Engaging the private sector in public health challenges in Namibia

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The studies presented in this thesis largely focused on evaluating how the private sector can be engaged in public health challenges in Namibia. The findings indicate that there are multiple opportunities for doing so, such as understanding and subsequently stimulating demand from patients/clients (Chapters 2-5), establishment of innovative service provision for HIV and non-communicable diseases (Chapters 6-7), stimulating the market for prepaid services through risk equalisation (Chapters 7-8), performing surveys and advocating pertinent research results to policy makers within the public and private sector (Chapters 9-11).

The research questions were formulated around the strategies of PharmAccess to stimulate healthcare exchange by key players in the healthcare system: the patient, the provider, and the payer; always in the context of the pertinent healthcare policy. Whilst the patient, provider and payer directly participate in the healthcare exchange, the policy is the context within which this exchange takes place and the policy makers determine the ‘rules of the game’. The findings and experience in testing PharmAccess hypothesis shows that coordinated exchange between these players is a key to stimulate change.

A summary of the interventions including the direct and indirect effect of the intervention on each stakeholder group is presented in Table 1.
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The following pages discuss per strategy the most important conclusions and put those into perspective of the general literature.

**Strategy 1: To stimulate demand by improving health awareness of the patient/client**

Various interventions were performed by PharmAccess that were geared towards increasing demand for healthcare in the Namibian context. One postulation was that performing surveys for pertinent health problems would have multiple stimulatory effects: making people more aware of their health status (and hidden health problems) and thus more willing to prepay for healthcare, making employers more aware of their healthcare responsibilities towards employees and at the same time get more information on the extent of various health problems (in particular HIV), thus creating data to help health policy makers to make better-informed decisions. One approach was to assess whether an understanding of the HIV prevalence, collected through bio-medical and behavioural surveys support organizations to enrol their internal stakeholders in pre-paid low income health insurance for HIV in Namibia?

We begin in Chapter 2 by presenting the validation of the diagnostic accuracy of the OraQuick® HIV-1/2 Rapid Antibody test and the Oral Fluid Vironostika® HIV Uniform II microELISA system with the Namibian National Algorithm for HIV Testing. Although oral fluid based rapid HIV tests were available on the international market at the time, these tests had not been validated nor approved for use in Namibia. A validation study was thus undertaken by PharmAccess in collaboration with the Namibia Institute of Pathology (NIP).

This study was the first formal field evaluation of the OraQuick® and OraSure® devices, in a resource limited setting in Southern Africa. The study found that the OraQuick® test is 100% accurate (100% sensitivity and specificity) and that the OraSure® has a high specificity (99.5%) and slightly lower sensitivity (97.1%). The high negative predictive value of both tests rendered them particularly suitable for HIV surveillance purposes. Based on this validation the Namibian MoHSS approved the OraQuick® and OraSure® devices for surveillance purposes in Namibia. HIV testing for individual diagnostic purposes remained based on rapid blood testing utilizing the National testing algorithm. This study paved the way for the implementation of non-invasive HIV screening in Namibia, both in workplace and household studies.

Following the validation of non-invasive oral fluid HIV testing devices in Namibia, prevalence surveillances were conducted by PharmAccess in 24 Namibian private companies, from 11 different industries, between November 2006 and December 2007 (Chapter 3). Participation rates amongst the 8,500 employees ranged from 61.3-97.3% with a mean participation rate of 78.6%. The prevalence rate of 15.0% revealed that the overall HIV prevalence rate in these companies was in line with the national prevalence estimates in Namibia at the time (UNAIDS/WHO, 2008). However, it was also found that HIV prevalence varied widely between industries, ranging from 4% in the information technology sector to 21% in the mining sector. These prevalence rates were similar to findings of high HIV prevalence rates in workforces in Southern Africa (Evian, et al., 2004) and especially in miners (Corbett, et al., 2004) in South Africa.

The studies not only provided the first prevalence data from a portion of the working population across various industry sectors, but also demonstrated how knowledge of the HIV prevalence amongst the workforce stimulated enrolment in private health insurance for HIV in Namibia. Following the HIV prevalence surveillance, 61% of the previously uninsured employees had been enrolled in health insurance, the majority of these insurances (78%) covering HIV only. This engagement of the private sector to purchase health insurance including HIV coverage for their employees was deemed important for several reasons, but most impor-
tantly to reduce the burden on the public sector (Feeley, et al., 2007) (Sekhri & Savedoff, 2005), secondly raising awareness of HIV to reduce traditionally high stigma (Holzemer WL, 2004) and thirdly to manage apparent higher concentrations of HIV infection amongst employed and mobile members of society (Mishra, et al., 2006) (Piot, et al., 2007).

This study was important in dispelling the myth that HIV was a general population and not a workforce problem as maintained by many organizations especially in the SME sector in Namibia (NABCOA, 2004) (Hohmann & Skolnic, 2004) and can be convinced to invest in the health of their employees, which was supported by later studies (Rosen, et al., 2007).

