

Influencing Policies to Prevent Hypertension and Strokes in South Africa

Agincourt HDSS

MRC/Wits Rural Public Health and Health Transitions Research Unit

IMPACT CASE STUDY



Agincourt Health and Socio-Demographic Surveillance System (HDSS)





The Agincourt Health and Socio-Demographic Surveillance System (HDSS), located in rural northeast South Africa close to the Mozambique border, provides the foundation for the Rural Public Health and Health Transitions Research Unit of the Medical Research Council (MRC) and University of the Witwatersrand, South Africa (the MRC/Wits-Agincourt Unit). Its origins lie in the university's 'Health Systems

Development Unit' that in the early 1990s focused on district health systems development, sub-district health centre networks and referral systems and training of clinically oriented primary health care nurses. The Agincourt HDSS was a founding member of the International Network for the Demographic Evaluation of Populations and Their Health (INDEPTH) (<http://www.indepth-network.org/>) and provides leadership to INDEPTH multi-centre initiatives in adult health and ageing and migration and health.



INDEPTH Network
Better Health Information for Better Health Policy

INDEPTH is a global leader in health and population research, providing robust answers to some of the most important questions in development. The lack of a reliable information base to support the

identification, prevention and treatment of health problems is a major hurdle to addressing the high burden of disease in low- and middle-income countries. INDEPTH — through its global network of 52 health and demographic surveillance system (HDSS) sites run by 45 research centres in 20 countries across Africa, Asia and the Pacific region — is the only organisation in the world capable of developing that information base. It tracks a total population of over 3.8 million people, providing high quality longitudinal data not only about the lives of people in low- and middle-income countries (LMICs), but also about the impact on those lives of development policies and programmes.

Summary of the Impact

With over a decade of research into blood pressure as an important facet of the rapid epidemiological transition in rural South/ern Africa, MRC/Wits-Agincourt Unit has influenced policies and practice at local, district, provincial and national levels. Sustained relationships with multiple stakeholders resulted in responses with potential for major public health impact. Research since 2002/3 demonstrated that about 43% of the Agincourt population had hypertension, that reducing the sodium content of bread would reduce population-wide systolic blood pressure, and prevent about 2000 fatal and 2300 non-fatal strokes annually. In addition to salt, smoking and obesity were found to be critical risk factors in strokes.

The research led to:

- The development of national stroke prevention initiatives.
- Changes in national policy regarding salt content in foods.
- And research into health system interventions for chronic disease management in partnership with the Ministry of Health.



Sources to Collaborate the Impact

SASPI Study: District/Provincial Level

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Salt Content Regulation: National

The PRICELESS Board has several influential government and South African Medical Research Council representatives guiding its core work. These relationships have been integral in building a sustained relationship with the Minister of Health, Dr Aaron Motsoaledi specifically through the Director General Dr Precious Mabase and high level department of health representatives, including Dr Yogan Pillay and Dr Melvyn Freeman. The primary contact person at the Department of Health with regard to the salt content work is:

Melvyn Freeman, Cluster Manager Non-communicable diseases of the National Department of Health

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The salt work produced extensive media debate and discussion in South Africa, a full listing of media coverage can be found here: <http://www.pricelessa.ac.za/News/Pages/Media.aspx>

Integrated Chronic Care: Local

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The Underpinning Research

A key aspect of the rapid epidemiological transitions being faced in rural South and Southern Africa is a simultaneous increase in non-communicable and communicable diseases, most notably HIV/AIDS and stroke. The HDSS has provided integral data highlighting this transition.

SASPI Work on Hypertension and stroke (2002/3-2006):

Having noted increased reporting in non-communicable disease and in particular hypertension through its annual census round, the MRC/Wits-Agincourt Unit joined forces with a special study group, the South African Stroke Prevention Initiative (SASPI). The SASPI team conducted several studies on hypertension and its consequences, in particular stroke. These studies under the SASPI team explored various facets of blood pressure in the MRC/Wits-Agincourt HDSS:

(i) The research highlighted the prevalence of hypertension, with some 43% of the population having some degree of hypertension [1,2].

(ii) A nested study on 402 participants who had had a stroke, highlighted critical behavioral risks for hypertension including obesity, high salt content in diet and smoking.

(iii) Further investigation into health system treatment of hypertension resulted in an audit of blood-pressure-devices [3].

National Focus on Salt content in manufactured food (2011-2013): These studies into hypertension within the MRC/Wits-Agincourt site led to a national level focus on hypertension, again highlighting its critical linkage to stroke. The Priority Cost Effective Lessons for System Strengthening (PRICELESS) unit is a critical health economic unit with the MRC/Wits-Agincourt unit.

