

AGINCOURT HEALTH AND SOCIO-DEMOGRAPHIC SURVEILLANCE SYSTEM SOUTH AFRICA September 2009

Brief Introduction

The Agincourt Health and Socio-Demographic Surveillance System (HSDSS) is the research foundation of the MRC/Wits Rural Public Health and Health Transitions Research Unit (Agincourt). Work of the Unit serves to strengthen and extend a high-functioning health and socio-demographic surveillance system – including annual census, vital events and socio-economic updates. This serves as the scientific foundation for a programme of advanced research and intervention studies.

Evolution of the Agincourt HSDSS

Work in Agincourt passed through several stages following a baseline census in 1992:

1. Decentralised health systems development (1993-97) providing a prototype for national Policy in response to limited experience delivering rural services
2. Reorientation to a university-linked health and population research initiative (1998-2002) as serious weaknesses in the rural evidence base became apparent
3. Establishing a field-based research and training programme linked with Witwatersrand University (2003 onwards) that is central to an interdisciplinary university initiative termed 'Population, Health and Society'.

The Agincourt Study Site

The Agincourt sub-district, measuring some 420 sq km and extended in 2007 to cover 84,853 people living in 14,382 households and 26 villages, lies in South Africa's semi-arid rural north-east (figure 1). Part of the Bushbuckridge 'poverty node' it has long been a labour sending area with limited employment opportunities despite a population density above 200 persons per sq km. Located only 40km west of the Mozambican border, the area can be regarded as a cross-border region of rural southern Africa – indeed former Mozambicans make up about a third of the Agincourt population.

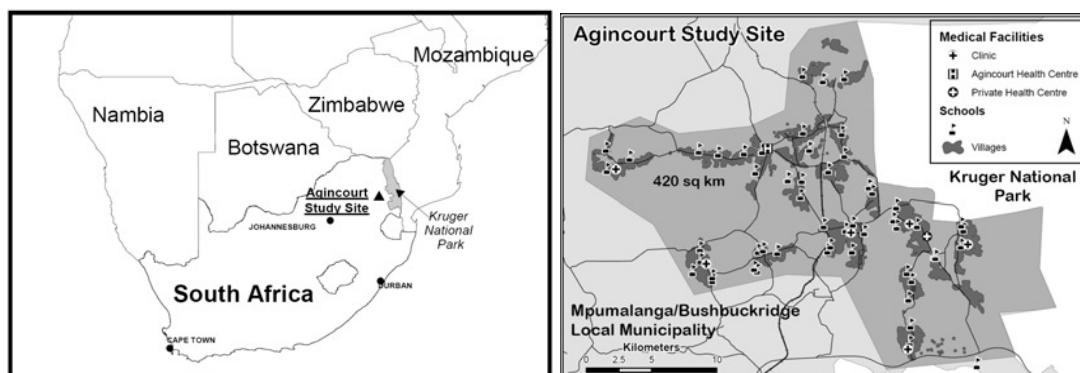


Figure 1: Southern Africa showing Agincourt study site; Agincourt study site detail, 2009.

Highlights

The Unit's goal is 'to better understand the dynamics of health, population and social transitions in rural South (and southern) Africa in order to mount a more effective public health, public sector and social response'. Work over more than a decade has demonstrated the mortality impact of emerging non-communicable disease despite overwhelming chronic infectious disease (HIV and TB), and highlighted the implications of this for the provision of effective primary health care. A Lancet research article was published as part of a 30th anniversary commemorative issue on Primary Health Care (Tollman SM, Kahn K et al. Implications of mortality transition for primary health care in rural South Africa: a population-based surveillance study. *Lancet* 2008; 372: 893-901); this has a linked commentary and was discussed in the editorial. In August 2009, The Lancet produced a South Africa series (*The Lancet, Health in South Africa, August 2009*); Tollman contributed to the paper on non-communicable diseases that includes data from the Agincourt HDSS.

