



## THE AGINCOURT FIELD SITE — EVOLUTION AND CURRENT STATUS

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*Objective.* To describe the evolution and current status of the Agincourt field site, Bushbuckridge, in South Africa's rural north-east.

*Setting.* A defined subdistrict, with a population of some 60 000 people including Mozambican refugees, in a former 'homeland' area with substantial labour migration.

*Approach.* Three phases are described: origins and establishment of the field site; a programme of health systems research underpinned by multi-round (prospective) demographic and health surveillance; and contributions to the University of the North's Dikgale field site.

*Comment.* Knowledge of trends in population health (e.g. mortality) is important when shaping the skill base and organisational framework of a district health system. There are valuable opportunities for collaborative research with field sites elsewhere in sub-Saharan Africa, and within South Africa itself. This will be facilitated by a common data model. A country-wide network of field sites, with surveillance capability, would complement the occasional national census and demographic and health survey, and strengthen South Africa's embryonic health information system.

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Field sites have been an important part of public health teaching, research and practice since C C Chen's impressive efforts at the Beijing Union Medical College in the 1920s and 30s.<sup>1</sup> This paper describes the genesis and development of the Agincourt field site, located in South Africa's rural north-east, over the period 1992 - 1996. The initiative was launched in the last years of apartheid, and is now orientating itself to the demanding health needs of South Africa today — as such the study captures it in transition. Comment is also made on initial efforts to find productive partnership between South African institutions of fundamentally different origin, namely the Faculty of Health Sciences of the University of the North (UNIN) and its counterpart at the University of the Witwatersrand (Wits).

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In 1982 Wits University's Department of Community Health initiated a Health Services Development Unit (HSDU) in Bushbuckridge, some 500 km north-east of Johannesburg in the then Gazankulu and Lebowa 'homelands'. Its purpose was to develop models for local health services based on primary health care principles, as advocated by the World Health Organisation (WHO).<sup>2</sup> However, at this time, health planning and practice in South Africa were heavily influenced by the apartheid system. Hierarchical and authoritarian in outlook and practice, this system served to reinforce the management and work patterns of a largely conservative and hospital-orientated administration, and sustained health systems innovation proved extremely difficult. In response, work in the HSDU tended to emphasise human resource development, for example prototypes of primary health care nurse training and strengthening community initiatives such as village-based women's groups.<sup>3</sup>

Ten years later, in 1992, the Agincourt field site was established as part of the Bushbuckridge demonstration district health initiative (Fig. 1). The expectation of profound political change, in evidence throughout South Africa, was reflected in the Gazankulu health services' preparedness to enter into a long-sought-after partnership with the university to reorient 'homeland' health services along district health lines.

### OBJECTIVES AND SITE DESCRIPTION

As first conceived, the site had two major, interrelated purposes: development of an experimental area where innovative subdistrict and health centre programmes could be introduced and evaluated; and addressing the complete absence of valid and reliable population-based data to inform health planning, practice and evaluation, and the allocation of resources. The site was expected to bear directly on emerging national health policy, and we were concerned that work take place broadly within the resource constraints of the rural public health sector.

The Agincourt site, with a population of some 60 000 people in 20 villages, was therefore superimposed on a functioning subdistrict. A network of four fixed clinics, a mobile clinic service, and a reference health centre, with referral links to two district hospitals (Tintswalo and Mapulaneng), make up the subdistrict health system. Bushbuckridge itself is now a local government area with ties to both the Northern and Mpumalanga Provinces. (Although formally part of the Northern Province, there is widespread popular support for the area to be administered through Mpumalanga Province. The logic of health systems organisation and management reinforces this position.) It is situated adjacent to the western boundary of the Kruger National Park and has a population of over half a million people, largely Tsonga- and Sotho-speakers, as well as tens of thousands of (former) Mozambican refugees. The area is overcrowded and poor, prone to drought, with a

