The three INDEPTH sites in

Ghana (Navrongo)
Guinea-Bissau (Bandim)
Burkina Faso (Nouna)

Reaching MDG4?
- Bandim
- Nouna
- Navrongo
Navrongo

Navrongo Health Research Centre
Ghana Health Service
Ministry of Health

Abraham Oduro
Director
Structure and Affiliations

Ministry of Health, Ghana

Ghana Health Service

Research & Development Division

Navrongo Health Research Centre

Navrongo Health Research Centre *(Northern belt)*

Kintampo Health Research Centre *(Middle belt)*

Dodowa Health Research Centre *(Coastal belt)*
Background

History
• Started in 1989 as Field station for the Ghana Vitamin A Supplementation Trial
• Upgraded in 1992 into Health Service Research Centre by Ministry of Health
• In 2009 became part of R & D Division of the Ghana Health Service

Vision statement
• To be a centre of excellence for the conduct of high quality research and training for national and international health policy development.

Mission statement
• To undertake health research in major national and international health problems with the aim of informing policy for the improvement of health.
Core Operational Areas

- The 3 regions of the north of Ghana
  - Northern, Upper East & west
  - About 40% land mass
  - About 20% of the population
- Demographic Surveillance areas
  - Two administrative districts:
    - Kassena-Nankana Municipal
    - Kassena-Nankana West
Introduction to HDSS

Entrance → Births → In Migrations → Baseline Enumeration → Entrance

Entrance → Births → In Migrations → Exit

Baseline Enumeration → Dynamic Cohort prospectively being followed → Time

Baseline Enumeration → Deaths → Cause of Deaths Using VA Techniques

Baseline Enumeration → Deaths → Cause of Deaths Using VA Techniques → Out Migrations → Exit
Navrongo Health & Demographic Surveillance System

- Established since 1992
- 1,675 sq.km and 161,000 People
- Two administrative districts
- Five zones: East, West, Central, South & North
- 247 clusters, 18,800 compounds & 33,000 households
- Three rounds in the year
- 82nd round of data collection
- Key Informant System (CKI)
- Verbal autopsy (VA)

Core Indicators collected during round
- Births
- Deaths
- Migrations
- Pregnancies
- Vaccinations
- Household SE characteristics
- Education
Trends in under-five mortality per 1000 live births in Navrongo HDSS: 1996-2015

Navrongo HDSS: MDG-4 reached:
78% reduction from 1996-2015: 235/1000 to 51.6/1000
Interventions in Navrongo

- Bednet Trial: 1993-1995
- CHFP (CHPS): 1994-2004
- OPV and Measles Campaigns: 1996-2015
Bandim

Bandim Health Project
National Institut of Public Health, Guinea Bissau

Amabelia Rodrigues
Bandim Health Project

Urban: Since 1978

• All individuals in 6 suburbs in the capital Bissau

• Population: ~100,000

• Birth cohort: 2800

• Census: Every 2-4 years

• Pregnancy registration: Monthly

• Children 0-3 years: 3-monthly visits
Bandim Health Project

Rural: Since 1990
- Women of fertile age and children 0-4 years in 182 randomly selected village clusters
- Population: ~100,000
- Birth cohort: 3900
- Pregnancy registration: every 6 months
- Children 0-4 years: every 6 months
National Hospital Simao Mendes:
Births at maternity ward, consultations and admissions at pediatric ward. HIV diagnostics and treatment

Urban Study Area Health Centers:
Births, child vaccinations and consultations. HIV and TB diagnostics and treatment

Rural Area Health Centers/Hospitals:
Admission and consultations for children enrolled in specific studies
Under 5 mortality 1978-2014
Bandim Health Project - Urban

Urban area: MDG-4 reached:
71% reduction from 1990-2014: 227/1000 to 65/1000
Rural area: MDG-4 reached:
68% reduction from 1995-2014: 241/1000 to 76/1000
Nouna

Nouna Health Research Centre
Ministry of Health, Burkina Faso

Ali SIÉ
Director
Nouna Health and Demographic Surveillance System (HDSS)
Missions & priority research areas

• Missions
  – Provide evidence for better policies/health care interventions
  – Create formal training capabilities on site
  – Reinforce research capacity within the country

• Priority Research Areas
  – Health System Research (treatment seeking behaviour, quality of care, health financing, reproductive health, health and equity, adult health, migration, assessment of poverty reduction strategies)
  – Biomedical Research (parasitology, entomology, biochemistry in malaria and virology in HIV/AIDS, bacteriology in meningitis)
  – Clinical Research (drug & vaccine trials, clinical epidemiology of infectious diseases,…)
  – Environmental issues and health
Nouna HDSS

- 58 villages and the town of Nouna
  - 1992: HDSS started with 39 villages
  - 2000: Nouna and 2 further villages added
  - 2004: further 17 villages added

- Total population (2014) ~ 103,575

- Censuses in 1993, 2000, and 2009

- All households visited 3 times per year to register births, deaths, migration,…

- Area served by 1 district hospital and 17 peripheral health centers (2016)
Overall = 44.6% reduction (Urban 45.6% vs Rural 42%)
Extrapolated to 1990 – 2015:
Estimated reduction in child mortality: 54%
Health Interventions

- Doubling the number of HF 2004-2015
- ITN interventional study (2004) follow by national scale up in 2010-2013-2016
- EPI program
  - Introduction of Hep-Hib 2006
  - November 2013: Pneumo & Rota
  - October 2014: 2\textsuperscript{nd} Measles dose at 15 months:
  - Several OPV, Measles campaign (RR Nov 2014,..)
- MenAfriVac in December 2010
- IMCI
Conclusion

• In all the 3 HDSS sites mortality has drastically declined over the past 15 years.
  – Navrongo and Bandim reach MDG 4
  – Nouna nearly but not

• Continuous data collection ongoing on
  – mortality
  – morbidity
  – health interventions

• Serve as important platforms to assess the effect of interventions