The Unit is uniquely positioned to study coverage of, and equity in access to, treatment programs including VCT and ART, as well as other chronic care services. This will be achieved through linking health facility records with the Agincourt population-based database. Work evaluating the most effective methods for the linking is near completion.

The Unit's efforts to develop effective chronic care systems, responding to both infectious and non-communicable disease, are strengthened through partnership with the Mpumalanga Department of Health. This involves provision of population-based health and household data for provincial and district priority setting, and R&D efforts to develop effective health programmes for children and adults.

Medium-term sustainability of the Agincourt health and socio-demographic surveillance system over the period 2008-2013 is assured through award of a five-year Wellcome Trust programme grant (GB£2.9 million).

Comparative rural-urban research on child and adolescent growth, development and risk for adult chronic disease is jointly led with the urban Birth-to-Twenty Project (Soweto), and benefits from two major longitudinal studies.

Research portfolio

Studies to-date and a strengthened research platform combine to produce the portfolio presented below. Every project is linked to the HDSS, relies on its data management system during field and analytic phases, and will ultimately contribute new datasets to the research platform thus extending and enriching it. To avoid overburdening study participants, HDSS management is careful to monitor selection of samples to limit participation in multiple studies. Project-specific funding is sourced separately.

Figure 2 describes an organizational framework for the research programme indicating major research themes and links between them.

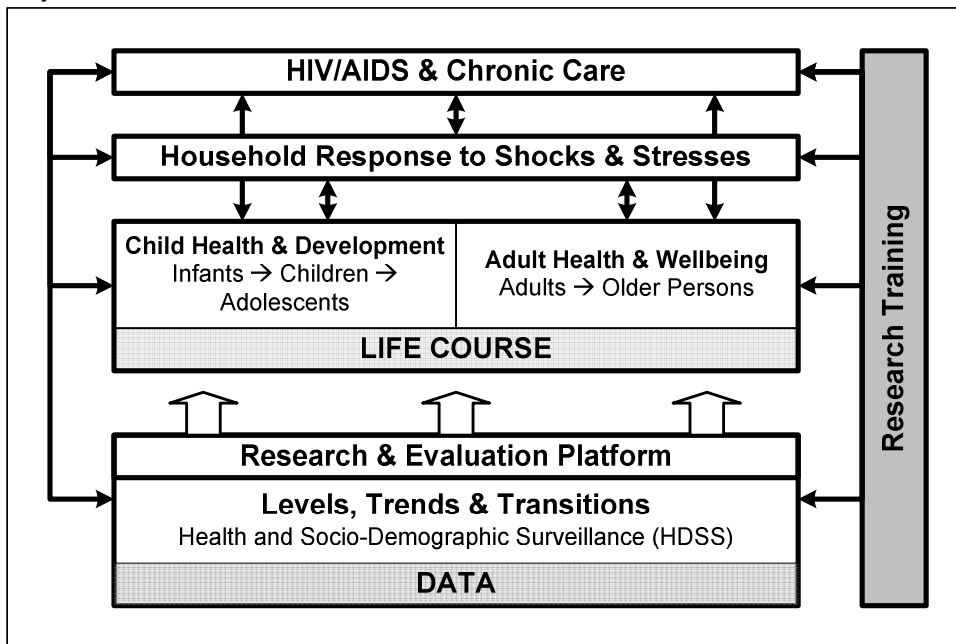


Fig 2. Population and Social Transitions in Agincourt

Theme 1: Levels, trends and transitions

Theme leader: Sam Clark, with Mark Collinson

- Seeks to understand dynamics of demographic/epidemiological change in rural populations contending with rapid transitions, and identify the forces driving that change.

