THE SOCIAL PRACTICE OF HIV DRUG THERAPY IN BOTSWANA, 2002-2004:
EXPERTS, BUREAUCRATS, AND HEALTH CARE PROVIDERS

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To Clay
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Abstract

The Social Practice of HIV Drug Therapy in Botswana, 2002-2004

Elise Audrey Carpenter

Steven Feierman

This dissertation analyzes the creation of Botswana’s ARV program, which was the first nation-wide, government program in sub-Saharan Africa to attempt comprehensive treatment for HIV, including drug therapy. The initiative was the fruit of a larger partnership between the Botswana government and an internationally funded donor organization named ACHAP, an acronym for the African Comprehensive HIV/AIDS Partnership. ACHAP itself was a collaboration between two main donors, the Merck and Gates Foundations, which joined together to assist Botswana. The dissertation, which is based largely on ethnographic observations from 2002-2004, examines the process by which key actors created and adapted the clinical, bureaucratic, and global health practices that constituted Botswana’s ARV program. While popular accounts emphasize the role that international money and expertise had in starting this program, this dissertation tells the story of Botswana’s landmark ARV program from within its government health care system. The dissertation examines the politics of knowledge within Botswana ARV program by describing how HIV drug therapy was understood by national bureaucrats, hospital chiefs, HIV clinic nurses, and rural health providers. It focuses on knowledge about HIV clinical care and management developed within Botswana’s own health care system, both at the top, among physician-bureaucrats, and at lower levels, among Botswana’s nurses, physicians, and other care health workers.
Expertise from within the nation played a vital role in creating this lifesaving clinical care program. Further, the dissertation argues that state bureaucrats worked strategically and thoughtfully to use the talents of international health experts for maximum positive effect. Both upper level bureaucrats and workers in the individual hospitals used international health experts as brokers and negotiators, in order to achieve needed changes. Experts’ success in their role depended as much on their social status as outsiders as on their knowledge of public health management and HIV clinical care. The dissertation adds to a growing body of scholarship that examines the local social and political context of health care in order to understand global health, and is intended for an audience of medical historians, sociologists, anthropologists, and health policymakers.
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<tbody>
<tr>
<td>ACHAP</td>
<td>African Comprehensive HIV AIDS Partnership</td>
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<tr>
<td>ARV</td>
<td>Anti-retroviral</td>
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<td>ARVT</td>
<td>Anti-retroviral Therapy</td>
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<td>BHP</td>
<td>Botswana Harvard Partnership</td>
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<tr>
<td>CMO</td>
<td>Chief Medical Officer</td>
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<td>CPP</td>
<td>Clinical Preceptorship Program</td>
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<td>DHT</td>
<td>District Health Team</td>
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<td>IDCC</td>
<td>Infectious Disease Care Clinic</td>
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<tr>
<td>KITSO</td>
<td>Knowledge and Training Shall Overcome (AIDS)</td>
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<tr>
<td>MTCT</td>
<td>Mother to Child Transmission (of HIV)</td>
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<td>PHS</td>
<td>Public Health Specialist</td>
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Chapter 1

Introduction

The Social Practice of HIV Drug Therapy in Botswana, 2002-04

The 13th International AIDS Conference started July 14, 2000 in Durban, South Africa. Its program featured advances scientific knowledge and medical treatment for HIV positive patients in a region where patients were dying because they were too poor to afford life prolonging HIV triple drug therapy. In Durban, HIV activists and advocacy organizations, including Doctors Without Borders/ Médecins Sans Frontières, ACT UP, and the Treatment Action Campaign, held enormous protests. These HIV activists demanded that HIV patients in poor African countries have access to the expensive, recent, and highly effective HIV triple drug therapy called HAART (Highly Active Anti-Retroviral Therapy) that had been prolonging HIV patients’ lives in rich countries since 1996. HIV activists identified the high prices of patented drug therapies as the major barrier to access. The HIV activists further condemned drug companies’ unwillingness to lower those prices even in the face of ever-increasing numbers of deaths from AIDS patients in African countries. The Durban International AIDS Conference, and the coinciding protests, were covered in newspapers worldwide. However, little journalistic comment was made on an initiative announced four days before the conference that offered a counter-narrative to the activists’ claims that drug companies put profits over people.¹

¹ A Lexis Nexis Academic search of Major US and International newspapers for the month of July turns up 817 articles on this conference with newspapers from many different countries including: The Ottawa Citizen in Canada; The Guardian in the UK; Deutsche Presse in Germany; and The New York Times in the
This initiative, described four days earlier on July 10, 2000 in a joint press release, had announced that Merck & Co., Inc., an American based pharmaceutical company, and the Bill and Melinda Gates Foundation, would provide $100 million dollars towards advanced HIV clinical care, including HIV drug therapy to Botswana, the country at the time with the highest percentage of HIV positive citizens in the world. In addition to this donation Merck, and its philanthropic foundation, the Merck Company Foundation, had negotiated with several other pharmaceutical companies to provide free or discounted HIV drugs to Botswana. This partnership between the government of Botswana and the Merck and Gates Foundations came to be called ACHAP (African Comprehensive HIV AIDS Partnership) and it funded many types of programs, including providing money and expertise to Botswana’s government for a variety of HIV focused initiatives. This dissertation focuses on the HIV drug therapy program, an ACHAP funded project within Botswana’s Ministry of Health. This program, called the Masa ARV (Anti-retroviral) program, would create HIV clinics in government hospitals to provide HAART to Botswana’s citizens. (Botswana’s citizens are also called Batswana with the singular being Motswana.)

U.S. Only 22 of these articles mention the Gates and Merck Foundation initiative that at that time was called the ‘Botswana Comprehensive HIV/AIDS Partnership’. Most of the newspapers covering this partnership were South African and Australian.


3 Because both Merck and Company, Inc. and the Merck Company Foundation were involved in this project and they have overlapping executive positions, for example the president of the foundation is also an executive in the company. I will call both actors Merck.


5 I use Batswana in this dissertation to refer to all citizens of Botswana, although it can also mean one ethnic group. Here it is used in the most inclusive way possible.
I was an intern for several months with ACHAP in 2002, and conducted the ethnographic research on Botswana’s ARV program from 2003-4. I focused on observing the creation of HIV clinics, a process called the ‘rollout’ of HIV clinics. I was particularly interested in how health care providers, bureaucrats, and donor-hired international experts worked together to create a new government service, HIV drug therapy, within an existing health care system. Sites of my observations and interviews included the Ministry of Health’s ARV Team, which supervised the rollout, and also four HIV clinics, each at a different stage in their creation. Through my observations, I found that what a person knew about HIV clinical care was shaped by his or her institutional location and bureaucratic context, and his or her multiple identities, including professional, gender, and national. This dissertation will describe how international donors, HIV experts, state bureaucrats, and health care providers all dynamically negotiated between different ways of knowing health care in order to create Botswana’s HIV clinics. Using my ethnographic observations and interviews from 2002 and 2003-4, this dissertation describes how this landmark health care initiative began and examines Botswana’s HIV drug therapy program as a form of technical practice where global expertise and money, national health care, and local bureaucratic and health practices intersected to create a particular politics of knowledge.

Understanding how social position created different types of knowledge and how hierarchies of knowledge could determine social position is the focal point of this dissertation. I take an ‘actor-oriented approach’ as described by Long and Long in *Battlefields of Knowledge* and understand planning and development projects “as an
ongoing transformational process in which different actor interests and struggles are located. Each chapter takes a close look at how different actors—international experts, local nurses, and foreign African doctors in the hospitals and the rural health care system—understood HIV clinical care in Botswana. My work tells the stories of each of these actors from their various institutional perspectives: transnational organizations like ACHAP; the Ministry of Health; HIV Clinics themselves; and the rural health care system.

From these vantages, we can examine development as a process of creating new health services and ask whose perspectives, interests, and strategies prevailed; which possibilities were explored; and which were not. Important questions addressed in this dissertation include: who were experts and what role did they play in social change? How did the bureaucratic context of the state shape expert knowledge and determine social change? How did the different institutional locations of experts, whether they were supervised by bureaucrats or not, determine what they knew, how they taught, and how they evaluated the results of their clinical trainings? How did nurses participate in the creation of this new medical practice of HIV drug therapy? How did doctors in the rural health system have a different way of knowing health care from doctors in the hospital, and what potential new solutions did the local knowledge of rural health care workers offer Botswana's ARV program? These questions are important for anyone who wishes to maximize the benefit of international health donations, including people like me, who wish to practice global health and pursue research in Africa. Who we are in terms of

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6 Long, Battlefields of Knowledge, 9.
nationality, gender, race and professional status, as well as where we locate ourselves in the context of a health care system, affects what we know and how we can help.

Each section of this introduction provides important background for the chapters that follow. ‘HIV/AIDS Policy Debates and Biomedical Knowledge’ describes how HIV advocacy debates and biomedical hierarchies of knowledge shaped the way that expertise was constructed and what knowledge was valued. ‘HIV Clinical Care as Health Development’ looks at how the technical practices of experts in the ARV program both resemble and differ from development practices discussed in the literature. ‘Botswana, Nation and State’ discusses why government practices, including those of the national health care system, are part of Botswana’s special postcolonial history. ‘Identity, Social Position, and Institutional Location’ discusses two ways social roles in Botswana’s ARV program were constituted. Social roles were both based on institutional location (whether one was at a regional hospital or in the Ministry of Health for example) and on the social position conferred by the dynamic interactions of multiple identities, such as professional status, citizenship, and gender. ‘Methods and Settings’ orients the reader to my own identities and ways of knowing.