Thus, these surveys helped identifying formal sector worker populations at higher HIV risks which helps targeting pertinent HIV interventions, both with respect to prevention and to treatment. Sharing the surveyed HIV prevalence data with higher management of companies coincided with considerable increase in private health insurance uptake, suggesting that anonymous HIV workplace surveys can indeed serve as a tool to motivate companies to invest in health insurance for their workforce and thus alleviating burden on the public sector. Regular screening of working populations and the consolidation of data, as was highlighted in the study, not only provided information for employers to plan workplace health responses but also gave valuable evidence for policy makers to plan for interventions and health insurers to plan for health risks. Both large and small companies purchased insurance for their employees following the availability of the evidence of the anonymous HIV prevalence surveillance. The consolidated anonymous data by industry made it possible for sector responses to be planned, the data from these surveys fed into to motivation for the establishment and strengthening of the Walvis Bay Corridor Group (supporting the transport, fishing and manufacturing sector) and the establishment of the HIV desk at the Chamber of Mines. The evidence of the HIV prevalence rates in the working population was availed to and utilized by the actuaries of medical aid funds in Namibia to calculate the expected risk, and contributed to the development of the HIV benefit structure within the low-income health insurance products developed as part of the HIVREF (Chapter 8).

The evidence of the HIV prevalence rates was also utilized by the disease management companies of the medical aid funds to motivate the establishment of case management capacity, and related investments. Especially as more countries look towards inclusive forms of community and national health insurance, the demonstration and quantification of the benefit of access to prepaid healthcare can be a key motivator for support and enrolment in the systems.

Expanding the findings on formal sector employees, additional studies were performed amongst those who are likely to become member of such sector: tertiary students. The question was considered whether students of academic institutions in Namibia were a target market for low-income health insurance for HIV?
To this end the HIV prevalence, knowledge of HIV and health care utilization trends of students at the two largest academic institutions in Namibia were determined as presented in Chapter 4.

The study found, although it may have been underestimated, that students had relatively low HIV prevalence rate (1.8% at UNAM and 2.8% at Polytechnic) compared to the estimated national adult average of 15.3% (UNAIDS/WHO, 2008) at the time in Namibia. Studies performed in Ethiopia (Mulu, et al., 2014), South Africa (Dell, 2013) and Mali (White, et al., 2009) revealed 1.2%-3.4% HIV prevalence amongst university students. In South Africa and Namibia the prevalence rate of students were found to be well below the national adult average, while they were similar to the lower national adult average in Mali and Ethiopia. In all
cases, the need for intensified HIV prevention and treatment amongst University students is highly recom-
mended to policy-makers.

Namibian campus health facilities were found to be underused, mostly due to privacy reasons. The findings
motivated an intensification of prevention and education initiatives through the institutional HIV awareness
programs and better marketing the use of the existing campus health facilities. Given the relatively low HIV
prevalence found amongst students, the underutilization of campus health facilities and the relatively low
reported willingness to pay towards an HIV health insurance, it was concluded that this group would not be
the most viable target group for insurances covering HIV without significant and long-term subsidy. This study
indeed could not motivate the policy makers at the tertiary institutions to find a mechanism to provide HIV
insurance to students at the time. The low HIV prevalence amongst tertiary students brings hope and makes
them an attractive group to include in any (future) general health insurance in the country, thus contributing
to larger risk pools for sustainability and cross subsidization purposes.

Since agriculture is one of the largest industries in Namibia, and despite their dispersed geographic location,
commercial farmers, their employees and dependents were considered by PharmAccess as an interesting
target group for health insurance. A study was conducted to evaluate what are the healthcare challenges and
the related needs for health services amongst rural and remote employers in the commercial farming sector
in Namibia? It was assumed that commercial farm workers could be a good target group for private health
insurance, which includes benefits for the treatment of HIV (Chapter 5).

It was found that this group indeed did not have adequate access to formal healthcare and particularly to HIV
related services, similar to the experience in other African countries, where distance from healthcare facilities
is a significant barrier to access (Kenny, et al., 2015) (Rees, et al., 2016). The willingness of farmers/employers to contribute to the cost of health insurance in Namibia was high, however access to health
services due to large distances posed a significant obstacle. Thus it was found that health insurance alone
would not be a solution for rural and remote employers. Geographic distance barriers could only be overcome
by bringing healthcare services closer to these work places. This study motivated the piloting and implementa-
tion of the Mister Sister mobile primary health care services public private partnership.

