PROFILE OF THE NAVRONGO HEALTH DEMOGRAPHIC SURVEILLANCE SYSTEM

Location
- Behind War Memorial Hospital, Navrongo
- Post Office Box 114, Navrongo
- Ghana West Africa
- Telephone: 00233 3821 22310
- Email: Director@navrongo-hrc.org
- Website: www.navrongo-hrc.org

Brief Introduction to Navrongo HDSS
Having started in 1988 as a field site, the Navrongo Health Research Centre (NHRC) was formally established in 1992 by the Ghana Ministry of Health. In 1993 the NHRC put in place the Navrongo Health and Demographic Surveillance System (NHDSS) in the two Kassena-Nankanadistricts of the Upper East region of Ghana to support the evaluation of research activities in the Centre particularly on the determinants of morbidity, mortality and fertility in Ghana’s northern regions.

The two districts cover an area of 1675 km² along the Ghana-Burkina Faso border. The NHDSS currently monitors approximately 157,000 people in 32,000 households; fieldworkers routinely visit households within the study area to collect and update the demographic characteristics of the people. Events monitored routinely include pregnancies, births, morbidity, deaths, migrations, marriages and vaccination status. Socioeconomic indicators are also monitored. Data updates are done every four months by trained fieldworkers. Additional features of our HDSS include the Community Key Informants (CKI) system where trained volunteers routinely report key events such as pregnancies, births and child deaths as they occur in their locality. Verbal Autopsy (VA) technique is also used for the determination of the probable causes of death of the study population.

Objectives

To date, the NHDSS has fulfilled its role of serving as a resource for the conduct of research at the Navrongo Health Research Centre by
• Accurately documenting demographic dynamics in the Kassena-Nankana districts
• Serving as a framework for population-based health research that addresses local health priorities
• Providing the needed platform for research that informs population and health policy both in Ghana and worldwide

**Demographic characteristics as at June 2012**

As at June 2012, the population of the study area stood at 156,735, giving a population density of 93.6. The annual growth rate is 2.2 percent from last year's population of 153,293. As it is with most populations, there are more females than males as females constitute about 52.3 percent of the population of the study area. The proportion of children who are below 15 years continues to decline from 36.6 percent in the previous year to 36 percent this year. The proportion of the population which is 60 years and above is 10 percent, same as the previous year.

**Mortality levels**

The routine data collection processes of the NHDSS include the registration of all deaths that occur to resident members of the study area. A total death recorded within the analysis period (one year, between July 2011 and June 2012) was 1651. This gives a crude death rate of 10.5 per 1000 person years. Neonatal mortality rate for the period under review stood at 14.3 per 1000 live births. Infant and under five mortality rates stood at 30.4 and 56 per 1000 live births respectively.

**Fertility levels**

Births form one of the components of population change and so is one of the important events captured by the NHDSS. This information allows for the evaluation of the fertility profile of the study area. Crude births rate for the districts as at June 2012 was 24.2 per 1000 person years, whilst general fertility was 102 per 1000 person years of women within the reproductive age. The total fertility rate of 3.51 was recorded and this refers to the number of children a woman in the Kassena-Nankana districts would have if the current age-specific fertility rates were to continue.

**Priority Research Areas**

• Clinical and Field trials
• Maternal and child health interventions
• Prevention and control of tropical diseases; malaria, etc
• Adolescent and Reproductive Health
• Communicable diseases; Meningitis, Rotavirus, etc
• Noncommunicable diseases; adult health, human genetics, etc
• Health systems research
• Social and behavioral Studies
• Poverty and Equity Studies
• Monitoring and Evaluation of public health interventions

**Some Key activities in 2012- July 2013**

1. Meningitis Vaccine Project (MVP)
2. INDEPTH Phase IV Effectiveness and Safety Studies (INESS)
3. Immunogenicity of the Human Rotavirus Vaccine (Rotarix) in Rural Ghana
4. QUALMAT: Quality of maternal and neonatal health research
5. Malaria in Pregnancy studies (MIP)
6. Embrace Initiative in Ghana: Study on Maternal, Newborn and Child Health to Strengthen Continuum of Care
7. Monitoring the Impact of Vaccinations and other Childhood Interventions
8. Measuring changes in Reservoir of Malaria Infection in Northern Ghana
9. A phase ll randomized ,controlled double –blind, multi-centre study, and immunogenicity of GMZ2 candidate malaria vaccine in, Gabonese, Burkinabe, Ghanaian and Ugandan children aged 12-60 months.

**SOME POLICY DRIVEN PROJECTS**

- Vitamin A Supplementation Trial (Ghana VAST)
- The permethrin impregnated bednets study (Bednet studies)
- Community Health and Family Planning Project (CHFP)
- Community-based Health Planning and Services (CHPS)
- Malaria control and prevention
- Control and prevention of meningococcal meningitis
- Rotavirus Diarrhoea
- .

**Selected major current funders**

**Collaborating Institutions**

- INDEPTH-Network
- All universities in Ghana
- Kintampo and Dodowa Health Research Centres
- Noguchi Memorial Institute for Medical Research
- London School of Hygiene and Tropical Medicine (LSHTM)
- Several Universities including Columbia, New York, Tokyo, Colorado, Oxford, Heidelberg, Liverpool, Wits, etc


9. Helen Prytherch, MoubassiraKagoné, Gifty A Aninanya, John E Williams, Deodatus CV Kakoko, Melkidezek T Leshabari, Maurice Ye, Michael Marx and Rainer Sauerborn; *Motivation and incentives of rural maternal and neonatal health care providers: a comparison of qualitative findings from Burkina Faso, Ghana and Tanzania.* BMC Health Services Research. 2013, 13:149.

10. Antje Blank, Helen Prytherch, Jens Kalschmidt, Andreas Krings, Felix Sukums, Nathan Mensah, Alphonse Zakane, SvetlaLoukanova, Lars L Gustafsson, Rainer Sauerborn and Walter E Haefeli; *Quality of prenatal and maternal care: bridging the know-do gap*
(QUALMAT study): an electronic clinical decision support system for rural Sub-Saharan Africa. *BMC Medical Informatics and Decision Making* 2013, 13:44.