**HIV/AIDS Policy Debates**

In 1996, after the 11th International AIDS Conference, HIV policy debates began to change for HIV positive people and HIV clinical care. HAART had reduced the death rates of HIV positive patients in treatment by 75% in the wealthier countries, and its ability to extend and improve the lives of HIV positive people was clear. The HIV drug
therapy referred to in my account is the triple combination therapy regimen called HAART (Highly Active Anti-Retroviral Therapy) by most doctors or ARVT in policy circles. The efficacy of HAART strengthened the argument that patients in poorer countries were morally entitled to HIV drug therapy as a human right. This access gap between those in rich and poor countries increasingly became the focus of international HIV policy and activism.

HIV activism became more international during this period from 1996-1998. Groups like the Treatment Action Campaign in South Africa, ACT UP-Paris, Doctors without Borders, and Health GAP became networked together during this period. Activists were a diverse group that included gay men from the US and Paris who had been active in earlier campaigns for the rights of HIV-positive people, doctors and nurses who specialized in HIV or global health advocacy, African people with HIV involved in the Treatment Action Campaign, and consumer advocacy groups like Public Citizen, founded by Ralph Nader. Within two years of HAART’s début, both international governance organizations and HIV activists agreed that there was a pressing need for increased access to HIV drug therapy in the Global South. At the 12th International AIDS Conference in 1998 (these conferences were held every other year) UNAIDS director Peter Piot gave the keynote address “Bridging the Gap”, which focused on the lack of access to HIV drug therapy by people in poorer countries. Activists and policy experts both framed the solution as access to HIV drug therapy for the poor, particularly for those

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7 Smith and Siplon, Drugs into Bodies.
patients in the Global South whose countries could not afford to pay for the new triple therapy.

Africa was the continent with the most to lose from high prices for HIV drug therapy. Sixty percent of all people living with HIV were located in sub-Saharan Africa, even though the area had only 10% of the world’s population. In 2004, 76% of AIDS deaths in the world were in sub-Saharan Africa. In Botswana, HIV prevalence rates in 2003 were estimated to be the highest in the world with 39% of pregnant women testing positive in the World Health Organization surveillance and 17.3% of the general population testing positive in the 2004 Botswana AIDS Impact Survey conducted by the government of Botswana. Most of Africa was not only burdened by the HIV epidemic, but in addition countries on the continent were poor. The Millennium Development Goals in Africa report of the UNDP and UNICEF in 2002 stated, “If current trends continue, Africa will be the only region where the number of poor people in 2015 will be higher than in 1990. It will then account for nearly half of the poor in the developing world, up from less than a fifth in 1990.” Botswana was relatively wealthy compared to other African countries and in 2001 it still could not afford to pay for HIV drug therapy for its citizens. In sub-Saharan Africa the combination of poverty and the high numbers of HIV positive people made the arguments that high drug prices for HIV drug therapy were an injustice even more relevant.

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8 WHO and UNAIDS. *AIDS epidemic update.* (December 2005).
www.unbotswana.org.bw/undp/publications.html
Experts associated with American research universities, and professors at American research universities emerged as a subset of advocates who often became policy advisors within international governing bodies like the World Health Organization (WHO) and the UN. Harvard University in particular seemed to be a locus of intense policy advocacy. Jonathan Mann, Professor of Public Health at Harvard, became the head of the World Health Organization’s Special Program on AIDS in 1996. Many successful HIV/AIDS advocacy organizations were affiliated with Harvard, such as the Institute for Health and Social Justice, established by Paul Farmer in 1993. The Harvard AIDS Institute, which had been founded in 1988, in the 1990s led several major research and treatment initiatives in Africa. One of these included a 1998 collaboration with Merck that focused on HIV clinical care in resource-poor environments, called the ‘Enhancing Care Initiative’. Later in 2000, as described in Chapter 2, the head of the Harvard AIDS Institute, Richard Marlink, played a role in the creation and oversight of ACHAP. He assisted Merck by introducing the president of Botswana, Festus Mogae, to the Merck & Co. and Merck Foundation executives who had decided to create an HIV drug donation program in Africa, and he sat on ACHAP’s board. The international public health experts who worked for and were hired by ACHAP to assist the government of Botswana were also part of these international health policy networks.

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12 For an account of how the earlier HIV activism in the United States had also focused on scientific solutions for the American HIV epidemic see Steve Epstein, *Impure Science: AIDS, Activism, and the Politics of Knowledge* (Berkeley: University of California Press, 1996). Epstein describes how the technical focus of HIV activism, ‘drugs into bodies’, was not new with the global campaign for equal access.

There were countries in the Global South providing treatment to their citizens. One such country, Brazil, had engaged in an international struggle to gain patent rights to produce older HIV drugs and then gained patent rights to the new drugs that were the key ingredients in HIV triple therapy. Few governments in Africa had the ability to manufacture drugs (nor were African health care systems as developed as Latin American ones,) but generic drugs from India, whose companies did not yet have to recognize global patents, did start trickling into Africa during this period, and some Africans paid for the drugs out of pocket or had coverage under an employer. While the President and some members of South Africa’s government were arguing that HIV drug therapy was ineffective, lawmakers convinced otherwise passed a law in 1998 that allowed for both the importation of generic drugs and the domestic production for HIV drugs; however, in response, a coalition of drug companies sued the government.14 Drug companies wanted to protect their patent rights and their right to price drugs high enough to make back their research and development costs. Activists saw patent protections as a way to protect profits instead of patients and accused drug companies of greed and callous disregard for the lives of the poor. Perhaps the most anti-corporate articulation of HIV activism was at the ‘Battle of Seattle’ when HIV activists joined other groups protesting a meeting of the WTO (World Trade Organization) with news-making results from both the turnout and the violence.15 The 2000 International AIDS Conference in Durban, South Africa was as

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15 Smith and Siplon, *Drugs into Bodies*.
much a culmination of global activism as the protests were an expression of the increasing critique of corporate pricing of HIV drugs.

In 2000, the UN reached out to companies and encouraged the formation of public-private partnerships to address HIV/AIDS in poor countries. UNAIDS, WHO, the World Bank, UNICEF (United Nations Children’s Fund), and five pharmaceutical companies, including Merck, formed the Accelerating Access Initiative. By this time, the consensus was that it was wrong to deny the poor people HIV drug therapy when it was the key to helping them have longer, healthier, and more productive lives. Policymakers in international governance institutions, HIV activists, public health experts, and pharmaceutical companies all were coming to this conclusion.\(^\text{16}\) ACHAP, conceptualized in 1999, was coincident with this growing tide of activist criticism and policy concern over the lack of access of HIV patients in poor countries, especially African countries, to life saving HIV drug therapy.\(^\text{17}\)

Activists, policy experts, and international aid organizations, all began to focus on HIV drug therapy as a part of the solution to the African HIV epidemic by 2002. Nevertheless, there were some who still did not agree. In 2001, Andrew Natsios, who was the head of the United State’s international aid program called USAID, received

\(^{16}\) The extent to which medical policy experts and activists worked together and their networks overlapped is not well addressed in the literature that analyzes HIV policy at this time. The two major works on this topic, books by Smith and Siplon and Keck and Sikkink, distinguish professional networks of doctors and scientists from networks of transnational activists. From my own experiences these are not distinct networks. For example, some of the clinical preceptors hired by the ARV Team were doctors who had devoted their lives to specialties like men’s sexual health or HIV clinical care in order to act as advocates for HIV positive people. Smith and Siplon, *Drugs into Bodies*; Margaret Keck and Kathryn Sikkink, *Activists beyond borders: advocacy networks in international politics* (Ithaca, N.Y.: Cornell University Press, 1998).

\(^{17}\) Harvard Business School, Case No. N9-301-089.
criticism when he publicly argued that African patients were unable to properly take HIV drug therapy, and African infrastructure was incapable of providing it. Another skeptic was South Africa’s president, Thabo Mbeki, who publicly doubted whether AIDS was caused by HIV. ACHAP’s ARV program was a response to doubts about the efficacy of the drugs for African patients and about the ability of African patients to adhere to treatment regimens, a doubt more common in the United States’s government than in the international policy community. ACHAP was designed as a pilot project to demonstrate that the amazing successes of HIV therapy in the Global North could be reproduced in Africa, saving both individuals from suffering and a country from an epidemic.

Everyone in this story, from Merck executives to local clinic nurses, believed in the efficacy of HIV drug therapy and in the ability of African patients to take lifesaving medicines in accordance with protocol.