All in all it can be concluded that private interventions to create demand in the context of a public healthcare
system that offers services for free or at marginal costs remains a serious challenge. All target populations
addressed in the above studies could potentially pre-pay for healthcare. However, they also have access to free
services. Apparently such services, even when overburdened, with long waiting times, medicine shortage and
too short consultation times, are considered ‘good enough’ by most formal sector workers to not switch towards
health insurance. The opportunity for national health insurance in Namibia would require the reformulation of
the policy of free public healthcare for all, those who can pay should pay. Employer groups should be mandated
to provide health insurance for their employees, this should not be a voluntary benefit. The Namibian Social
Security Act (34 of 1994) makes provision for a National Medical Benefit Fund (NMBF), mandated to the Social
Security Commission (SSC), which to date (end 2016) has not been established. In 2012, the SSC commis-
sioned an actuarial study to recommend options for the NMBF. This study, which PharmAccess Foundation
contributed to in terms of data provision and technical support, proposed a social health insurance model for
Namibia funded through tax resources – either increased taxation or redistribution of existing taxation (Deloitte,
2012). In 2013 a ‘Universal Health Coverage Advisory Committee (UHCAN)’ was established headed by the
MoHSS, the secretariat supported by the SSC, to develop a road map towards universal health coverage in
Namibia supported by a model of health insurance for all. PharmAccess was a member of this advisory committee. The fragmentation of the process of the NMBF development and the mandate for universal health coverage being seated with the MoHSS, has been a key determinant in the lack of political will and progress. Thus despite financial and technical support from various international and national partners, little progress has been made towards social or national health insurance in Namibia, unlike other African countries such as Ghana, Tanzania and South Africa.

**Strategy 2: To stimulate supply by developing innovative new healthcare service provision**

It was evaluated whether mobile HIV testing in Namibia is an affordable alternative for hard-to-reach populations? The public-private partnership (PPP) model 'Bophelo!' providing mobile wellness screening at workplaces in Namibia, presented in Chapter 6, demonstrated the potential to mobilize private sector funding and be a cost-effective manner to reach individuals in workplaces and other hard-to-reach areas.

To reduce the stigma associated with HIV testing, the screening package included blood pressure and body mass index (BMI) readings; and blood screening for HIV, blood glucose, cholesterol, haemoglobin and Hepatitis B. The inclusion of wellness screening in addition to stand-alone HIV testing illustrated a number of benefits at only a marginal additional cost and could thus assist to help address the growing issue of non-communicable diseases in Namibian workplaces. The Bophelo! PPP also provided evidence in the provision of mobile services to workplaces in Namibia to create the foundation for expansion to a public private partnership for populations that are hard-to-reach by conventional public or private services.

Wellness screening, using the Bophelo! mobile clinics not only provided a better understanding of the costs associated with such an initiative, it also demonstrated that mobile services could be effectively run in Namibia across large distances. This motivated the Ministry of Health and Social Services to acquire clinics to provide outreach services for special programs in Namibia. The Bophelo! program demonstrated the effectiveness, and cost efficiency, of mobile testing with lower public cost due to significant contributions by the private sector. This program however highlighted a gap in access to healthcare facilities for referral and treatment after screening.

The Bophelo! program demonstrated, what was later to be confirmed in other literature (Bemelmans, et al., 2016), how the use of lay counsellors and task shifting could provide quality healthcare services at a lower cost. The findings of accessibility of testing services also confirm the findings of a later study conducted on mobile testing services in South Africa (Meehan, et al., 2015). This method of providing screening services has proven to be sustainable and continues in 2016, with both the Healthworks Business Coalition (previously NABCOA) offering mobile wellness screening partially funded by GFATM, and Mister Sister providing the services to companies contracted at a full cost recovery fee.

Upon the successful implementation of mobile primary healthcare services it was further aimed to assess whether and how leveraging private sector funded mobile clinics can benefit vulnerable groups? In Chapter 7, the Mister Sister Mobile Clinics providing primary health care services in a PPP to rural and remote employers are presented. This PPP was formally established between PharmAccess and the MoHSS in 2011, after a successful pilot project amongst a small group of commercial farmers in late 2010 (PharmAccess, 2010). The services were implemented to reduce the geographic barriers to preventative and curative services as were identified in the earlier PharmAccess study presented in Chapter 5.
The target population for the clinics were predominantly employees and dependents at rural and remote workplaces. Vulnerable groups such as women, children and the elderly residing at significant distance from healthcare facilities which the mobile clinic encountered en-route were also provided services (MSMHS, 2013). These services were funded through employer contributions for their employees and national and international donor contributions for vulnerable groups. The MoHSS provides all medication, vaccines and consumables for the primary health care services at no cost and provides services to patients referred from the mobile facilities. The mobile clinics provide primary health care according to the national treatment guidelines of the MoHSS and form an innovative private extension to public services. The patients served by the mobile clinics would have been patients needing to travel long distances to visit the public health facilities of the MoHSS. With the MoHSS providing the medication/consumables at no cost, the employer contributing to the operating and transport costs for their employees and dependents and international/national donors contributing to the operating costs of service provision for vulnerable groups all parties benefit. It was concluded that the provision of regular preventive and therapeutic mobile clinic services improved health outcomes and reduced morbidity in vulnerable children who had access to these services. The greatest improvement in health indices was amongst Orphans and Vulnerable Children (OVC) whose disease burden was significantly reduced, indicating that mobile clinics may be an effective intervention in hard-to-reach and resource-limited settings. These findings were similar to The engagement of the private sector to contract for healthcare services for their employees was an important component to motivate this public private partnership, upon which subsidized care could subsequently be expanded to other vulnerable groups and poor communities, utilizing both domestic and foreign donor funding. Similar to the experience in Malawi (Geoffroy, et al., 2014) mobile clinics can improve access to healthcare and health outcomes for rural, remote and poor patients to compliment fixed site facilities, although the challenge remains how to move towards an integrated role for mobile clinics in the government healthcare system.

