

TRANSLATING RESEARCH INTO POLICY AND PRACTICE - Examples from HDSS Centres

Four HDSS centres were selected to provide examples of their work in translating research into policies or practice. As stated previously, the four centres were chosen using a number of criteria: those who had responded in the affirmative to a questionnaire sent by the Secretariat asking centres to report if they had impact on policies and practice in the past five years; to obtain a mix of centres, by age of HDSS; and geographical region. The centres were given a template to report on specific impact on policies or practice, the underpinning research, the role of collaborators and networks, including INDEPTH, and the source of funding for the research. Centres were also asked to provide names of stakeholder contacts who could verify the reported impacts. Finally, centres were asked about the positive factors that enabled them to translate research into policy and practice and what role the Secretariat should take in supporting HDSS centres.

All of the centres reported on findings which led to impacts on health policies and practice, demonstrating the health bias of the majority of HDSS. In all of the impact case studies, there was external funding for the research, and the Secretariat did not play a specific role in enabling the impact to happen other than the general support such as training on data collection and training HDSS staff.

Agincourt HDSS, South Africa

Hosted by the MRC/Wits Rural Public Health and Health Transitions Research Unit at the University of the Witwatersrand, the Centre is situated 500 kilometres northeast of Johannesburg in the Bushbuckridge region of Mpumalanga province. The HDSS, which was established in 1992, is following a population of 110,000 people and data are updated annually. The Centre's research investigates the dynamics of health, population and social transitions in rural South (and southern) Africa in order to provide evidence for more effective public health, public sector and social responses. The Centre is supported by the University of the Witwatersrand and its research has multiple funders including the Wellcome Trust, South African and UK Medical Research Councils, and National Institutes of Health, to name a few.

In terms of publication, the Centre is highly productive, averaging around 32 articles per annum in peer-reviewed international journals (including the Lancet, Bulletin of the World Health, International Journal of Epidemiology, and many more). Agincourt described the impact that they have had on policies to prevent hypertension and strokes in South Africa. Research from the HDSS demonstrated that the percentage of the adult population with hypertension in the Agincourt rural surveillance area was very high (43%) and that policies to reduce salt intake could save lives and reduce stroke-related morbidity (see Box 3 below and a full description in Appendix 3). As the impact case study claims, reduction in salt in manufactured food products in the country will have regional impact because of the export of manufactured food from South Africa to neighbouring countries.

3. AGINCOURT HDSS

Title: Influencing policies and practice to prevent hypertension and strokes in South Africa

With over a decade of research into blood pressure as an important facet of the rapid epidemiological transition in rural South and Southern Africa, the 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 nationally, and prevent about 2000 fatal and 2300 non-fatal strokes annually, and that in addition to salt, smoking and obesity were critical risk factors for strokes. The research led to: development of national stroke prevention initiatives; changes in national policy regarding salt content in foods; and research into health system interventions for integrated chronic disease management in partnership with the Ministry of Health.

The success of the Agincourt HDSS in influencing policies and practice can be attributed to the quality of the research and its policy-relevance, and the trusted relationships that the researchers have with users of research. Evidence of the quality of the research findings is endorsed by their publication in high quality journals (for example The Lancet). The stakeholders that we contacted commented on the high quality of the research at Agincourt, describing it as *“outstanding”*. The Agincourt case study is a good example which demonstrates that the process from research to policy engagement to impact is not linear. In one of the examples of impact in the case study, the stakeholder initiated the interaction after reading about the research in the newspapers. In another case, after the initial research, the stakeholders requested Agincourt to conduct additional research to strengthen the case for change in legislation. As one of the stakeholders stated, *“Firstly we looked at research that was already being produced (such as high rates of strokes and other NCDs in this area) and this informed our policy directions to do more about reducing hypertension related mortality and morbidity. We then requested further research be done in order to get more information (of a slightly different kind) to move forward. This contributed significantly to policy and legislative initiatives to reduce hypertension - salt reduction being one such important initiative”*.