**Biomedicine as Knowledge and Practice**

Although all of the actors in my account believed in the biomedical efficacy of HIV drug therapy, each type of actor—local nurses, foreign doctors, citizen bureaucrats, or international experts—had widely divergent points of view on how to create an effective HIV drug therapy program. If all of the people in this story are practitioners of western medicine, then why is what they know so different? In the ethnographic work that follows, biomedicine is not treated as a fixed set of universal, portable scientific

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18 Smith and Siplon, *Drugs into Bodies*. Andrew Natsios is quoted in Phillip Hilts, *Rx for Survival*.  
19 Fassin, *When Bodies Remember*.  
truths about the body, health, and disease; medicine is an evolving set of clinical practices shaped by international policies, local health care systems, and site-specific conditions of clinical care. Like Phillip Setel’s ethnographic study of HIV in Tanzania and historian Megan Vaughan’s examination of colonial era medicine in Africa, I consider the clinical practices of HIV drug therapy in Botswana to be a blend of both African and Western healing traditions and a unique product of the local and the global.\(^{21}\)

Many other scholars have established the advantages of examining biomedicine as a product of a particular place and time in Africa. In my work I follow many historians of African medicine, including (but not limited to) Randall Packard, Shula Marks, Julie Livingston, and Nancy Rose Hunt, who have examined how the larger historical context of African countries, including colonialism, apartheid, and labor migration, shaped medical practices.\(^{22}\) The authors of *On Knowing and Not Knowing in the Anthropology of Medicine*, and the edited volume by Roland Littlewood, also looks carefully at issues of knowledge making and medical practices. In this edited volume the authors examine how


medical anthropologists make knowledge and in his introduction Littlewood observes that even medical anthropologists assume medical practices and knowledge are more stable, systematic, and coherent than what is often found to be true in the field and on repeated examination. This suggests that all social positions come with particular ways of knowing, whether it is of the ethnographer, that of the HIV public health expert, or that of the physician-bureaucrat in Botswana’s Ministry of Health. Building on the work of both medical historians and anthropologists, I too examine HIV clinical care as a technical and social practice, with the understanding that it is constantly evolving and cannot be understood as a coherent whole. Further, I examine how the knowledge of these practices varies based on one’s social position.

In his essay “When Physicians Meet: Local Medical Knowledge and Global Public Goods” Steven Feierman points out that clinical research and evidence-based medicine are carried out with the understanding that knowledge produced is useful everywhere and should be used in clinical decision-making. However, Feierman shows that clinical research often does not meet the needs of doctors and patients in countries and places with different resources, ways of organizing medical care, epidemiological patterns, technologies and priorities. He also discusses a related problem with ‘best practices’ that assume identical conditions of care in poor countries. (‘Best practices’ are protocols used by international health policy community to guide care in resource-poor countries.) Feierman demonstrates, using examples of African neonatal hospital care, that

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there are no universal conditions of clinical care within Africa. Thus, the idea that biomedicine is stable, universal, and research-based has important consequences because it focuses international donors on developing and promoting universal ‘best practice’ protocols and away from supporting African doctors’ efforts to create their own effective epistemologies for clinical care.\textsuperscript{24} Following on his work, I show how all health care providers have separate knowledges based not on their training as professionals, but on their various experiences as workers. Like Feierman, I also explore how a focus on research based clinical knowledge by experts and bureaucrats in Botswana’s ARV program had consequences for HIV clinical care in Botswana.

A work that discusses identity, social position, and knowledge also draws on feminist scholarship, including standpoint theory, that discusses the ways that patients know their own bodies and illnesses. These ways of knowing are often called situated knowledges or positional knowledges. Examples of this work are Donna Haraway’s article “Situated Knowledges: The Science Question in Feminism and the Privilege of Partial Perspective” and Alison Wylie’s essay “Why Standpoint Matters.”\textsuperscript{25} The work of feminist historians of medicine have also contributed to my thinking, such as Rayna Rapp’s Testing women, testing the fetus: the social impact of amniocentesis in America.


Her book describes how pregnant women and their husbands experienced genetic counseling differently depending on interrelated factors, such perceptions of ones' own body, ethnicity, and class. Although I am examining the knowledge of experts, bureaucrats, and health care providers and not that of patients, the way that I use identity and social position is influenced by this body of feminist scholarship. Also like them, I recognize that the underlying assumption that biomedical knowledge is portable, stable, and research based is a powerful one with important repercussions in the practice of medicine and international public health.

To summarize, I follow Africanist historians, medical anthropologists and feminist scholars who work on knowledge and power in biomedicine when I ask, what are the consequences of emphasizing universal, technical medical knowledge when creating health care? The idea that biomedical interventions, here HIV drug therapy, are universal and research-based influenced how Botswana's HIV drug therapy program was designed, managed, and how HIV clinical care was practiced. When certain types of knowledge were privileged, so too were certain types of people privileged. Inside Botswana's HIV drug therapy program a certain hierarchy of knowledge was created: international experts were thought to know more about HIV than African doctors who in turn were thought to know more than nurses did. This hierarchy of knowledge reinforced the existing professional hierarchy within the Ministry of Health where African doctors who were in charge of hospitals voiced the concerns of nurses at national planning.

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meetings. Chapter 4 on HIV clinical training in Botswana explores this politics of knowledge further.

Botswana's HIV drug therapy program initially focused on a narrow conception of portable, universal medical knowledge and privileged it over local, experiential knowledge for many reasons. First, as discussed above, biomedical solutions were the focus because of the way international HIV policy debates focused on biomedical solutions to HIV. Second, HIV drug therapy was thought of as a portable and stable biomedical intervention that was relatively independent of social context (as long as patients took their drugs properly.) The third reason, which I will discuss in the next section, was that HIV drug therapy in Botswana was initiated as a development project in which external money and expertise benefited a developing country.

HIV Drug Therapy as Health Development

The ARV program and HIV clinical care in Botswana is a product of both biomedical practices and the technical practices of international health development. Here I consider Botswana's ARV program as a development project because it was a product of international health policy intent on improving the lives of people in a developing nation using transnational expertise and capital. A large and diverse body of literature addresses development as a technical practice of international policy and governance.27 Although many works address agricultural development and not health,

one consistent theme is the way international policies and transnational experts often use expert knowledge and technical solutions to exclude the social and political context of the problems they examine. Many other examinations of development projects have described the way that development workers focus on technical solutions obscuring social and political inequalities.²⁸

In The Anti-Politics Machine, a classic description of how development workers understand their problems and projects, James Ferguson describes how development workers at a UNDP cattle range management project imagined both Lesotho as a country and cattle range management in ways that ignored both the political inequalities between South Africa and Lesotho, as well as the social realities of cattle management. UNDP experts, in ways similar to the HIV experts described here, conceptualized a problem that they had the tools to solve. UNDP development workers were confident that they knew the optimal way to manage cattle, that what they knew about cattle management was universal and locally useful, and that they could reorganize the way locals manage cattle. All of these assumptions turned out to be flawed and the project failed. However, there were political effects for the rural people of Lesotho, the UNDP built a road and, as a

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result, the government built a barracks that increased the ruling party’s control over this area. Not only did the technical focus of the development workers exclude the social and political from their solution, but it also excluded the social and political from the international community’s assessment of the outcome. The barracks and increased political control were invisible outcomes, not acknowledged by the technical frame that development workers used to understand their work and represent it to the international community.

This dissertation follows Ferguson’s early work in two ways. It defines development as a practice that can be made intelligible by ethnographic work, and it examines how the technical focus of development influences the evolution of projects and how it camouflages, through an exclusion of the social and political, many unintended outcomes. Not only did the HIV policy community focus on drug therapy as a technical solution, but ACHAP’s approach to creating HIV drug therapy in Botswana has the classic hallmarks of a development project, namely the centrality of expert knowledge and technical services provided by American and European HIV specialist physicians and American research universities, such as Harvard University and the University of Pennsylvania. The focus of HIV international policy, like that of the development project that Ferguson describes, also excluded the local context of clinical care and as a result much of the social and political work of creating a ARV program in a national health care system was unintelligible to the international community. Like the consequences of the UNDP cattle project Ferguson describes, many important actors in Botswana’s ARV

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program remained invisible to the international community because of the narrow focus of how HIV/AIDS policy framed the problems of HIV drug therapy.

Although the project that my dissertation examines had a technical approach, similar to that described by Ferguson, Botswana's HIV drug therapy program is very different from the one Ferguson describes in its effects. Range management by the UNDP failed, but Botswana's ARV program succeeded. By the end of 2005, one year after the story told here, HIV clinics were providing life-saving drug therapy to 38,492 patients in 22 hospital in Botswana. Ferguson's study was a major contribution to the anthropological literature on how international expertise understands its problems and creates and deploys its projects, but it is also important to study the way in which the approaches of international health policy obscured political and social practices even in successful development projects like the one described here.

In a 2001 article, Gillian Hart describes a historical form of neoliberal development with goals of privatization, fiscal austerity, lowered trade barriers and deregulation as articulated in the Washington Consensus in 1993. Transnational policy experts began to promote these goals as the key to successful development projects in the early 1990s and these neoliberal values are intrinsic to many stories of development in Africa as Hart describes in her book *Disabling Globalizations.* As described by Michael Goldman in his article, "How 'Water for All!' policy became hegemonic: The power of the World Bank and its transnational policy networks", experts and international

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governance bodies like the World Bank promoted neoliberal solutions to development problems like clean water, which could also be considered a public health problem. In this article, he describes how international water policies promoted the corporate ownership and management of the world’s water in the early 21st century. During the same period, HIV policy experts, unlike international experts on water policy, had no consensus about whether corporations, NGOs, or states did a better job of providing health care.