Using mechanisms such as this PPP could leverage private sector resources to not only improve the health of employees and dependents directly associated with the workplace, but vulnerable groups within the geographic area of service provision especially in hard to reach and underserved geographic areas in Africa. The expansion of the PPP has been possible, as a result, of increasingly attracting private sector funding, declining unit costs as a result of higher patient numbers, and increasing operational experience improving efficiencies. The provision of these mobile services are sustainable for service provision to employer groups for their employees and dependents, however continuing to serve vulnerable and poor populations will require partial subsidization from foreign or local donor funds unless the government outsources community mobile health services as part of an expanded PPP.

In late 2013 the MoHSS opened a fixed site clinic in the study location presented in Chapter 7, which would provide daily services to the community and employer groups. This facilitated that the Mister Sister mobile clinics could move to new under-served areas. By 2014 the demand and willingness to pay for mobile primary care services amongst semi-urban and urban employers far outweighed the rural and remote employers. The lower cost of service provision in the semi-urban and rural areas due to lower travel and overnight costs for staff, in the absence of significant donor or government subsidy, led to a shift of provision of services to these areas. The Mister Sister mobile clinics in mid-2013 started providing service to both employer groups and communities in informal settlements in and around Windhoek. These services were funded predominantly by private sector contracting for the prepaid healthcare services to their employees and corporate social responsibility funding from a private medical aid scheme to poor communities living in informal settlements around the capital city. An evaluation of the mobile clinic program providing services
into informal settlements around Windhoek, conducted in 2013 (Sabin, et al., 2014) highlighted improvements in access to health services and reduced costs associated with travel and time, due to the availability of mobile clinics, with high levels of patient satisfaction with the quality of services provided.

Given the short period of time between the implementation of the services in the areas in Windhoek and the data collection for the evaluation, there was inconclusive evidence of the changes in the health status of patients. It could also not be concluded whether the availability of mobile clinics resulted in changes in health seeking behaviour of patients. Further research would have to be conducted into these topics to inform the impact of the mobile clinics. The various challenges identified during the evaluation included language barriers, high volumes of patient visits per day, which are very similar to the challenges faced by fixed health care sites in the City of Windhoek. The utilization of mobile clinics in informal settlements in and around the urban areas of Namibia however, represent an innovative manner to temporarily service communities who do not have access to such services until such a time as semi-mobile or fixed-site clinics can be established and permanently manned and sustainably financed. The Mister Sister clinics are the only primary health care clinics in Namibia to be SafeCare (www.safe-care.org) certified. SafeCare is an innovative method of certification of healthcare facilities according to five SafeCare levels, determined by an assessment of the facility’s grading according to SafeCare standards and a quality improvement plan to facilitate measurable improvements between assessments (Johnson M. S., 2016). Mister Sister mobile clinics illustrate that good quality primary healthcare services can be provided in a public private partnership and that medicines provided free of charge by the MoHSS can be transparently accounted for and delivered to patients in under-served areas. The example of PPP contributes towards supporting the call for more PPP’s in Namibia and the SADC region as described in literature (Novignon & Olakojo, 2012). The expansion of the PPP to fixed and semi-mobile sites, contracting with private providers and encouraging more nurse led clinics, could contribute significantly towards mitigating the service-delivery gap currently experienced in Namibia.

The provision of primary healthcare services using mobile clinics could be expanded to include HIV treatment services as was successfully done in South Africa (Igumbor, et al., 2014) and other countries in sub-Saharan Africa (Roa, et al., 2011). At the end of 2016, the Mister Sister mobile primary healthcare programme (described in Chapter 7) had been identified by the government to become a Nurse Initiated Management of ART (NIMART) site. The staff of the mobile clinics underwent training on ART initiation and management in late 2016 and plans to commence roll out of NIMART services were in place for implementation in early 2017.

**Strategy 3: To innovate new payer mechanisms using temporary subsidization**

The question was addressed whether low income health insurance/medical aid funding can be developed sustainably in Namibia with short-term donor subsidy to avoid the crowding out of the private sector and leverage private sector resources for HIV care and treatment. Chapter 8 demonstrates that through the innovative Health is Vital Risk Equalization Fund (HIVREF) payment mechanism additional prepaid resources for health could be raised that were several times higher than the short-term PharmAccess donor subsidy. This additional revenue was financed by higher income populations and demonstrated how cost sharing could be achieved while simultaneously the quality of care for HIV could be improved. The intervention confirmed that private voluntary schemes work when the benefits exceed the cost of membership. Moreover, the willingness to prepay appeared to depend to a great extent on the quality of the care received. The critical success factors of this intervention to leverage private sector resources for health included the government policy that supports the role of the private sector in healthcare; a willingness to accept subsides for those other than the
poorest of the poor; and an adequate quality-controlled private sector healthcare service delivery infrastructure. This was accomplished despite an environment at the time where there was relatively little dialogue between the public and private healthcare sectors.