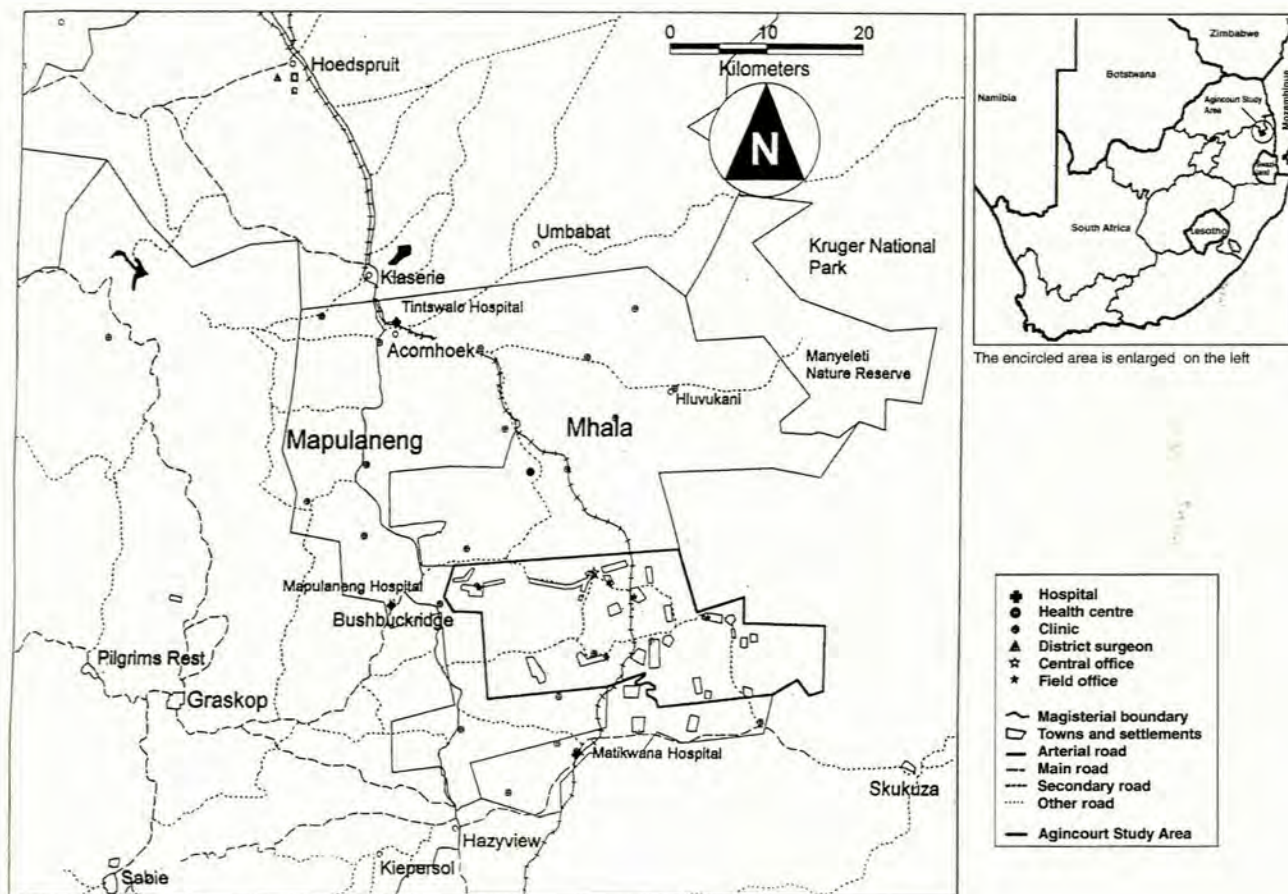


Fig. 1. Section of Northern Province/Mpumalanga, showing the Bushbuckridge area and Agincourt field site.

population skewed by migrant labour.

Given the presence of demographic and health surveillance over 5 years (1992 - 1996), the site is also able to support advanced community-based research and capacity building in the health and population sciences. Although orientated to issues of rural health development, there would be applications relevant to South Africa as a whole as well as to other African settings.<sup>4</sup>

Developments since 1992 are outlined according to the main, partially overlapping phases in the evolution of the site.

### PHASE I: ADOPTING A FRAMEWORK AND ESTABLISHING A SITE

The Agincourt/Bushbuckridge framework draws on two approaches, adapting them to local realities. First, rigorous earlier efforts at intervention research, for example the Narangwal project in the Indian Punjab<sup>5</sup> and work in community-orientated primary care (COPC) that originated in South Africa.<sup>6,7</sup> Second, the experience of so-called 'population laboratories' such as Khanna in rural India,<sup>8</sup> Matlab in Bangladesh,<sup>9</sup> and Niakhar in Senegal.<sup>10</sup> In all of these regular

small-scale census studies supporting demographic and health surveillance are a consistent feature, despite different emphases that favoured either research or action.