In 2000 HIV policy experts and activists focused on providing HIV drug therapy irrespective of whether it was through employer paid programs, such as in the South Africa’s and Botswana’s mines, through NGOs like Partners in Health, which provided HIV drug therapy in Haiti, or through government health care systems such as in Brazil. The donors to Botswana’s ARV program, as part of this international community, also had no strong feelings about how HIV drug therapy should be distributed. Merck had experience with donating drugs to NGOs, but none to governments. In the 1980s Merck had coordinated with the World Health Organization’s onchocerciasis control program to donate mectizan to NGOs that in turn distributed the drug to health care providers and patients. ACHAP, Merck’s later project in Botswana to address HIV, did not specify the same method of distribution. Instead, they embraced the idea that Botswana’s Ministry of Health would provide drug therapy through government hospitals. Like their contemporaries in HIV policy circles, they focused on access and not the method of drug

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www.who.int/blindness/partnerships/onchocerciasis_OCP/en/print.html
distribution. When Merck chose Botswana as the site of ACHAP, it chose an African country that had the ability to distribute HIV drug therapy within a government health care system. ACHAP was in partnership with the government. More specifically, the ARV program was in partnership with the Ministry of Health and this partnership added to government services instead of disregarding them. Unlike other development projects described in the literature, ACHAP did not promote neoliberal capitalism by specifying the way that HIV clinical care was delivered. In contrast, ACHAP promoted itself as an international model of how private corporations and governments could collaborate to use patent protected drugs for government provided health services.\footnote{Merck did specify that HIV drugs in Botswana, whether donated or purchased, were brand name drugs. This made Botswana government HIV drug therapy program very different from previous ones in Brazil and developing ones in Thailand, which used drugs manufactured by the government using licensed patents. Hilts, \textit{Rx for Survival}. Ernest Darkoh, \textit{Testimony before the African subcommittee of the U.S. Senate}, April 7, 2004.}

As Tania Murray Li states in \textit{The Will to Improve: Govermentality, Development, and the Practice of Politics}, “The claim to expertise in optimizing the lives of others is a claim to power, one that merits careful scrutiny.”\footnote{Li, \textit{The Will to Improve}, 5.} She also describes how development practices involve an implicit power dynamic between improvers and improved. The improvers have the solutions and the improved are the object of the technical practices. The ARV program’s international experts had an approach consistent with a development approach, but their expertise was placed in Botswana’s distinctive social context, which changed the power dynamic. Botswana’s bureaucratic practices defined roles for outsiders based on the broader social categories of foreigner/local. Practices of bureaucratic incorporation and isolation, discussed in Chapter 2 and 3, restricted the
power of experts in Botswana. When read as a story of international development and ‘the will to improve’ this dissertation describes the limits of expert power.

The centrality of the state bureaucracy in this story of international donor funded health care in Africa may come as a surprise. Susan Strange’s *The Retreat of the State* is only one example of a larger body of literature discussing the decline of the state. Most African states have few bureaucratic services to offer citizens. African states are poor because of historical power relationships emerging from colonization and decolonization. This history most recently included large loans to states and later structural adjustment as a condition of loan repayment. Structural adjustment resulted in services formerly provided by the state increasingly being provided by NGOs or corporations or alternatively cost recovery where state services could only be had for a fee. However, Botswana’s history differs from other African states allowing it to provide extensive state services to its citizens, including health care, education and welfare. Botswana is not simply different from other African countries because of its wealth. Many African countries have similar natural resources, but often their wealth benefits relatively few citizens. The state has an unusual relationship to transnational capital wherein state coffers benefit greatly from mineral wealth, and the state uses that wealth to provide

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services for its citizen, including health care.\textsuperscript{40} Botswana's wealth does not explain why it has a functioning state that provides for its citizens, however the history of Botswana's nation and state provides some answers.

**Botswana, the Nation and State**

Although international public health projects may be conceived of in the context of international policy debates, they are implemented by people, and they exist in a geographic place with a particular political and social context. Understanding Botswana's place in the world as a nation and how it works as a state is important to understanding why the HIV drug therapy program took the form it did.\textsuperscript{41} Botswana's position as an economically and politically progressive African country is important to its national image in international policy circles. Botswana is known for its leaders' foresight and business sense and its tendency to make policies that differ from those of its neighboring countries. When reading the story of Merck's decision in Chapter 2 keep in mind that Botswana's national image as an economically and politically progressive African country is important to both international donors and local politicians. Botswana's place

\textsuperscript{40} James Ferguson points out in Global Shadows: Africa's Place in the Neoliberal World Order, that Botswana for all of its relative wealth is still poor even within the Global South if not in Africa. James Ferguson, *Global Shadows: Africa in the Neoliberal World Order*. (Durham: Duke University Press, 2006), endnote number 5 in the Introduction.

\textsuperscript{41} Here I draw a distinction between the nation, an imagined community of people whose leaders participate in international governance, and the state, the actual government bureaucracy that provides services. The distinction draws an article by Gupta and Ferguson that discusses how nations perform their nationhood on an international stage. The state here refers to a more concretely located national bureaucracy. While many aspects of the state perform nationhood including the ability to provide health care, the distinction here is one of audience. The major audience of nationhood is other nations and international governing bodies that interact only with states. The key audiences for the state are the citizens, the bureaucrat and the politician who depend on the bureaucratic functions of the state to bind them together. Akhil Gupta and James Ferguson, "Spatializing States: Toward an ethnography of neoliberal governmentality." *American Ethnologist*. 29 (November 2002), 981-1002
on the national stage and its extensive bureaucratic services are both unusual for an
African country and are the result of an unusual history.  

Botswana’s unity, the fact that it is one peaceful nation, is not an accident, but an
historical legacy of leadership and luck. Central to creating Botswana as a unified nation
was the discovery of diamonds, luckily after the country gained its independence, and the
use of that wealth to fund state services and avoid international loans. Before diamonds
were found in Botswana, Seretse Khama, Botswana’s first president and deposed chief of
one of Botswana’s most powerful tribes, convinced the chiefs to cede their rights to
mineral wealth found in their traditional territories to the newly independent country.
The questionable role of the British in Seretse Khama’s removal from chieftainship put
him in a good position to ask this of the chiefs. In addition, the mineral wealth in the
country at independence was located primarily in areas that Khama would have been
chief over. This legacy of leadership, a president with the ability to ask and to convince
local chiefs to participate in nation building, was how Botswana began its steady climb
from one of the poorest countries in Africa to one of the continent’s wealthiest
countries.

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42 Historically, Botswana as a nation has distanced itself from many of the political struggles in Southern
Africa. During the Cold War, they were part of the non-allied states that declared themselves independent
from the USSR or USA and so did not participate in the extensive proxy wars fought between those two
countries on African soil. Botswana as a nation, as opposed to individual citizens, also had limited
engagement with revolutionary and anti-apartheid struggles in Zimbabwe and South Africa, which occurred
after Botswana gained independence. At the same time Botswana, through transportation networks and
labor migration was and continue to be embedded in complicated economic relationships with surrounding
countries. On the history of Botswana see: Fred Morton and Jeff Ramsay eds., The Birth of Botswana: A

43 James A. Robinson and Q. Neil Parsons. “State Formation and Governance in Botswana.” Journal of
and class leadership and colonial legacy in Botswana development, (Portsmouth, NH: Heinemann, 1999).
Botswana’s wealth is predicated upon its diamond mines; 70% of GDP is derived from diamonds. Botswana’s diamond mines are operated by Debswana, a cooperative venture between DeBeers, the world largest diamond company, and the government. Debswana operates under a board with members appointed by both DeBeers and Botswana. Profits are also divided between the corporation and the state. In the last twenty years, Botswana’s leadership took the government’s profits and reinvested them in DeBeers so that now the state of Botswana is one of the largest shareholders in this international company. These shares provide income to the state of Botswana. The government of Botswana controls a large share of both the national and international operations of the corporation that provides the country’s relative wealth.

Botswana’s income from diamonds goes into a large surplus fund (international loans do not float any portion of the state’s operating costs) and state services. In Botswana, money earned by the state generally stays with the state, although elites benefit often from close relationships with government leaders, much like in the Global North. The Transparency International Corruption Perceptions Index for 2002 listed Botswana as less corrupt than France. This does not mean that there is no corruption in

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45 Ibid.
47 Transparency International, *Corruption Perceptions Index,* 2002. http://www.transparency.org/ This index is based on several polls of the perceptions of public officials and politicians inside the countries. Finland is thought to have the least corruption and Bangladesh the most by their own officials. Botswana is number 24. The united States is number 16.
Botswana, just that the literature about the African criminal state does not apply here.\textsuperscript{48} Corruption does not noticeably limit the services that the state can provide.