After the first 20 months (2006/2007), the HIVREF had enrolled over 34,000 people, which was equivalent to approximately 2% of the Namibian population. During the same period the Namibian public treatment program to fight HIV, TB and malaria, highly subsidized by PEPFAR and GFATM, was implemented and scaled-up nationwide. The successful implementation of the free access to HIV treatment in public health facilities had a direct effect on the new enrolment numbers of the HIVREF. The willingness of the target groups to enrol declined, enrolled groups resigned and by early 2009 enrolment rates on the HIVREF reduced to under 18,000, providing an example of crowding out of the private sector (Schellekens, et al., 2007). The HIVREF turned dormant in 2009, at which time the remaining members were transferred to a private insurance product of a participating health insurer. Despite the HIVREF’s dormancy low income health insurance products developed as part of the HIVREF in 2006-2009 were still in existence (at the time of writing this thesis at the end of 2016) being marketed and managed as part of smaller medical aid fund risk pools.

The evidence and experience of the HIVREF contributed towards a number of other international studies and publications (Preker, et al., 2010) (Preker, et al., 2013) (Schellekens, et al., 2007) (Gustafsson-Wright, et al., 2009). The experience of leveraging private sector resources through the HIVREF is supported by similar later findings in South Africa, demonstrating that private sector can play an important role in expanding health care coverage by mobilizing revenue to support the public healthcare system (van den Heever, 2012). Although South Africa is ahead of Namibia in the development of pre-payment for health care and health insurance (Erasmus, et al., 2016) (van den Heever A. M., 2016), the HIVREF mechanism remains a first in the region.

The gains made by the HIVREF demonstrated that both the financial and clinical management of HIV was effectively possible in the private sector. However, the availability of free public health services for HIV, predominantly financed by donors (MoHSS, 2015); (Abt Associates, 2008) resulted in crowding out of the results achieved. With free ART services available and a lack of a mandatory requirement for employed individuals to belong to a health insurance, there was less incentive for companies to insure their employees. Although this may have been a suitable response to the HIV epidemic during a period of ample donor funding, yet the consequences thereof are felt over a decade later when the donor funding to treat HIV is declining (Cairney & Kapilashrami, 2014) (Schiffman, 2008) and structures for health financing after donor exit have not been adequately put in place. Donors should take these points to heart realizing that large donor funding for health, and specifically for vertical programs, can have detrimental effects in crowding out the private sector. In countries where a means-tested mandatory contribution for health care cannot be enforced, a strategy should be applied that avoids crowding out and for example includes voluntary private insurance and risk equalization. The Namibian experience shows that this is, at least temporarily, possible.

Seven years after the 2009 reintegration of the HIVREF into the medical schemes, the UHCAN (SSC, 2016) is looking at mechanisms to pave the way for a national or social health insurance in Namibia. The principles of risk pooling of expensive diseases, the utilization of private sector administrators and disease management mechanisms could be re-established and form the basis of such a pre-paid medical benefit scheme. From the experience of the HIVREF and the related low-income health insurance products, the large-scale enrolment of those in formal employment on health insurance would have to be made mandatory or be incentiv-
ized. To undo the crowding out effect, the legal framework in Namibia would have to be revised, to restrict free public health services only for the poor, requiring all those who can afford to pay for health services to pay.

The findings of a 3-year panel survey conducted in the City of Windhoek, (Gustafsson-Wright, et al., 2010) estimated that for the middle three income quintiles surveyed, health insurance premiums could be set at between 4-6% of per capita income levels. This study also found that the potential for a health insurance market in Namibia was very large with a relatively high willingness to pay, even amongst the lowest income quintiles. This would reduce the need for tax-based public health funding and encourage growth in private sector health insurance generating volumes, which support cost reductions through economies of scale. The findings are valuable information for Namibia upon which to base information on national health insurance and universal health care coverage also using mixed models of financing (Uzochukwu, et al., 2015).

The role of the private sector, especially in the achievement of universal health coverage remains a subject of debate, although most broadly suggested is that public sector, private sector and funding agencies work together to mobilize domestic resources to both fund and deliver health services sustainably and especially fill gaps left by the public sector and international funders (Stallworthy, et al., 2014). Challenges such as the poor implementation of public private partnership agreements in the provision of universal health coverage services have hampered progress in countries such as Malawi (Abiiro, et al., 2014) thus suggesting that well-functioning public private partnerships that support access to community health insurance and health services should fully integrate both public and private sector.

