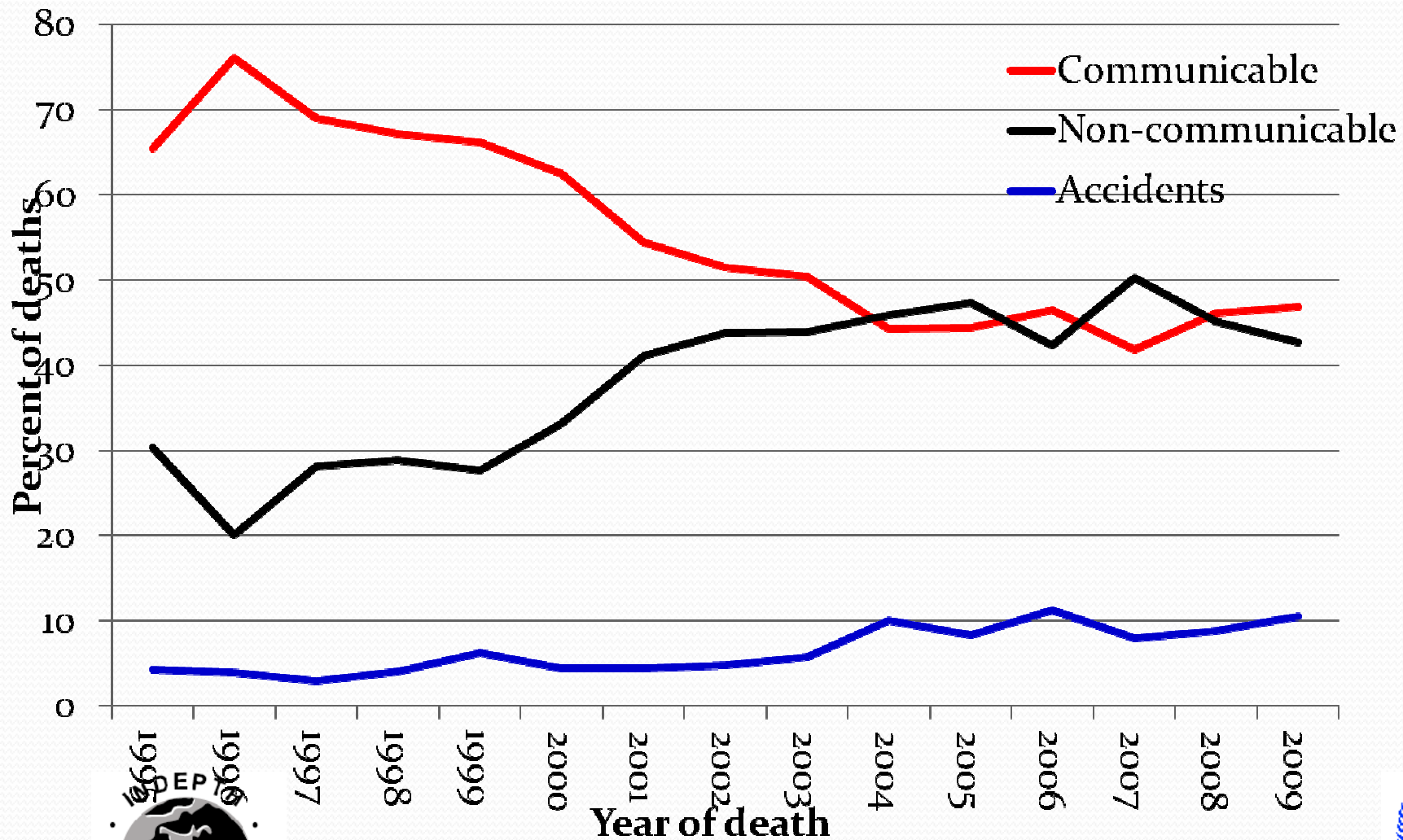
Top ten causes of death among adults in Navrongo HDSS by period



Trend in broad causes of death in Navrongo HDSS: 1995-2009



Trend in broad causes of death among adults in Navrongo HDSS: 1995-2009



Summary of results

- Disease patterns and causes of death are changing
 - Decline in proportion of deaths attributed to communicable diseases
 - Increase in proportion of deaths attributed to non-communicable diseases especially among adults
 - Co-existence of communicable and non-communicable diseases



Implications for health delivery

- Need to strengthen health care for non-communicable diseases
- NCDs are preventable
 - Education on risk factors
- Challenges
 - Health system structured around communicable diseases
 - Inadequate resources
 - Managing NCDs is expensive and beyond reach of many



Implications for health research

- Opportunity to broaden research portfolio to include NCDs
 - Surveillance for NCDs
 - Determinants of NCDs
 - Inter-play of communicable diseases and NCDs
- Challenges
 - Research concentration on infectious diseases
 - Capacity for NCD research
 - Inadequate resources



Conclusions

- Growing prominence of NCDs and persistence of CDs
 - Increasing NCDs in a context of poverty
- Need to reorient health care delivery to strengthen prevention and care of people with NCDs
- Research to monitor NCDs and identify determinants
- Need for a longitudinal approach in research
- Demographic and health surveillance an essential research platform for NCD research



Acknowledgements

- Chiefs and people of the Navrongo HDSS area
- Staff of NHRC
- Funders of Navrongo HDSS
- INDEPTH Network



THANK YOU!