Botswana’s national wealth does not mean that there are no poor citizens. From 1999-2005, about 55\% of people lived on under two dollars a day and 31\% lived on under one dollar a day, despite the fact that Botswana’s GDP was high for a sub-Saharan country.\textsuperscript{49} At the same time, living below the poverty line in a country that has free education, health care and some social welfare services is different from living in a country with few.\textsuperscript{50} Botswana’s leaders believe that their legitimacy comes from a functioning state.\textsuperscript{51} As a result, political leaders invest in a functioning bureaucracy that provides services. Citizens expect their leaders to provide for them and health care and education are free. These services are organized at the national level through the Ministries of Health and Education respectively. At the local level, there are other services through both the Ministry of Local Government, like food baskets, and there is land distribution to citizens through local headmen and chiefs.\textsuperscript{52} A large literature exists discussing how this relationship between Botswana’s elites and its government evolved;

\textsuperscript{48} JF Bayart, S Ellis, and B Hibou, \textit{The Criminalization of the State in Africa} (Indiana University Press, 1999).
\textsuperscript{50} Leith, \textit{Why Botswana Prospered}.
\textsuperscript{52} Pauline Peters. \textit{Dividing the Commons: Politics, Policy, and Culture in Botswana}. (Charlottesville: University of Virginia Press, 1994).
what is important for this story is the fact that the state provides extensive services to citizens and that citizens expect these benefits. 53

The state bureaucracy in Botswana is extensive, and ties citizens together in a web of interdependence. Most people receive health care and education from the government. Most children go to free schools. Adults and children go to their local clinics or the hospital when they are sick. Most employed people in Botswana, who do not work in mining, work for the government. One of the most widely read newspaper in Botswana is the government newspaper. 54 State services are only provided free to citizens with the national identity card, called an Omang card. People engage with the state through health care, education, and employment and these services are one reason to identify as a citizen. Bureaucratic services provide the state with legitimacy. It is important to understand HIV drug therapy in Botswana not just as a development project, initiated by Merck and Gates money, but also as the creation of a new service within the bureaucratic state system in Botswana.

As described by Timothy Mitchell’s chapter “Can the Mosquito Speak” from his book, Rule of Experts, health development projects are as much statecraft as other development projects. 55 By taking bureaucrats seriously, I follow in the footsteps of another excellent ethnographic study of development, Judith Justice’s Policies, Plans, &

Justice made the relationship between bureaucrats and development workers central to her inquiry. She describes international planners, Nepalese bureaucrats, and village health care workers as having separate bureaucratic cultures. Plans are passed among these groups and "[a]cross each boundary information is filtered by the cultural and political environment, and outcomes are accordingly altered." Justice finds that plans are powerfully altered by both the global and local cultures of international development workers, Nepalese bureaucrats, and village health workers. Like her, I do not assign all of the power to experts or international policies. In this dissertation as in Justice’s work, bureaucrats are important, knowledgeable development workers. Also like Justice, and other ethnographers of global health such as Paul Farmer, I am interested in using contemporary and historical analyses to find ways to maximize the benefits of medical services created with international development money. Now I turn to health care in Botswana, because global health exists only in the context of the local bureaucratic and biomedical cultures.

Identity & the State

Although HIV drug therapy in Botswana can be told as a global story of expertise and a national story of statecraft, HIV clinical care in Botswana is also product of a particular bureaucratic culture. In Botswana’s ARV program people’s social positions in state and locally run international organizations were consistent with their gender,

57 Ibid., 152.
citizenship, and profession. Complex power relationships existed between citizens and foreigners, women and men, and different professional groups within the national health care system. The categories of insider/outsider and foreigner/citizen shaped interactions between foreign experts and local bureaucrats in the capital city, as well as those between foreign doctors and local nurses in the hospitals. In this section, I will discuss how identity mapped onto social position in this preexisting, local topography of power, which shaped the HIV drug therapy program.

Two separate ministries, the Ministry of Health and the Ministry of Local Government, provided health services, but HIV clinical care was initially provided in hospital-based HIV clinics and coordinated by the ARV Team located under the Ministry of Health. To demonstrate the interactions between identity and bureaucratic position, I will focus on the Ministry of Health and the ARV Team. The ARV Team was staffed by foreign experts, both men and women, who were usually doctors. (Specifics about the ARV Team and about bureaucrat-expert collaborations within the ARV program can be found in Chapter 2.) The national bureaucrats at the Ministry of Health coordinated hospital care through the head of each hospital, called the Chief Medical Officer, who was a male doctor. All of the other managers in the hospital, such as the Matron in charge of nursing care or the Heads of Laboratory or Social Work, reported to the Chief Medical Officer and he reported to national bureaucrats at the Ministry of Health. The management of the HIV Clinics depended on a similar system where the HIV clinics were managed by the ARV managers, who were usually also the Chief Medical Officers.

59 Chapter 5 discusses the rural health services provided by the Ministry of Local Government
These ARV managers reported to the ARV Team and the national bureaucrat who supervised the ARV Team at the Ministry of Health. Botswana’s hospitals had a vertical system of management, and the HIV clinics had a similar system that was managed parallel to that of the hospitals. (Specifics about how the HIV clinics were managed can be found in Chapter 4.)

I could almost guess the medical training, citizenship, and gender of a person purely based on their bureaucratic position in the national health care system. There were distinct categories of personhood that corresponded to social positions within the Ministry of Health. At the national level in the capital city, the higher up in the health system the person was the more likely they were to be a citizen doctor. National positions in the Ministry of Health had to be held by citizens, and these bureaucrats were usually male doctors. The doctors in charge of the hospitals were male doctors and either foreign Africans or citizens. Most doctors in the hospital were foreigners from Zambia, Zimbabwe, Nigeria, Kenya and other African countries.\(^{60}\) Citizen women staffed most positions providing health care, including as nurses and social workers.\(^{61}\) The hierarchy was clearly gendered with more men as managers, but citizenship also mattered since one could not move up from being the head of the hospital to being a national level bureaucrat without being a citizen. (If I looked around at a national ARV program meeting I was the only woman and the only non-physician, but non-citizens were common. See ‘Methods and Settings’ below.) There were two types of foreigners,

\(^{60}\) Note here that I use the term African to refer to their citizenship not race or ethnicity. One Zambian foreign doctor that I worked with was South Asian.

\(^{61}\) I met two male nurses and one male social worker in the several hospitals in which I observed.
African doctors who worked in hospitals and American and European public health and HIV experts. The categories of citizenship, training, and bureaucratic location were four: European and U.S. HIV experts in the capital city; national bureaucrats with technical expertise also in the capital city; African foreign doctors in the hospitals; and citizen nurses and social workers in the hospitals. The following section will address the categories of foreigner and citizen and then the subsequently I will discuss the power dynamics between doctors and nurses within the Ministry of Health.

State services and the idea of nation building, discussed previously, are central to how the categories of citizen and foreigner are understood in Botswana. Citizenship implies that a person's ancestors participated in building the nation during and after independence, and reflects a person's ability to make demands of state services, although not all citizens benefit equally from Botswana's wealth. Just as citizens have a perceived relationship to the state, two categories of foreigners are also associated with positive or negative contributions to Botswana's prosperity. In his book Francis B. Nyamnjoh, *Insiders & Outsiders: Citizenship and Xenophobia in Contemporary Southern Africa*, describes how foreigners from economically wealthy countries are portrayed differently in the media than those from relatively less wealthy African countries, such as

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62 However, as a number of authors, including Good, Werbner and Gaitskell, have discussed, certain groups, such as the majority Tswana tribes, have benefited more from citizenship than some minority groups, such as the Basarwa (a people also called the San). Werbner, *Reasonable Radicals and Citizenship in Botswana*. Kenneth Good, "The State and Extreme Poverty in Botswana: the San and the Destitutes," *Journal of Modern African Studies* (v. 27, n. 2, 1999). Also see Richard Werbner and Deborah Gaitskell, eds., "Minorities and Citizenship in Botswana," Special issue of *Journal of Southern African Studies* (v. 28, no. 4, 2002).
neighboring Zimbabwe. The Setswana words *Makgowa* and *Makwerekwere* are both used to describe foreigners, but there are a very different set of associations for each. *Makgowa*, a term that originally referred to people from England and now used more broadly to refer to white people, is associated with modernity (*se lo sa makgowa*) and used to describe expatriates from countries that can offer technical or economic assistance. In contrast, as Nyamnjoh describes, "*Makwerekwere* are perceived among Batswana as having nothing to contribute but crime, scams and unemployment."*64* *Makwerekwere* is a term used to describe some people from other African countries. These categories are more dynamic and subtle than sketched here, but it is important to keep in mind when thinking about the identities of the actors described in this dissertation that such categories as *Makgowa* and *Makwerekwere* suggest that in Botswana’s society citizens could, and in many cases did, evaluate whether foreigners contributed to the greater benefit of the group, nation, and state, and that locals categorized outsiders accordingly.

Foreigners are expected to contribute to building Botswana’s society. Another way to understand the relationship of foreigners to locals in Botswana is through the analogy of guest and host. Nyamnjoh only mentions this association once, but in my experience, the analogy of guest and host was often used to represent the relationship between foreigners and the citizens of Botswana.65 There are many ways that this analogy gives us insight into the relationship between foreigners and citizens in Botswana.

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64 Nyamnjoh, *Insiders & Outsiders*, 103.
Guests and hosts have a reciprocal relationship. Hosts must make sure that the guests are comfortable and have everything they need. However, guests must be polite and respectful of how things are done by the host. Foreigners, like guests, were also supposed to be temporary. A bad guest would be one who overstayed his or her welcome, who usurped the role of other family members, or who challenged the status quo. The power dynamic and asymmetry between a guest and host is very different from that between an improver and those who are improved.