**Strategy 4: To collect and present evidence to support policy-making**

We presented in Chapter 9a the data providing the first ever HIV prevalence and incidence data from a 3-year panel household survey conducted in the City of Windhoek, to provide information to insurers and policy makers to plan the HIV response. The findings of HIV infection rates of 2-3 per 100PY provided an evidence base to advocate against complacency in the HIV response. This study underscored the importance of using incidence (new infection) to understand the HIV epidemic in addition to the more commonly used HIV prevalence rates, which represent both new and existing infections. This was especially important when looking at the findings of HIV amongst adolescents (12-24 years) in the city. HIV prevalence rates for male and female adolescents were similar in 2009, yet HIV incidence in adolescent females was 1-3 per 100PY and 0.2-1 per 100PY in male adolescents. This study found what has now become an accepted fact that young females are at heightened risk of HIV infection and specific strategies are needed to prevent infection in adolescent girls (Mavedzenge, et al., 2016). The methodology of the household surveys conducted in Namibia was utilised in other sub-Saharan African countries where PharmAccess had interventions and the lessons learnt could be shared. One of the key lessons resulting from the implementation of the study was the risk of surveyor bias as described in Chapter 9b, which highlights potential limitations of household surveys.

As a result of the data generated from these studies UNAIDS commissioned a Know Your Epidemic / Know Your Response (KYE/KYR) study (van Renterghem, et al., 2012); (Van Renterghem, et al., 2012) to encourage the CoW management to adopt an HIV strategic plan using the evidence. This strategic plan has been in development since 2012, yet has not been implemented, largely due to human and financial resource constraints. The findings of the HIV prevalence and incidence survey, especially the geographic representation of the burden of disease in the city, supported the negotiations of PharmAccess with the MoHSS, resulting in the provision of mobile primary health care and HIV screening services to the informal settlements in and
around Windhoek, by the Mister Sister mobile primary health care clinics since 2012 and the recent (2016) inclusion of the Mister Sister clinics in the MoHSS NIMART programming.

A further research question to improve health awareness amongst decision/policy makers in the private sector was to establish what the prevalence of non-communicable diseases, and the related absenteeism, is at workplaces in Namibia? Chapter 10 presents the findings of a larger Bophelo! wellness screening dataset on the prevalence, knowledge and self-perceived risk of employees of the three most significant health threats in Namibia, namely HIV, hypertension and diabetes. It was found that the prevalence of elevated blood pressure, elevated blood glucose, and HIV among employees of the Namibian formal sector is high, while risk awareness is low. This data suggested that attention must be paid to improving the knowledge of risk factors related to these conditions as well as providing care to those with chronic conditions in the formal sector through programs such as workplace wellness, motivating even greater investment by employers into the health and well-being of their employees.

Despite the high prevalence rates, risk awareness and knowledge of health related risk factors was low. These findings, together with the findings of the resultant absenteeism due to these conditions’ effect on productivity (Chapter 11) when presented to companies could be used as an advocacy tool. Such advocacy would encourage employers to expand their HIV workplace programs to wellness programs which include information, education and communication on NCD, as well as encourage access to health services for these chronic conditions. Evidence that both non-communicable disease risk factors and infectious diseases are associated with increased rates of short-term absenteeism of formal sector employees in Namibia is presented. This evidence supports the suggestions that programs to manage these conditions could help employers avoid costs associated with absenteeism. These workplace wellness programs were encouraged to include basic health care insurance, to provide effective access to care and include regular wellness screenings.

The results of this survey motivated the inclusion of treatment for NCD in the primary healthcare services provided by the Mister Sister mobile clinics (Chapter 7). The Bophelo! workplace (Chapter 10) and Windhoek household survey (Chapter 9a) data on NCD was included in larger international studies (Hendricks, et al., 2012) (Collaboration NCD Risk Factor, 2016). The strategy employed in Bophelo! to include screening for other conditions into a minimum package to reduce HIV testing stigma could be employed effectively in other developing countries to incorporate screening for NCD in HIV surveys.

Reflection and general recommendations

From the various PharmAccess studies it is evident that interventions aimed at specific stakeholders have effects on other stakeholders, illustrating the intricateness and daunting complexity of health systems in general. The various interventions have taken place over a more than a decade in different locations with many different stakeholders involved. The funding for the different components of the PharmAccess programs in Namibia came from various different sources at different moments with different priorities and reporting requirements. This reality contributed to a relatively fragmented approach to improving components of the healthcare system. To break out of the vicious circle of poor healthcare as per the PharmAccess theory of change, a more comprehensive and less fragmented approach may have had the potential for more intensive results. In other words: an important lesson learnt from the PharmAccess interventions in Namibia is that a more coordinated approach addressing all stakeholders in the healthcare exchange (patients, providers,
Innovative financing models to assist governments to cover the costs of ARV treatment in the wake of declining donor funding can only be encouraged and expanded as more local funding models are required (Atun, et al., 2016). The responsibility for funding HIV/AIDS should be shared between public and private sector, especially in the light of declining donor resources in countries whose income is growing. The question is often what is the capacity of a country to finance their own HIV response in an environment of declining donor funding? As shown in some of the existing research, upper middle income countries such as Namibia could become financially self-reliant (Resch, Ryckman, & Hecht, 2015) to domestically finance healthcare and specifically if more cost effective provider services such as those of Bophelo! (Chapter 6) and Mister Sister mobile clinics (Chapter 7) can be expanded.