Agreement to establish the Agincourt site involved detailed discussions with both the 'homeland' health administration and local health service staff. Agreement was achieved on the grounds that the project would be a university-health service partnership; and that while all personnel and services would remain in place, financed as usual, the HSDU would have relative freedom to introduce and evaluate innovative approaches, thereby creating a resource for local and (now) provincial health services.

The introduction of population registration (i.e. the annual census) was politically sensitive and required thorough justification to community members and leadership. Their support, and permission to proceed, was eventually granted subject to two conditions, namely that the project be seen to contribute to visible health service improvement, and that research results be shared on an ongoing basis with local communities. This dialogue helped to involve the local community as a third, active element in the project partnership, and we have tried to remain true to these undertakings.



## PHASE II: HEALTH SYSTEMS RESEARCH AND DEVELOPMENT

Between 1992 and 1995 a substantial programme of health systems research and development (R&D) evolved in Agincourt (Fig. 2). This combined more conventional research with 'learning by doing' approaches that have been encouraged by the Division of Strengthening Health Services of the World Health Organisation (WHO)<sup>11</sup> (the same group within the WHO that planned the 1978 conference on primary health care in Alma Ata). Involvement of the Tintswalo Health Service made it possible to link local health service improvement in the experimental setting (extended mobile services, improved referral systems) with district-wide initiatives to support health centre and district systems development (Fig. 2).

Our emphasis on development of the field site and demonstration district within the constraints of the rural public health sector was in response to experience from the 1960s and 1970s. Projects such as Narangwal and Matlab contributed greatly to international research and practice, but failed to integrate their work adequately into local conditions and circumstances. This seriously compromised the local extension and take-up of lessons learned, and has led to a widespread, though sometimes inappropriate, wariness of pilot projects.<sup>11</sup>

The relationship of pilot or demonstration projects with the public sector inevitably fluctuates. Despite acknowledged common interests, day-to-day pressures and expectations along with differences over policy recommendations can produce tensions. However, continued effort to maintain common ground has underpinned the project's work with the Mpumalanga Provincial Health Department, leading to the handbook *PHC in Mpumalanga: Guide to District-Based Action*.<sup>12</sup> The search for common ground also underlies efforts to pilot decentralised laboratory services with the Northern Province and South African Institute for Medical Research (SAIMR). The subdistrict laboratory service was a centrepiece of discussions at the 1996 conference of the South African Society of Pathologists.

Demographic and health surveillance<sup>13</sup> involving a comprehensive census followed by annual updates and information on all special events (births, deaths and migrations), contributed straightforward but previously unavailable descriptive information to local health planning. For example, population profiles (by age, sex, refugee status, etc.) and their geographical distribution have helped to define clinic catchment areas, vulnerable groups and potential users of local services. Early results on cause of death have laid the basis for better targeting of district interventions. These address infant and child nutrition, environmental health, sexually transmitted diseases (STDs) and a decentralised maternity programme.

Regular exchanges, based on surveillance results, were

scheduled between the project team, community leaders and members of each village. This continues to provide a general basis for health promotion efforts, and in particular has helped conservative communities to accept the need for education in local schools.