If experts were the guests, then bureaucrats were the hosts. As I will examine in Chapter 1, expert foreigners in Botswana’s HIV drug therapy program often reported to bureaucrats in Botswana’s government health care system. Experts, as good foreigners, had a powerful, but limited social position. They were expected to assist, creating new clinical care or training programs, but they were also expected to stay within certain boundaries. Many foreigners in Botswana, including the international health experts, found themselves constantly reminded of their temporary status even while they were doing important work for the Ministry of Health. For example, the Clinical Operations Manager of the ARV Team, who was well connected both within the Ministry of Health and with Merck, could not secure more than a temporary visa and had to go back every six months for visa extensions during the several years he spent in Botswana.66 This was not an unusual experience, but it also may have been connected to the fact he was an

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African-American and, because of his race, could be believed to be a *Makwerekwere.* In fact, Dr. Darkoh, the Clinical Operations Manager once mentioned to me that he had heard people whispering this ugly word about him in the supermarket, which was a place where his status as an American, a doctor, and an expert might not be evident. Other African-Americans of my acquaintance had similar problems negotiating this distinction between the American foreigner with expertise, assumed to be white, and the African foreigner from an economically backward country capitalizing on Botswana’s relative wealth.

The guest-host analogy was not only a category used by Batswana. It was even a way that foreigners, even international experts, in Botswana understood their relationship with the country and her citizens and it implies a particular power dynamic, not one that favored the outsider. I found myself using this analogy while on a brief trip to South Africa. In Botswana I myself, as an American researcher, felt a responsibility to be a good guest. One aspect of being a good guest was being polite, including greeting people in Setswana. An experience I had in Johannesburg, South Africa made me realize that my greeting style, even in English, had changed to meet the expectations of Botswana’s society. A street vendor, who was selling me a small souvenir noticed that I greeted him and asked me, “Who taught you to be so polite?” and I replied, “The Batswana. I am a guest in their house. Guests must be polite.” The vendor was amused at this reply. I had learned implicitly that foreigners in Botswana had defined roles-- guest, observer,

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outsider, foreigner, *Makgowa*—all of these applied to me and there were appropriate and inappropriate ways to behave according to these roles. Being polite and greeting people, mostly in Setswana, was one of those ways that I signaled that I understood my responsibilities as a good guest. Chuck Bosk has observed the way in which ethnographers also have a guest-host relationship with those that they study and it is interesting to contemplate my dual status as a guest in Botswana, both as a foreigner and as an ethnographer.68

Doctors in the hospitals, who were expatriates from other African countries, often faced difficulties related to the fact that they were both skilled workers and foreign Africans. They expected to be treated like guests; however, because they were from African countries, sometimes they were perceived by locals as benefiting more from Botswana’s wealth than they contributed to the society’s well-being. Several times during my observations in hospitals in Botswana, foreign African doctors pointed to nurse-doctor and patient-doctor interactions that led them to the conclusion that they were not welcome in Botswana because of their status as non-citizen Africans.69 In the rural health system, I observed one Zambian foreign doctor tell the Congolese doctor that he supervised that they both served at the whims of the Batswana and needed to work extra hard to prove themselves to their patients and to the nurses, both groups of people who

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68 Cite Chuck here.
African foreign doctors working in the hospitals were much more likely to have their authority and motives questioned by the citizens with whom they worked. Further complicating foreign doctors' relationship to citizen nurses was the fact that most direct patient care was conducted by nurses and patients in Setswana. Mompoloki Bagwasi discusses the use of English and Setswana in Botswana as an example of diglossia, which is where different types of communication are conducted in different languages. In Botswana, as Bagwasi describes, English is associated with higher education and greater social status, while Setswana is the language of "national pride, unity and cultural pride". Setswana is used at home, amongst family, with the elderly as a sign of respect, and in traditional political assemblies, which are called kgotla meetings. Setswana and English are used in the government, including in the health care system. Diglossia can exist in Botswana without bilingualism. Although both languages are used in government, only 40% of citizens speak English, and many English speakers are functionally illiterate. In hospitals, nurses and social workers had their meetings in Setswana, while doctors had their meetings in English. During patient care, nurses translated for doctors, who as foreigners did not know sufficient Setswana for this purpose. Language differences in the hospital reinforced the boundary between foreigner and citizen. Foreign, African, English-speaking, male doctor and citizen, Setswana-speaking, female nurse were accepted categories inside of Botswana’s hospitals.

70 Observations of the rural health system with the DHT and PHS (rural health doctors), Palapye, June 7-11, 2004.
72 Ibid., 213
73 Ibid.
Nurses' ability to speak Setswana meant that they had special skills that allowed them to know more about the problems that patients faced when trying to access effective care. Even so, foreign African doctors managed the hospitals and were the ARV managers responsible for representing the HIV clinics at the national meetings. Nurses did not have a large role at the national level in the Ministry of Health, perhaps because of their gender or their professional status. This dissertation argues that two overlapping hierarchies of knowledge minimized nurses' roles in clinical care. First there was a privileging of doctors within the Ministry of Health and second an international health policy approach that emphasized universal, scientific knowledge, such as doctors and pharmacists, over workers with experiential and local ways of knowing. From the national level, nurses' work became invisible. What appears to be separate from national and global processes, such as the nurses' limited roles in national planning in Botswana's HIV drug therapy program, is really caused by both the bureaucratic context of clinical care at the Ministry of Health and global context of international public health development, HIV policy, and biomedical knowledge.

While nurses were invisible at the national level, they actually were crucial to the operations of the HIV clinic. Chapter 4 examines closely the work of nurses and describes the knowledge, strategies, and solutions that nurses came up with managing HIV clinical care. Understanding how nurses manage patient care is central to understanding changing clinical practices. Nurses have the potential to introduce new forms of clinical care as described in Julie Fairman and Joan Lynaugh's work *Critical Care Nursing: a history*. Fairman and Lynaugh show that critical care units in the U.S.
emerged not from new technological monitoring devices, as is often thought, but from how nurses grouped patients based on the nurses’ work practices. Shula Marks’s work, *Divided Sisterhood: race class and gender in the South African nursing profession*, also describes the role of nurses in changing medical practices when she highlights how the complexities of nurses identities in apartheid South Africa shaped the practice of clinical care in government hospitals. Like these historians of nursing, I examine how nursing practices not only were important for the day-to-day functioning of the HIV clinics, but also the way the HIV clinic functioned as its own bureaucratic unit within the hospital. Chapter 4 makes nurses’ invisible work visible.

In Botswana’s HIV drug therapy program, nurses’ perspectives were represented by the doctors who managed the HIV clinics, usually the Chief Medical Officers, or the doctors who managed epidemic control and physicians in the rural health clinics, called Public Health Specialists. Chapter 5 discusses how Public Health Specialists, the doctors responsible for medical care in the rural clinics and epidemic control, had very different perspectives on how to create good HIV clinical care than the Chief Medical Officers, the heads of hospitals who were usually foreign, male doctors. Public Health Specialists’ experiences practicing epidemic control and clinical care with nurses, social workers, and other female local providers in the rural health care system created a different knowledge base. As discussed in Chapter 5, in July 2004 a meeting between the rural health workers and the ARV managers had the potential to transform HIV clinical care in Botswana.

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75 Shula Marks, *Divided Sisterhood: race class and gender in the South African nursing profession*. 
Different bureaucratic practices in the hospitals and rural health system created different ways of knowing HIV clinical care and different potential solutions for challenges facing HIV clinical care in Botswana.

By examining the practices of medical care, this dissertation argues that any health practitioner's knowledge of HIV clinical care was a product of their profession, their day-to-day work, and the perspectives and knowledge of their co-workers. In this way, a person's institutional location, for example whether he or she worked for the Botswana-Harvard Partnership, the ARV Team, a hospital's HIV clinic, or the rural health care system, shaped what she or he knew. At the same time, a person's identity shaped his or her ability to claim legitimacy for that knowledge and to represent his or her own perspectives. The first half of this dissertation addresses the social power that expertise confers and how the bureaucratic practices of the state were central to Botswana's HIV drug therapy program. The last two chapters provide a contrast between the experts and bureaucrats work in the capital city and the work of providers in the HIV clinics and rural health care system, whose knowledge and work eventually transformed the practice of HIV clinical care in Botswana. Not only is the forward momentum here chronological, but it also progresses from global to local, while at the same time making an effort to connect and collapse the barriers between these categories.

Methods and Settings

In 2002, I had an internship in Botswana at the Merck and Gates Foundations' donor NGO, ACHAP. During this time I had participated in creating Resource Centers
for HIV, which became important predecessors for the HIV clinics. I had also worked with several other initiatives and I chose to return to Botswana and work on the HIV drug therapy program because I found the idea of creating a new HIV drug therapy program within a government health care system exciting and challenging. I had no doubt it would save lives and I wanted to see how it happened. How would this project evolve from one HIV clinic at Princess Marina to many all over Botswana?