Further leveraging of domestic resources to fund the HIV epidemic could require the mobilization of private sector resources such as those of the HIVREF (Chapter 8) and similar models. In the absence of a social or national health insurance scheme, the HIVREF in fact represented a unique model, that could effectively combat the often-observed disadvantages of ‘HIV exceptionalism’ (Lima, et al., 2014) (Dionne, 2015) (Cailhol, et al., 2013) or ‘vertical funding’ for HIV (Musse, et al., 2013) (Tan, et al. 2015) (Nattrass, et al., 2016). With stagnating PEPFAR and declining GFATM funds for antiretroviral treatment and in light of the current uncertainties with respect to US policy towards combating HIV/AIDS, the HIVREF could become attractive again. Particularly in Africa countries that are moving towards a national health insurance system (e.g. Ghana, Rwanda, South Africa, Kenya, Tanzania), PEPFAR funds could complement their general risk pools by covering the diagnosis and treatment of HIV/AIDS.

The development of the PharmAccess Namibia programs, as mentioned previously, was at times organic and opportunistic, based on the identification of gaps in one program, trying to find an innovative solution for such gap and then trying to secure funding to intervene. The need to align interventions to donor/funder priorities at times led to fragmentation of the interventions and the inability to break through the vicious circle. In hindsight, Namibia could be considered as a ‘phase zero’ country for PharmAccess for ideas and innovations that would later be further refined and appropriated for use in other countries. The PharmAccess experiences in Namibia provided:
- the first healthcare crowding out experiences of HIVREF to contribute to PharmAccess Theory of Change
- the first lessons in healthcare insurance, risk sharing and prepayment which formed the basis for the Health Insurance Fund (HIF) for Nigeria, Tanzania, Kenya
- the first format for impact evaluation through household surveys as later used in Nigeria, Tanzania, Kenya
- the first challenge to build financial models for diagnosis and treatment of a particular diseases, such as the HIV actuarial models later used elsewhere in Africa
- the first challenge to implement and improve quality of the management of the treatment of HIV (My Health Namibia) including the development of standard treatment protocols, setting up disease and quality management systems, highlighting the need for improvement of private healthcare facilities and patient safety
- the first model of PPP to provide wellness screening services to specific target groups in a mixed-funding model
- the first model for PPP mobile healthcare provision through ambulant clinics providing mixed funding model
- the first opportunity to develop SafeCare standards for mobile health facilities

Besides the learning for the PharmAccess Group the programs and interventions have brought significant changes in the healthcare system of Namibia and especially broke through the ice of building trust between the public and private sector to jointly provide health services using a mixed funding model.

Managing the public-private mix will be one of the biggest challenges of the Namibian government going forward towards the achievement of the universal health coverage goals. Similar to the models and related challenges described by McPake and Hanson (McPake B, 2016) the Namibian government will have to ensure public-private partnerships that facilitate access to good quality and affordable healthcare. In the process of managing such public-private mix, the Namibian MoHSS may benefit from a more regulatory role, outsourcing service provision and health service management to both the for-profit and not-for-profit private sector.

The recent decline in donor funding for health in Namibia, as well as the mandate of the UHCAN warrants the consideration of the re-establishment of the HIVREF. The structure and mechanism of the HIVREF could be re-established as a transitional funding model during the PEPFAR phase out, and other donor transitions. This could be accomplished through the inclusion of contracted private healthcare providers, the expansion of existing public-private partnerships for service delivery (such as the Mister Sister clinics), and the utilization of private third-party administrators and disease/case managers monitored to a stringent quality monitoring and management system.

In hindsight, a more substantial investment of vertical donor funding in the HIVREF in 2008 might have leveraged the same proportionate amount of private sector funding and with the inclusion of other disease benefits could have created a platform for a national health insurance scheme in Namibia.

Overall, concluding from the results of studies described in this thesis, the following recommendations, are made which build on the recommendations made by Gustafsson-Wright at al. (Gustafsson-Wright, et al., 2010):

1. **Continue stimulating and understanding the demand of the patient/client through increased efforts to provide preventative health awareness both in formal sector and in communities:**
   - Mandate or incentivize the provision of workplace programs, which provide linkages to care, for health in the formal sector;
   - Seek PPP’s to provide workplace type programs in the informal sector, linked to community health programs;
c Offer free or inexpensive testing for major health expenditure risks to both workplaces and communities;
d Expand the existing wellness testing services offered in PPP through mobile facilities to remote and underserved areas;
e Use the mobile facilities available to seek out key populations for testing and referral for HIV and other chronic diseases;
f Establish a bi-directional referral system between the health care facility and the workplace/community and/or case manager to ensure that patients with chronic conditions remain within the continuum of care.