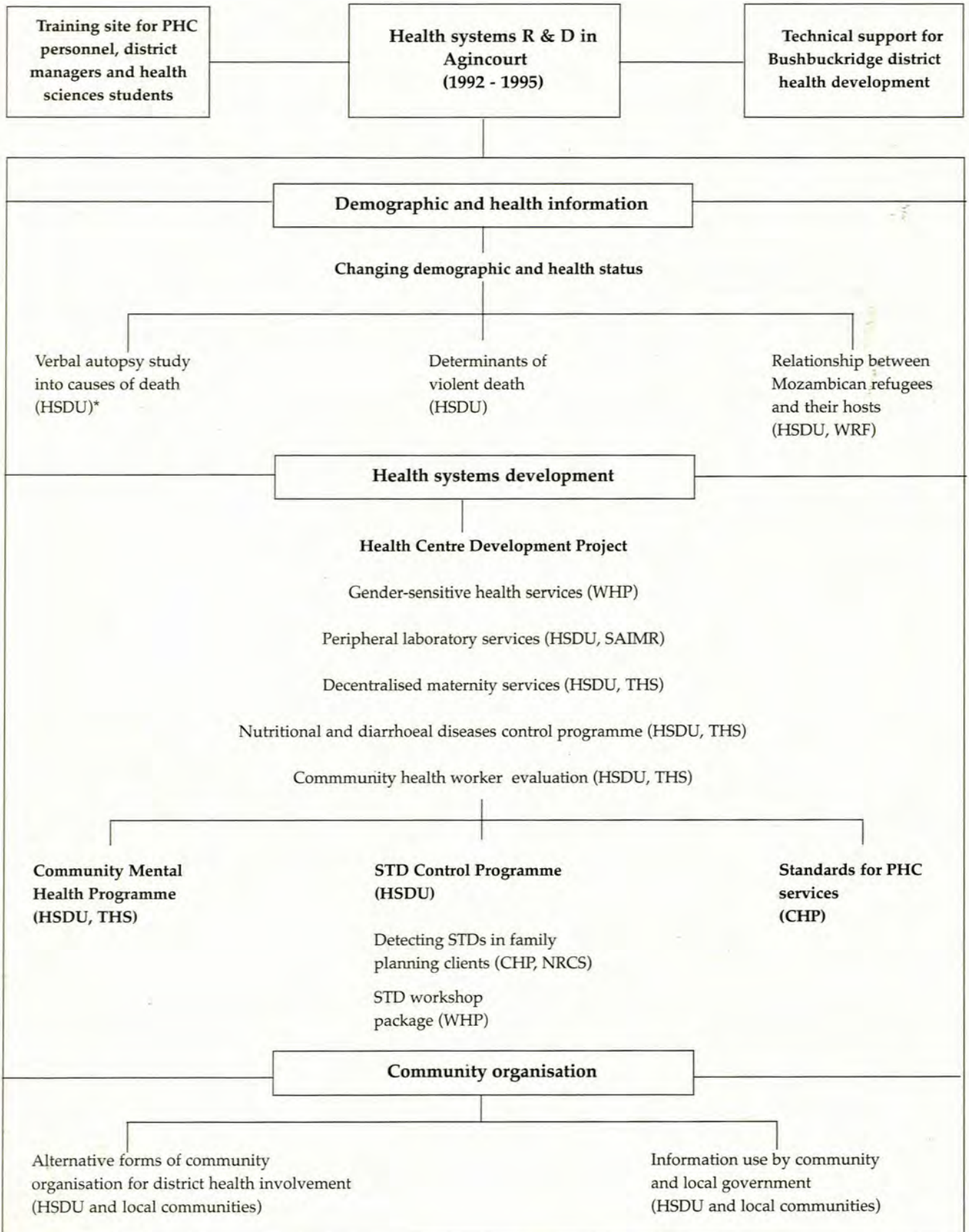
## PHASE III: ENGAGEMENT WITH THE UNIVERSITY OF THE NORTH (UNIN)

Given the HSDU's interests and location, common ground with the Faculty of Health Sciences at UNIN seemed likely. Sited in the former Lebowa 'homeland', UNIN draws its students from the largely rural Northern Province. With an excessive teaching load, low staff/student ratio and limited research experience, UNIN's Faculty of Health Sciences faces major challenges in developing a vigorous research programme. Yet the university is exceptional in its rural access, and this along with the determination and aspirations of faculty leadership can be turned to research advantage. In late 1994 a programme of reciprocal visits between UNIN and the HSDU was initiated. This led to the UNIN faculty's decision to establish a field site along similar lines to Agincourt in the Dikgale area, near Sovenga and Pietersburg.

The Dikgale site, covering eight villages with a combined population of some 8 000 people, is located about 15 km from UNIN. The project's aim is 'to determine the health status and needs of the community [and] to implement the necessary measures to improve health status and evaluate these measures'.<sup>14</sup> More generally, the hope is that the site can provide the infrastructure and research framework for the faculty to initiate its own expanding R&D programme.

UNIN's decision to develop Dikgale created an opportunity for the Agincourt team to learn about and contribute to the process of research capacity development. Although support was provided to individuals, the strategy adopted is best described as 'institutional capacity strengthening'. This sought to enhance critical leadership and infrastructural elements at UNIN, and bring these to a threshold sufficient for internally generated, independent institutional action. The essential prerequisite, institutional 'readiness', was clearly present. Moreover, given limited capacity among Agincourt staff, it was important to assess how to apply their inputs most effectively.