When I returned to Botswana in 2003, this project was a study of an organizational process and my choice of hospitals as sites of study reflected that focus. Because Botswana’s ARV Team started HIV clinics in a staged manner, called the ‘roll-out’, different hospitals had HIV clinics at different stages of organizational development. The referral hospitals established HIV clinics first, then the district and sub-district hospitals, and then the primary care hospitals. The creation of HIV clinics was also staged. Hospital HIV clinics during their first six months had on site HIV experts called clinical preceptors hired by the ARV Team with ACHAP funding. Later hospitals faced the challenge of expanding patient loads and the coordination of referral networks with the rural health care system. To study the creation of HIV clinics and the ongoing issues of managing an expanding HIV clinical care program, I wanted to study different types of hospitals with HIV clinics at different stages of creation and expansion. In the writing of this work, knowledge, expertise, social position and participation in decision making have taken center stage, and the actual details of the organizational process has become less central.
Hospitals I studied included Princess Marina Hospital in Gaborone, Sekgoma Memorial Hospital in Serowe, and a sub-district and a primary care hospital in Mahalapye and Hukuntsi. Princess Marina Hospital was the site where ARV was first provided, before a comprehensive national plan was developed. Sekgoma Memorial Hospital was a major referral hospital and had one of the earliest HIV clinics outside of Gaborone. Mahalapye Hospital was a medium sized sub-district hospital that had provided HIV drug therapy for about six months when I observed there. When I arrived at Mahalapye Hospital their clinical preceptors had just left. Clinical preceptors were the HIV experts hired by the ARV Team and paid by ACHAP to teach at local hospital HIV clinics for the first six months it operated. While at Hukuntsi Hospital, a primary care hospital in a rural sub-district, I observed a six-week-old HIV clinic, along with its clinical preceptors. At each site, I observed the HIV clinics for one to five weeks. During my period observing HIV clinics, I also observed the rural health team doctors or other members of the rural health system run by the Ministry of Local Government when its practitioners were involved with HIV drug therapy in the HIV clinics. My primary methods and sources were ethnographic observation, unstructured interviews, and documents including meeting minutes, slide presentations, and internal reports.

As a white female foreign researcher who spoke some Setswana and spent time with nurses, hospital staff had some difficulties appropriately categorizing me. The other white women who did not fit into the accepted categories were Peace Corps workers, who often worked on rural HIV prevention campaigns at the district level, or missionaries, who were often Europeans who spoke local languages, worked, and lived
amongst locals. Neither of these two types of white women was usually found in the
government hospitals, but I was often encouraged to seek out the Peace Corps workers by
the hospital staff, because they felt I would be more comfortable living with or
associating with people like myself. Sometimes my unclear status caused problems. In
one hospital, there was conflict between the African doctors and the Batswana nurses.
This conflict made it particularly difficult for me to find a comfortable social position
from which to observe the balkanized workings of the hospital’s HIV Clinic. I was first
invited to, and then thrown out of, a meeting about medical errors, because I was not a
doctor.

In hushed discussions afterwards, one of the doctors sympathetic to my confusion
explained that the exclusion was really to keep nurses out, not me, but they wanted to
avoid the slippery slope of inclusion. I was not a doctor and therefore not an ally, though
perhaps there were other factors at work. I was also female and Setswana speaking, like
the nurses and patients, but unlike the male, English-speaking doctors, I had been going
to the nurses’ meetings. I had chosen the nurses side without even realizing it. I was not
unfamiliar with carefully negotiating my gender, my language ability, and my American
white personhood, but I had never experienced such a firm and contested boundary
between foreign doctors and local nurses. I had effectively allied with one group, and
forsaken the other, simply by going to the nurses’ meetings. The divisions between
categories of citizenship, gender, and professional status were very clear to me because I did not fit into the preexisting categories.\(^{76}\)

This story is one of an exceptional social position since, as an ethnographer, my indeterminate identity usually allowed me to participate in the work from multiple social positions. Usually, I was accepted by doctors as an American student and researcher about to enter medical school at the University of Pennsylvania. At some locations, I was known as the ACHAP intern who had worked with Oscar Motsumi on building the resource centers that eventually transformed into the HIV clinics. Nurses saw me as a polite, Setswana speaking, young woman. Like the Peace Corps workers assigned to the rural health care system, I assisted providers, but I also wanted to write about their work. The peculiar situation of ethnographic research allowed me to observe multiple institutional locations and contemplate how identity was linked to social position and how knowledge of HIV drug therapy was linked to institutional location. Often I served as the conduit between the national planners and the hospital managers and practitioners and both were grateful for the information about the other. It is interesting to ask whether I would have had the same experiences and knowledge about HIV clinical care if I had...

\(^{76}\)I do not want to suggest that Botswana is the only place where identity is an important part of health care, but often the particular intersection of identity and social position is local. A year after returning from fieldwork, well into my first year of medical school, I received a follow up questionnaire from Penn’s Institutional Review Board. It asked me how many of my research subjects had been African American, Asian, White. This survey baffled and amused me. These categories were meaningless, or were differently meaningful, in the context of Botswana. Almost none of my actors were Americans so they would have been an undifferentiated mass of ‘other’ obscuring the real differences between them. Most could be categorized, without much relevance to anything as African. The foreign policy experts had complicated transnational identities. This questionnaire had nothing to do with me or my actors and everything to do with the politics of doing clinical research in America. Identity, social position and relative power are related in complicated ways in all forms of medical practice; how these relationships evolve and develop is specific to particular places and moments. See Steven Epstein, *Inclusion: The politics of difference in medical research*, (Chicago: University of Chicago Press, 2007) for a discussion of how American medicine has a particular politics of difference. The one I observed was very different.
been an older male doctor or if I had done all of my research in the capital city. Because I myself held so many different social positions while trying to understand HIV and HIV clinical care, including (previously) scientific researcher, medical student, ethnographic researcher, and ACHAP intern, I noticed that different people knew different things about HIV clinical care in Botswana. Understanding how different social position created situated knowledges and how certain types of knowledge accorded people special social positions thus grew to be the focal point of this dissertation.

Summary

Pearl T. Robinson in a presidential address to the African Studies Association in 2007 reflected on the politics of knowledge in the life of Ralf Bunche, a noteworthy African American diplomat and scholar whom she described as “an international civil servant”. She says of Bunche,

Toward the end of his life...He had come to appreciate that knowledge per se is fleeting and that what matters is less what you know, but rather, how readily you are able to absorb new information, how effectively you can analyze problems and evaluate solutions, and how much access you have to locally produced knowledge...77

This dissertation takes a similar approach to knowledge. Knowledge is not only about what we know. As important as what we know, is how we know, and how that knowledge translates into organizations that address the pressing problems of our day.

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77 Pearl T. Robinson, Ralph Bunche and African Studies: Reflections on the Politics of Knowledge.” *African Studies Review*, (v. 51, no 1, April 2008), 1-16. This article was originally presented as the Presidential Address at the African Studies Association 50th Anniversary Meeting, October 2007, New York City.
Chapter 2

Bureaucrats & Experts Begin Botswana’s HIV Drug Therapy Program

The African Comprehensive HIV/AIDS Partnership (ACHAP) was many things, almost none of them contained in its name. ACHAP began when Merck executives, who pledged $50 million of Merck Foundation money and free drugs, convinced the Gates Foundation to donate $50 million more to start an initiative that would provide advanced HIV clinical care, including HIV drug therapy, to African patients. When founded, ACHAP was funded by the largest amount of money dedicated to a single HIV clinical care program in Africa. Botswana, the beneficiary of this largesse, was selected from a short list of countries with leadership committed to addressing the HIV epidemic using health education and medical methods. When Merck executives and other donors decided to locate ACHAP in Botswana, they pledged 100 million dollars to a country of fewer than 3 million people. ACHAP was initiated as a big and inspiring project, and it saved lives in Botswana. However, it did not do so alone. ACHAP was a partnership between the Merck and Gates foundations and the government of Botswana.78

The HIV drug therapy program that emerged was the outcome of complex interactions between different partners. On one side were outsiders with health expertise

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78 Phillip Hills, *Rx for Survival: Why we must rise to the global health challenge.* (New York: Penguin Press, 2005). According to a July 2002 document summarizing ACHAP’s progress, quoted here, the project had four goals, “1. Reduction of HIV-infection and transmission; 2. Improved accessibility to comprehensive HIV care and support across a continuum from home to hospital; 3. Improved access to prophylaxis and treatment of opportunistic infections (OI) and highly active anti-retroviral therapy (HAART) in the public sector for all people living with HIV/AIDS, and eligible for treatment according to the nationally established guidelines; 4. Strengthen sustainable improvements of health care systems and mitigate the impact of the epidemic.” The document also details the percentage of monies spent on each area, “Capacity Building at NACA and other Government Institutions” 15.6%; “Prevention” 44.5%; “Care/Treatment” 31.9%; “Support” 8.0%. Note that this was not an official tally of money spent, but rather expected expenditures for the year. ACHAP. *ACHAP Backgrounder.* July 2002.
and international funding, while on the other side were government bureaucrats-physicians who supervised the day-to-day operations of the state’s health care system. The distinction between these two groups was temporarily and productively erased by the creation of the ARV Team, which was the actual organization put in charge of creating HIV clinics in the government hospitals. The ARV Team was supervised by Ministry of Health officials and bureaucratically attached to the Ministry of Health, but it was staffed by international health experts paid by ACHAP. In the ARV Team’s early conception and function, it was a hybrid of international health expertise and state bureaucracy. Eventually, citizen bureaucrat-physicians or bureaucrat-pharmacists replaced the international health experts, and the ARV Team decreased its reliance on international donations and expertise. The HIV drug therapy program in time became another government program within the Ministry of Health, but this dissertation focuses on a period when it was still a partnership between international money and a government health care system.