2 **Stimulate supply by expanding innovative new healthcare service provision through the PPP on service delivery mechanism**
   a Expand the PPP (example of Mister Sister) to existing fixed and semi-mobile sites and private health care providers;
b Seek public private partnerships to services the minimum health insurance package and risk equalization mechanism supported products;
c Establish PPP desk within MoHSS or inter-ministerial to seek out innovative and relevant PPP’s for health and contract for related services.

3 **Innovate payer structures to channel health risks into risk equalization mechanisms**
   a Restore the HIVREF for HIV and channel private premium contributions and donor transitional funding into this model;
b Offload the public sector by outsourcing services to private providers in a public private partnership, similar to that of Mister Sister;
c Expand the HIVREF, to include other expensive chronic conditions that are of importance to Namibia, such as cardio-vascular disease, TB, diabetes and possibly cancers. Donor contributions could be channeled into the fund to allow for price reductions in the private sector and to raise private sector funding from the higher income groups within the risk pool;
d Vertical donor funding during donor exit/transition phases could be channeled through these funds and used to leverage private sector and other resources;
e Investigate options to use the risk equalization fund mechanism as a foundation to establish the NMBF package for all employed but uninsured as contained in the Social Security Act 34 of 1994 (Republic of Namibia, 1994), engaging the private sector to avoid crowding out;
f Explore the possibility of expanding the NMBF to a national health insurance scheme for Namibia, to include the poor.

4 **Develop specific private health insurance for employed, including low income, groups**
   a Provide a minimal insurance package supported by public, private and tax revenue through the REF;
b Make health insurance mandatory for all formally employed;
c Accelerate the NMBF for all uninsured employed to be enrolled in the minimum insurance package;
d Utilize the combination of risk equalization mechanisms, the minimal insurance package and PPP structures for service delivery to establish this basis for a national health insurance;
e Consider using the infrastructure of an existing medical scheme, such as the Public Service Employees Medical Aid Scheme (PSEMAS) with risk equalization mechanism(s) for expensive and chronic diseases to support such a minimum package.
5. Expand the role of MoHSS to facilitate policy making and regulation for public private partnerships
   a. Include a focus on the contracting of the private sector to provide public health services within the MoHSS mandate;
   b. Expand the focus and resource allocation of the MoHSS to include public private partnerships and outsourcing of services to both for-profit and not-for profit private sector;
   c. Establish a PPP desk within the MoHSS to facilitate access to and from the private sector for the presentation of proposals or a coordinated call for proposals for the private sector to assist in public health challenges.

6. Establish an independent national health information hub to support evidence for policy making
   a. Establish a national health sector management platform consisting of representatives of all stake-holders to develop a health sector development strategy that makes optimal use of both public and private resources including foreign donor funding and investments, while strengthening complementarities and avoiding crowding out effects;
   b. Link this national health information hub to the inter-ministerial PPP desk;
   c. Establish a mandatory, possibly incentivized reporting requirement for private sector to overcome current reporting barriers;
   d. Collect all pertinent information from both public and private sector and make this information available to all stakeholders on a regular basis;
   e. Develop both the public and private sector capacity to on an ongoing basis collect, store, analyze, publish and disseminate pertinent health information for policy and planning purposes.

7. Establish national standards for quality of healthcare services and health information
   a. Achieve international recognition of national standards through established certification e.g. SafeCare (www.safecare.org) and accreditation (Whittaker, 2011) e.g. Council for Health Service Accreditation of Southern Africa (www.cohsasa.co.za) bodies;
   b. Explore possibilities of establishing an independent national quality board to represent those standards and independently offer quality assessments of public, private and public/private providers;
   c. Consider the temporary or partial subsidization of the certification and accreditation of the public and private health care facilities participating in the minimum package provision, to avoid cost barriers;
   d. Develop pay for performance mechanisms for healthcare providers linked to the metrics of providers’ quality performance;
   e. Assist existing HIV managed care programs to expand to other important diseases and ensure adherence to quality standards and national treatment protocols for these high risk diseases;
   f. Develop a national curriculum for continuous medical education of healthcare staff that is linked to the country’s priorities in terms of high expense and high risk diseases;
   g. Develop incentives for healthcare staff to increase the quality of output in both public and private sectors.
Conclusion

This thesis presents studies demonstrating how the private sector could be engaged successfully towards addressing public health challenges in Namibia. This engagement could be achieved not only in the response to HIV, but for other chronic and non-communicable diseases by stimulating demand through the patient/client; directing demand through the establishment of innovative public-private partnership providers; innovating new payer mechanisms and providing evidence for policy making. The response should include leveraging private financing of healthcare, both through formal health insurance and pre-paid subscription for primary care services.

The re-establishment of the HIVREF and its related infrastructure, as well as the scaling up of the public private partnership’s Bophelo! and Mister Sister, could contribute significantly towards a national health insurance approach, addressing access-, financing- and quality- gaps in the Namibian healthcare system, especially in light of the declining donor resources for health. In a country such as Namibia, with a strong, well-established private sector, which has demonstrated a willingness to engage and support public health challenges, and a government which has demonstrated a willingness to engage with the private sector, the achievement of the goal of universal health coverage for a population of under 2.5 million people should be achievable.
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