The Centre’s dissemination strategy is very effective. As one of the stakeholders stated, *“While journal articles are important, policy makers often don’t have the time to read them. Personal communication and interaction as well as presentation of data have been very important ways in which scientific data has been communicated to us from Agincourt. They have also summarised data for our perusal”*.

Staff at Agincourt attributed the successful translation of research into policy and practice to the following:

- The presence of a stable and productive research unit, with its commitment to community engagement and high quality research.
- A unit dedicated to Learning, Information Dissemination and Networking with Communities has been integral to the ability of the Agincourt HDSS to successfully translate research into policy

and practice. The unit has experienced and dedicated staff who work with principal investigators to ensure that the policy relevance of their research is explored and pursued, that information is disseminated to community groups, government departments and non-governmental organizations.

- Inclusion of cost-effectiveness studies as a core part of intervention research. This is popular with policy makers, especially estimates of lives saved.
- Sustained relationships with policy makers and implementers and production of factsheets at the end of each study ensure a reciprocal, sustained relationship with policy makers and service providers.

Dodowa HDSS, Ghana

The Dodowa HDSS is run by the Dodowa Health Research Centre (DHRC) in Ghana and is situated in the Dangme West District, one of the districts in the Greater Accra region. The HDSS, which was launched in 2005, is following up a rural population of nearly 112,000. Data are updated twice a year. Dodowa is one of three research centres that were instituted by the Ghana Health Service (GHS), (the others are Navrongo and Kintampo). As a government owned centre, its core staff are paid by GHS which also provides some funding for infrastructure and utility bills. Research costs are mostly externally sourced, except when the government needs the centres to conduct specific piece of research in which case they provide funding. Both staff and stakeholders admit that the core funding is inadequate; one of the stakeholders informed us that GHS is supposed to spend 5% of its budget on research but the actual fraction is far less than this. Nevertheless, the Centre appears to be successful in securing external funding (some of the current and previous funders include the Wellcome Trust, WHO/Tropical Diseases Research program, Gates Foundation and Grameen Foundation).

DHRC described the impact that their research has had on policies for home management of fevers in children under the age of five years in Ghana (see Box 4 for a summary and Appendix 3 for impact case study). The example demonstrates that negative findings can be just as useful in informing policies and practice. In the case of Dodowa, their research demonstrated that the existing strategy for home management of fevers among children using antimalarials only was just as effective as antimalarials plus antibiotics, except when there were respiratory signs of pneumonia, in which case antibiotics should be prescribed. The results confirmed to health policy makers in the country to continue with the existing strategy for home management of fevers in children.

DHRC has been successful in translating research into national policy and practice since its conception. The fact that it was created by GHS and its proximity to Accra could have been contributory factors. One stakeholder gave another example of successful research-to-policy work conducted by Dodowa which was to assess the feasibility of introducing a health insurance scheme in rural communities. Researchers at the DHRC disseminate their research at different levels: district, regional and national annual meetings, thus ensuring that the research is accessible to many stakeholders. The Centre's senior staff also hold regular informal meetings with officers at GHS and the Ministry of Health, and these are used for conceptualizing research as well as reporting of results. The roles of researcher and policy maker are often interchangeable between the Ghanaian

HDSS centres and GHS (researchers can get posted to a research centre or to GHS), which means that there is greater understanding of research and of policy-making for all parties.

4. DODOWA HDSS

Title: Improving policies for home management of fevers in children under-five years in Ghana

Research conducted at the Dodowa Health Research Centre (DHRC) has influenced the Government of Ghana's health policy on the home management of fevers among under-five children. The research conducted between 2007 and 2009 in Dangme West district showed that using antimalarial only for home management of fevers was just as effective in reducing under-five mortality as using antimalarial plus antibiotics. Furthermore, the results showed that the home-based management of fevers with antimalarial only was more cost-effective than antimalarial plus antibiotics. These findings provided evidence for continuation of the existing national strategy in home management of fevers among children using antimalarial only for fevers and to prescribe antibiotics only when there are respiratory signs of pneumonia.