A clear principle from the outset was that collaboration could only proceed on grounds of acknowledged co-equality of partners, mutual respect, and the expectation that as the Dikgale site matured, opportunities for collaborative research between the two field sites would be sought. To date, staff of the Agincourt project have worked with UNIN faculty to conceptualise the first stages of their research effort and turn this into an operational work programme; they have also trained the team of Dikgale fieldworkers and have supported field activities, including quality control. Software developed in Agincourt is used in data capture and analysis, and this is



\*Principal investigator's organisation in parentheses.  
HSDU — Health Systems Development Unit; WRF — Wits Rural Facility; WHP — Women's Health Project (Wits); SAIMR — South African Institute for Medical Research; THS — Tintswalo Health Service (Northern Province); CHP — Centre for Health Policy (Wits); NRCS — National Reference Centre for Sexually Transmitted Diseases (Department of Health).

Fig. 2. Health systems research and development in the Agincourt field site.



accompanied by contributions to data management, interpretation and write-up. However project leadership, control and management are firmly vested within the Faculty of Health Sciences at UNIN.

### CURRENT STATUS: LOOKING FORWARD

Empirically derived information from Agincourt provides an opportunity to examine the consequences of trends in population health for a decentralising national health system. Information on the changing mortality profile, for example, draws attention to emerging problems (domestic violence, circulatory disease) that contribute a growing disease burden, yet to date are little recognised in the rural health system. Such changes highlight the range of skills and competencies that local health professionals will need, and the kinds of technical and managerial support that district teams will require of provincial departments if they are to function effectively.

There is little experience, in South Africa or elsewhere, in linking mortality and fertility change to health systems development at district level. Making these connections is an important step, following on the global burden of disease analyses contributed by Murray and Lopez.<sup>15,16</sup> These analyses forecast profound changes to the disease profile of middle- and low-income countries over the next quarter century.<sup>17</sup> While several country-level studies are underway to bring specificity to the global analysis (Christopher Murray — personal communication), there is at present little work examining the implications of these changes for decentralised health systems.

Critical to future contributions from Agincourt will be the ability of workers there to develop a coherent portfolio of health and population-linked research. A number of possibilities were explored with potential regional and international partners at a round-table meeting held in London in April 1997.<sup>4</sup> These range from intervention-research to control HIV/AIDS through innovative community-based STD interventions, to in-depth prospective research on the factors contributing to household resilience and vulnerability. A medium-term collaboration with Dikgale, focused on the chronic lifestyle diseases and encompassing aetiological and operational research, is likely to be a leading initiative.

There are growing opportunities to pursue collaborative research based on demographic and health surveillance with field sites elsewhere in Africa. An unexpected consequence of the London round-table<sup>4</sup> was detailed exploration of a minimum but extensible reference data model. This work is proceeding; if it results in data structured in similar fashion in a number of field sites, this would greatly facilitate such collaborations.

Such opportunities should also be explored within South Africa. Other countries, including Burkina Faso, the Gambia, Ghana, Senegal and Tanzania, have all taken advantage of the

presence of multiple in-country sites to positive effect.<sup>18</sup> In this respect an important role will, in time, come to be played by leaders of the new initiative at Hlabisa in KwaZulu-Natal, field site for much of the reproductive health and population research that will make up the Wellcome Trust International Research Centre. (Participating institutions include the University of Natal, University of Durban-Westville and the Medical Research Council, under the auspices of the eastern seaboard Association of Tertiary Institutions.) Opportunities for work in Agincourt, Dikgale, Hlabisa and elsewhere that will strengthen and complement each other's efforts should be sought.

South Africa's long-standing lack of effective vital registration has produced a vacuum in monitoring demographic and health trends, and an inability to evaluate the impact of specific health interventions. There is therefore sound argument for a network of field sites,<sup>19</sup> with a surveillance capability that can supplement the (infrequent) national census and demographic and health survey. Such a network would contribute substantially to South Africa's embryonic national health information system. It could also inform evaluation of the current health reform process and national efforts to reduce inequities in health.

An initiative of this kind cannot be undertaken without leadership from several quarters. I acknowledge, among others, the continuing contributions of John Gear, Kathleen Kahn, Elisabeth Malomane, Obed Mokoena, Shirley Ngwenya and Sheona Shackleton of the HSDU; Marianne Alberts, Vernon Jali and Philip Venter at UNIN; Clara Chiloane and Rebecca Hlatshwayo of the Tintswalo Health Service; Shadrack Mkhonto of the Agincourt Area Health Committee; Michel Garenne of the French Centre for Population and Development (CEPED); and Kobus Herbst of MEDUNSA.

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