Theme 2: Child health and development

Theme leader: Kathleen Kahn, with John Pettifor

- Project PROMISE: Primary prevention to promote adolescent and infant health and wellbeing and to reduce intergenerational risk of metabolic disease in transitioning societies
- Kulani Child Health and Resilience Project
- Pneumococcal conjugate vaccine (PCV) introduction
- HIV & Education in Young South African Women

Theme 3: Adult health and wellbeing

Theme leader: Steve Tollman, with Myles Connor

- Studies on the epidemiology of epilepsy in demographic surveillance sites (SEEDS)
- Health and wellbeing of ageing populations in Africa and Asia

Theme 4: HIV/AIDS and Chronic care

Theme leader: Steve Tollman

- Home-based VCT in support of HAART roll-out
- Trials site development
- Chronic care

Theme 5: Household response to shocks and stresses

Theme leader: Mark Collinson, with Wayne Twine

- Natural resources and household vulnerability/resilience
- The social role of elders
- Migration, health and wellbeing

10 Most Recent Key Publications – Agincourt HDSS Related

Peer-review journal articles

1. Mayosi BM, Flisher AJ, Lalloo UG, Sitas F, Tollman SM, Bradshaw D. The burden of non-communicable diseases in South Africa. *The Lancet* 2009. DOI: 10.1016/S0140-6736(09)61087-4.
2. Madhavan S, Towensend N, Garey AI. Absent Breadwinners: Father-child connections and paternal support in rural South Africa. *Journal of Southern African Studies* 2009, 34(3):647-663. DOI: 10.1080/03057070802259902
3. Goudge J, Russell S, Gilson L, Gumede T, Tollman S, Mills A. Illness related impoverishment in rural South Africa: why does social protection work for some households but not others? *Journal for International Development*. 2009, 21(2) 231-251
4. Madhavan S, Schatz E, Clark, B. HIV/AIDS mortality and household dependency ratios in rural South Africa 2000-2005. *Population Studies* 63 2009; (1), 1-15.
5. Ogunmefun C, Schatz E. Caregivers' sacrifices: the opportunity costs of adult morbidity and mortality for female pensioners in rural South Africa. *Development Southern Africa* 2009;26(1).
6. de Sherbinin A, Vanwey LK, McSweeney K, Aggarwal R, Barbieri A, Henry S, Hunter LM, Twine W. Rural household demographics, livelihoods and the environment. *Global Environmental Change* 2008;18(1):38-53.
7. Tollman SM, Kahn K, Sartorius B, Collinson MA, Clark SJ, Garenne ML. Implications of mortality transition for primary health care in rural South Africa: a population-based surveillance study. *Lancet* 2008; 372: 893-901.
8. Hunter LM, De Souza R-M, Twine W. The environmental dimensions of the HIV/AIDS pandemic: a call for scholarship and evidence-based intervention. *Population & Environment* 2008;29:103–107.
9. Cortina MA, Kahn K, Fazel M, Hlungwani T, Tollman S, Bhana A, Prothrow-Stith D, Stein A. School-based interventions can play a critical role in enhancing children's development and health in the developing world. *Child: Care, health and development* 2008;34(1):1-3.

Book chapters

10. White M.J., Mberu, B.U., Collinson M.A. African Urbanisation: Recent Trends and Implications. In: G., McGranahan G., Montgomery M., Fernandez-Castilla R (eds). *'The New Global Frontier: Urbanisation, Poverty and Environment in the 21st Century'*. London: Earthscan, 2008: 301-316 ISBN 978-1-84407-559-1

Funders

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Collaborators

At Wits University: School of Public Health, Centre for Health Policy; Departments of Child Health, Sociology, Economics; Birth to Twenty, Forced Migration Studies Programme (FMSP), Wits Institute for Social and Economic Research (WISER), Centre for African Ecology, Reproductive Health Research Unit. In South Africa: Africa Centre Demographic Information System (ACDIS) University of KwaZulu-Natal; Dikgale DSS, University of Limpopo; Medical Research Council; Statistics South Africa; University of Cape Town. International: INDEPTH; UK: London School of Hygiene and Tropical Medicine, Warwick, Oxford, Cambridge and Edinburgh Universities; Europe: Pasteur Institut, France; Umeå University, Sweden; World Health Organisation, Geneva. USA: Colorado, Brown, Princeton and Harvard Universities.

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