Another important observation from discussions with the stakeholders at GHS is that researchers at Dodowa Health Research Centre are trusted. In addition, DHRC has a staff member who, as well as doing research, supports the policy engagement work¹ of DHRC enabling it to understand who their important stakeholders are, how best to disseminate findings to stakeholders, and which research is having policy impact.

In summary, Dodowa HDSS appears to be having an impact on policies in Ghana. The enabling factors were: policy-relevant research, the key role played by the government in the activities of the HDSS, and the political capital and level of trust among stakeholders in Ghana that the researchers have. The presence of staff with knowledge of policy engagement has benefitted the Centre in understanding how to influence stakeholders.

Manhiça HDSS, Mozambique

The HDSS is run by Manhiça Health Research Centre (CISM) and was established in 1996 in a rural area of southern Mozambique with funding from the Spanish Agency for International Development and Cooperation. The HDSS currently follows around 90,000 individuals living in approximately 20,000 enumerated and geo-positioned households. There are 6 data rounds per year. The Centre's main research focus is to use demographic and clinical data to understand priority health issues. CISM initially started by conducting socio-demographic observational studies to describe patterns and trends of fertility, migration, morbidity, and mortality in the area. CISM has now widened its scope to include more in-depth molecular, immunological, and entomological studies, as well as clinical trials and the evaluation of interventions. The Centre is very active in terms of research publications. In the past three years, the average number of publications per annum in international peer-reviewed journals was about 27 (including publications in the Lancet, New England Journal of

¹ Dr Escribano completed a Dr PH dissertation on policy analysis at the London School of Hygiene and Tropical Medicine. She used Dodowa as a case study.

Medicine, American Journal of Tropical Medicine and Hygiene, and Internal Journal of Epidemiology).

Manhiça described the impact that their research has made on policies to introduce vaccinations in the country against pneumonia diseases (see Box 5, and Appendix 3). The research demonstrated the high burden of pneumonia diseases among under five children which led to the government's decision to introduce the Haemophilus Influenzae type B (Hib) vaccine in the country in 2009. Similarly, after research from the HDSS demonstrated that the Pneumococcal Conjugate vaccine significantly improved child survival, the vaccine was rolled out throughout the country in 2013.

5. MANHIÇA HDSS

Title: Influence on pneumonia vaccine policies in Mozambique

The Manhiça Health Research Centre (CISM) has played a major role in generating knowledge for fighting against prevalent diseases in Mozambique and the region. Studies conducted by the CISM have guided the health authorities and decision-making bodies to define or adjust health policies. Specifically, research conducted by CISM in 2009 demonstrated the high burden of pneumonia among children in Mozambique, showing high incidence of 416/100,000 child-year at risk (reaching 779/100,000 in children under 3 months of age), with a case fatality rate of 10%. These findings prompted the government to request assistance from the GAVI Alliance in 2009 to introduce the Haemophilus Influenzae type B (Hib). Using the HDSS platform, the centre monitored pneumonia cases among children and showed that among children under 1 year and 5 years of age, significant reductions occurred in the rates of invasive Hib disease (91% and 85%, respectively) after vaccination, and for very severe pneumonia, the reductions were 29% and 34%, respectively. Similarly, research by CISM which demonstrated the benefit of the Pneumococcal Conjugate vaccine prompted its roll-out in the country in 2013.