In 2011, PRICELESS embarked on exploring the national burden of hypertension through excess salt consumption in processed foods [4,5,6]. The study estimated the number of lives that could be saved by reducing salt in manufactured food. The researchers showed that reducing the sodium content of bread would reduce population-wide systolic blood pressure, and prevent about 2000 fatal and 2300 non-fatal strokes annually. The work highlighted the savings from reduced numbers of hospital admissions of patients with non-fatal stroke alone could save ZAR300 million per year and prevent 3000 deaths from ischemic

and hypertensive heart disease. Integrated Chronic Care (2012/13-2015): The work on hypertension was granted an award in 2012 by the UK MRC for critical work on 'Treating hypertension in rural South Africa: Comparative effectiveness of two different patient outreach models' in the MRC/Wits-Agincourt site. This project named Nkateko, takes a health systems approach to treating hypertension in rural South Africa. As a national pilot site for integrated chronic care, it is hoped that the research will have an effect on the implementation of treating hypertension across South Africa.

For more SASPI research, visit <http://www.mrc.za/chronic/cdlchapter14.pdf>

To understand PRICELESS better, visit their website at: <http://www.pricelessa.ac.za/>

Details of the Impact

The extensive research into hypertension in the MRC/Wits-Agincourt unit has yielded positive impacts at local, district, province and national level. The timeline in Section 7 summarizes the research and major impacts on hypertension between 2002-2014

2003-2006 SASPI Study: Local Impacts

An integral part of the multi-disciplinary work on hypertension completed by the SASPI team was to disseminate the findings to the local community to highlight the risk behaviors for hypertension. This was achieved through drama in collaboration with a theatrical group. The process allowed data validation, and elicited ideas for future interventions. Fact sheets on preventing hypertension and its effects and symptoms of stroke were shared with participants in the applied drama processes across the study site.

District, Provincial Level

In 2003, the SASPI team presented their results to the National and Provincial Departments of Health in Pretoria. The Deputy Director of Health Promotion in the Mpumalanga Department of Health took the results of the study, and used them to develop a project titled 'Strengthening Capacity for Health Promotion in NCD Prevention in the Province of Mpumalanga'. This project, which was funded by WHO and the Flemish Government, aimed to reduce the burden of excess mortality and disability with regard to Cerebrovascular accident (strokes) and Cardiovascular disease by strengthening capacity for health promotion in three communities in Mpumalanga. The project was the first of its kind in South Africa, being collaboration between the province, the National Department of Health, WHO and the Flemish funders.

2011-2013 Salt Content in Manufactured food: National Level

The research by MRC/Wits-Agincourt Unit on salt content resulted in amendments to regulations in the Food, Cosmetics and Disinfectants Act to reduce salt content in manufactured food, announced by the Minister of Health in 2013, to be implemented in 2016. Several key processes in engaging with government to ensure success were followed [5]:

(i) Ensuring that relevant stakeholders were involved from the outset, including a participatory process to design key research questions,

(ii) Keeping communication channels open throughout the process and informing stakeholders of results as they emerged,

(iii) Researcher involvement in consultative processes with both industry and the media ensuring that these interest groups were correctly informed.

These regulation amendments will impact all South Africans who consume manufactured food products, most notably bread. It will have further impacts on sub-Saharan Africa with multiple South African manufactured food products available across the continent.