The political capital enjoyed by the centre was confirmed by the award in 2014 of a prestigious medal (Bagamoyo medal) by the president of the country. The collaboration with Spanish institutions, especially Barcelona Institute of Global Health, is highly valued by both countries and has led to many collaborative peer-reviewed publications in high impact journals. Dignitaries from Spain regularly visit the Centre (e.g. Spanish parliamentarians and the Queen of Spain in 2013). Since the Centre receives funding from the government, there is interest among the researchers to produce policy-relevant research, and among the policy makers to use the findings of the research. Unfortunately we did not get a response to our request for interview from the stakeholders in Mozambique. Thus, we are unable to report on the perception of the quality of research and its relevance from an end-user perspective.

Nairobi HDSS, Kenya

The Nairobi HDSS is an urban surveillance system which was set up in 2000 by the African Population and Health Research Centre (APHRC). It is following nearly 62,000 people in two informal settlements in the city of Nairobi to investigate the linkages between urbanization, poverty, and health. APHRC was set up with a grant from the Population Council, and became autonomous in 2001. Unlike many other HDSS centres, Nairobi does not have a parent university or research

institution in the northern hemisphere nor does it belong to a government department. APHRC's major sources of funding are the Wellcome Trust, the William and Flora Hewlett, David and Lucille Packard, and Bill and Melinda Gates Foundations, Sida and IDRC (Canada). In 2013, the Centre produced 44 articles in international journals including the Lancet, International Perspectives on Sexual and Reproductive Health and BMC Public Health.

The Nairobi HDSS described the impact of their research on cardio vascular diseases (CVD) in two informal settlements. The research showed, for the first time, the high prevalence of risk factors such as overweight and obesity, and hypertension among adults. This prompted the Nairobi City Council to set up clinics for screening and management of CVD. Furthermore, the community reacted by setting up community based organizations to manage a drug revolving fund for the treatment of CVD.

6. NAIROBI URBAN HDSS (NUHDSS)

Title: Cardio Vascular Disease (CVD) risk factor assessment study

The Cardio Vascular Disease (CVD) study conducted by the African Population and Health Research Centre (APHRC) led to the decision by the City Council of Nairobi (CCN) to prioritize CVD management in its primary health care facilities. Findings showed high prevalence of overweight and obesity particularly among females (43%) in the two slums of the Nairobi Urban HDSS, and hypertension and diabetes age-standardised prevalence of 18.4% and 5.4%, respectively, among adults aged 18+ years, (37% and 11% among older adults aged 50+, respectively). As a result, the CCN established 10 clinics through the rapid results initiative. To date, there are at least six active CVD clinics in CCN health facilities. Two patient support groups were registered as Community Based Organizations in the two NUHDSS slums, with members contributing monthly to a drug revolving fund, entitling them to treatment and a month's supply of drugs. The clinics are each handling about 200 patients every month and all newly diagnosed patients are enrolled in the support groups.

A particular feature of APHRC is the presence of a policy engagement and communications unit, with clearly defined objectives for policy engagement, knowledge management, and communications. The effectiveness of APHRC's approach to policy engagement was confirmed by one stakeholder whom we interviewed who commented on the "*professionalism*" of the team at APHRC, and of the researcher- end-user relationship which was a two-way process. The quality of the research was also viewed by the stakeholder "*as excellent*", and this is further endorsed by acceptance of APHRC's papers in peer-reviewed journals and invitations to present at major conferences. A second stakeholder whom we contacted did not respond.

The Centre attributed the success of their efforts in translating research into policy on the following:

- Conducting research on issues that are relevant to the local context.
- Having a standalone division that is in charge of policy engagement and communication, working with researchers to engage with policy makers through various channels. Building capacity of researchers to communicate evidence sensitively and appropriately with policy makers.
- Partnership with key government bodies such as Nairobi City Council (now Nairobi County) and relevant government ministries (e.g. Ministry of Health, Ministry of Education).

- Building cordial and sustained relationships with key government officials and nurturing these bi-directional relationships which also include participation of our researchers in government committees/task forces and their involvement on some research projects.
- Involvement of key stakeholders throughout the research process (planning, design, implementation, dissemination) to increase ownership of the research outputs.