2012/3-2015 Integrated Chronic Care: Local

The Agincourt HDSS has been

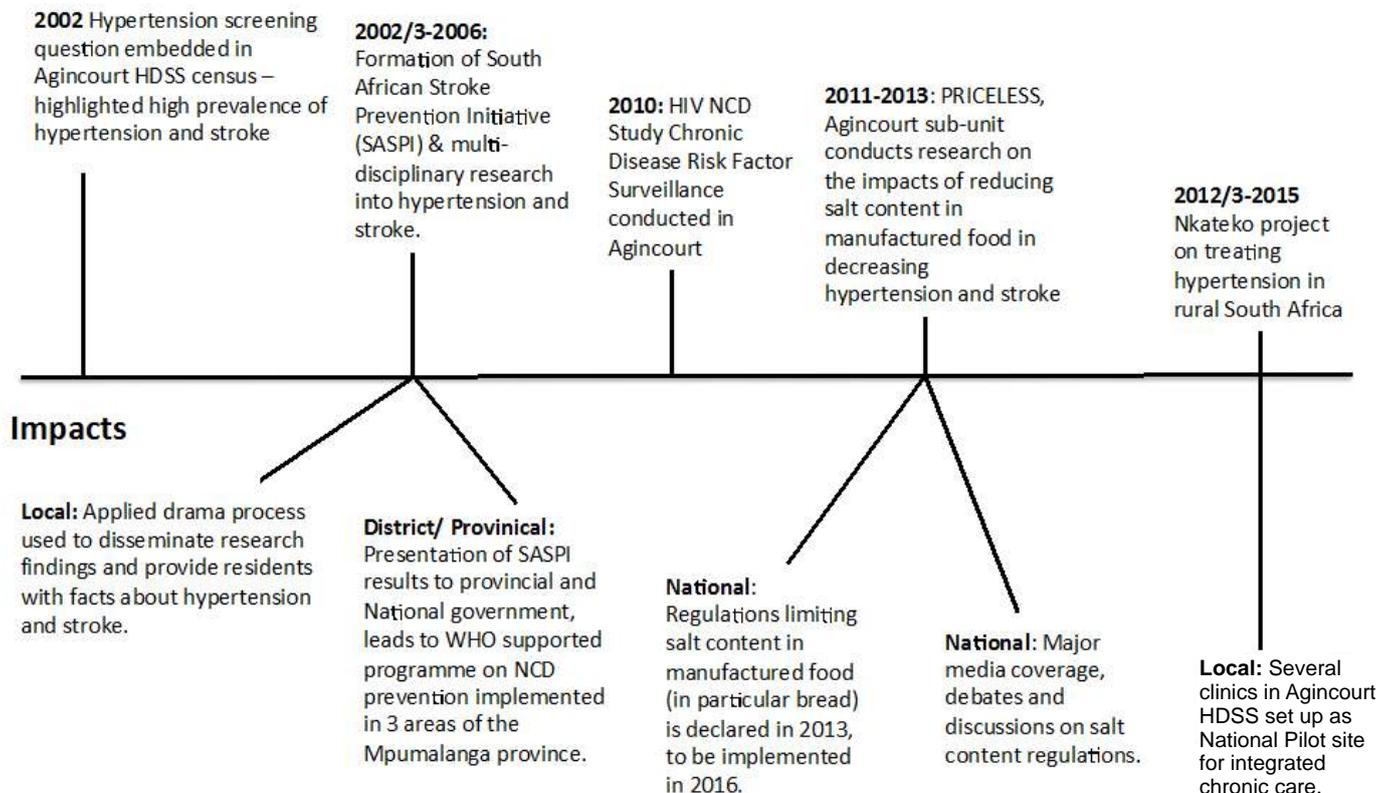
established as a National Pilot site for integrated chronic care, it is in this context that two patient models will be tested in relation to hypertension treatment. The intervention arm of the study will build on the integrated chronic care model with the introduction of lay health worker. The study based in clinics is reliant on both local and provincial health partnerships and whilst in the field the intervention arm adds additional capacity to local clinics through the lay health worker working directly with a nurse in the clinic.



Timeline of Impacts

Hypertension Studies and impacts in Agincourt HDSS 2002-2014

Research



All studies conducted in Agincourt include community entry and feedback from the LINC (Learning Information Dissemination and Networking with Communities) office as well as where relevant patient referrals to clinics and hospitals.

Role of the secretariat and other networks

INDEPTH Network and Other HDSS: The INDEPTH Network and other HDSS were not directly involved in the hypertension study described above. However, the MRC/Wits-Agincourt Unit participated in the INDEPTH-WHO SAGE study, which included critical questions on hypertension and stroke for Agincourt HDSS's ageing population. Furthering this work, the MRC/Wits-Agincourt unit together with the INDEPTH Centers Ifakara, Tanzania and Navrongo, Ghana will be conducting an extensive study in

Adult Health and Ageing in Africa: Longitudinal Studies of INDEPTH communities (HAALSI). This study will build on the work described above with both questions and hypertension testing.

Collaborators: University of Warwick, University of the Witwatersrand, University of St Andrews, South Africa Provincial Department of Health, University of the North West, National Department of Health

Funding

Research: The MRC/Wits Agincourt unit's work has been supported by various organisations throughout its extensive research into hypertension, they are varied and provided support in various ways for both research and impact acceleration. The most relevant financial contributions for the work described above are: Wellcome Trust, Medical Research Council, South Africa, UK MRC, IDRC Canada, National Institute on Aging, NIH, USA.

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