Collaborations between international health experts and government health workers were not restricted to the ARV Team. A separate ACHAP initiative built HIV resource centers on the grounds of government hospitals. These structures later became the ARV Team’s HIV clinics. In addition, collaborations between American research universities and the government of Botswana were part of how health care was provided at the capital city’s government hospital, Princess Marina Hospital. A collaboration between Harvard University, the University of Pennsylvania, and the Ministry of Health resulted in the first HIV clinic at that site, called the IDCC (Infectious Disease Care
Here I will examine how international expertise and government health care collaborated to create these hybrid social spaces that both facilitated change in bureaucratic structures and in some cases isolated the outsiders into enclaves.

**Merck Becomes a Guest in the House of Botswana**

Even before Merck conceived of ACHAP, it was a corporation that prided itself on its commitment to solving global health problems. Merck had initiated a number of drug donation programs, mostly in the Global North, but the important one for this story was a 1988 program that donated the drug Mectizan to treat African River Blindness, a disease caused by a parasitic infection.\(^{80}\) Top Merck executives often publicly lauded their corporation's commitment to increasing drug access in poor countries where most people could not afford drugs. The Mectizan drug donation program, called the Mectizan Expert Committee, was an important example of Merck's longstanding belief that "Medicine is for the people, it is not the profits"—a statement ascribed to George W. Merck by Merck executives.\(^{81}\) In Merck's NJ corporate office there is a statue that memorializes the Mectizan project called *The Gift of Sight*. The statue depicts an African

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\(^{79}\) IDCC as used here refers to Princess Marina Hospital's HIV clinic, but all HIV clinics in Botswana could be called IDCCs; they were named after the one at Princess Marina Hospital. In this dissertation HIV clinics not located at Princess Marina are called HIV clinics for clarity and simplicity. In Botswana, IDCC refers to an HIV clinic, but what the acronym stands for is not always clear. I have also heard it expanded as Infectious Disease Care Clinic. A google search in August 2008 suggests that both my usage and the previous are the most common. [http://www.google.com/](http://www.google.com/).


When Merck initiated ACHAP, its employees did not just embark on another drug donation project for public relations. Merck, as Chairman Gilmartin put it, had “a commitment to making medicines available without immediate concern for profits.”

Drug donation and access, particularly for infectious diseases in Africa, were part of Merck’s corporate culture.

However, Merck had more than drugs to offer Botswana. In addition to launching the Mectizan Expert Committee, Merck had initiated a collaboration in the late 1990s with the Harvard AIDS Institute resulting in the “Enhancing Care Initiative,” whose goal was to “improve the clinical care of people living with HIV and AIDS in resource constrained settings.”

Merck executives felt that they had valuable management experience to provide, along with free or subsidized HIV drugs. Linda Distlerath, president of Merck’s Foundation and VP of Global Health Policy at Merck Co. in 2002, pointed to Merck’s role as facilitator-manager as one of its most important contributions to ACHAP:

> When it comes to execution, Merck is business-oriented. Whenever Merck does a big program—launch a new product, undertake new research—it is analyzed to the hilt. There is a plan, there are specific objectives, deliverables, timelines, people overseeing it. “Did you do it, did you not do it?” There is a mentality of taking a big project, figuring out what needs to be done, getting the right partners to come together, developing a plan, and then executing it. These are hard management skills and it is the execution that Merck does so well that will be most valuable."

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Part of Merck’s management role was facilitating a particular type of partnership: a coalition where each participant contributed different assets and skills in kind. Boehringer-Ingelheim donated some of the drugs needed for a modern HIV drug therapy protocol; the Gates Foundation contributed money; Merck contributed both drugs and management experience. When Botswana was selected as the final location of ACHAP, its government contributed the infrastructure and personnel of their national health care system. In short, Merck’s experiences with coordinating international public health projects gave it a special type of role—not only the creator of the project, but also an implementer.  

Merck’s commitment to managing ACHAP meant that Merck Foundation employees became very involved in creating and funding new programs within Botswana’s government health care system. Both the Merck and Gates Foundations were very committed to providing public health, medical, and management expertise to the government of Botswana. However, Merck’s executives wanted Merck people, like the first project leader of ACHAP who was a former Merck executive in South Africa, to select the experts involved in the HIV drug therapy program, and they wanted them to have a close working relationship with the government of Botswana. The Gates Foundation’s presence in Botswana was less noticeable in the day to day operations of

86 Note Dr. Distlerath’s dual position at the Merck Co. and the Merck Foundation. Some Merck executives hold positions at the company and its foundation. This overlap between the leadership makes it difficult, if not impossible, to distinguish the company and foundation as different social actors.

ACHAP. 88 It was Merck’s commitment to managing the outcome of its largesse that caused its creation, ACHAP, to become so deeply imbedded within Botswana’s political system.89

By donating HIV drug therapy and by initiating a program large enough to address the HIV epidemic in an entire country, Merck not only could prove itself a philanthropic corporation; it could also directly answer the critiques of HIV activists. Merck and AIDS activists could both agree that HIV drug therapy was part of the solution to the HIV epidemic in Africa.90 In 1999, when the coalition that would fund ACHAP was first being assembled, donors envisioned a comprehensive program where drug therapy would join with other public health initiatives to address HIV/AIDS. At first, ACHAP was a solution in search of a country. As this story unfolds, it will become clear how importantly the particulars of Botswana shaped ACHAP, but initially Merck was constructing a plan for a public health intervention without any identified place to locate it.91 Merck’s initial vision—a coalition of experts, drugs, and money that would solve an unnamed African country’s HIV epidemic—was possible only because HIV had been construed as a problem to be resolved by a technical solution. The non-technical matters of social and political context could wait until the plan became reality.

Merck was aware, though, that politics could be a barrier to health development, so the recipient country had to be chosen carefully. Of particular concern was whether the

88 Personal experiences while intern at ACHAP, June-August 2002
89 It would be interesting to compare Merck’s approach to that of other philanthropic donors and international governance organizations.
91 Phillip Hilts. Rx for Survival (2005)
political will to address HIV was present. Merck executives looked for African leaders whose commitment mirrored their own and whose countries had a significant HIV/AIDS epidemic. The list of candidate countries was narrowed to Uganda and Botswana; both had presidents who were strong advocates for addressing HIV/AIDS. Ultimately, it was Botswana that was looked on more favorably, because 100 million dollars could make a bigger impact on a country with fewer than 3 million people than it could on a country with 24 million like Uganda. Botswana was also a stable country with the reputation of being a good partner in international aid projects. Finally in 2000, Merck and Gates executives were introduced to President Mogae of Botswana by the head of the Harvard AIDS Institute.

The head of the Harvard AIDS Institute, Richard Marlink, not only introduced the interested parties; he gave them some advice based on his experiences with the Botswana-Harvard Partnership:

Americans are looked at as being energetic, having lots of ideas and used to things happening. Botswana is a consensus society and things move at a different pace. They like to do their homework and make sure everyone is on board. Now when they decide, they are great partners because they follow through. But there is a different mindset and I would remind the partners that we are guests in Botswana.

Here Marlink is pointing out how outsiders, including international health experts and donors, were expected to work under the auspices Botswana’s state. Harvard’s program in Botswana was called the Botswana-Harvard Partnership (the Botswana Harvard

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Partnership). It was no accident that the Botswana Harvard Partnership named Botswana first and Harvard second. The implicit partner and host is the state of Botswana. As Marlink explains it, the role of Harvard is to initiate change by “having lots of ideas,” but it is the role of Botswana’s government to “follow through” by providing new services within the state’s bureaucracy.95

In Botswana, international health donors provided their services through the government’s own health care system rather than to individual patients. Even well-funded American universities like Harvard and Penn did not provide services independent of the government. Instead, they formed partnerships with the government like the Botswana Harvard Partnership, and their initiatives often involved government resources. For example, the 30 million-dollar laboratory building that Harvard built in Botswana is located on the grounds of the government’s Princess Marina Hospital. Harvard provided services to the national health care system, which in turn provided services to citizens. To patients in Botswana the international health community’s ‘development apparatus,’ a phrase used by Ferguson, was part of the ‘government apparatus.’96 Into this dense bureaucracy, Merck set its plans for a simple solution to Botswana’s HIV epidemic. It worked out well because Botswana had social space created specifically for such international aid projects. The state used experts to create new bureaucratically organized and delivered state services, and it used international money to supplement existing state

95 Public-private partnerships were promoted by the UN in the early 21st century as a way for African patients to gain access to HIV drug therapy, but such partnership were something that the government of Botswana had been doing successfully for more than two decades. Smith and Siplon. Drugs into Bodies. (2006), Hilts, Rx for Survival, (2005)
services. ACHAP’s role was to help the government provide better services, and the McKinsey Report, the subject of the next section, laid out the ways in which a government HIV drug therapy program in Botswana would need ACHAP’s help.

The McKinsey Report and ACHAP’s Relationship to Ministry of Health

ACHAP was formed in July 2000, and one of the first things the government of Botswana and Merck agreed to do was hire the consulting firm McKinsey and Company to assess what would be necessary for Botswana’s government to provide HIV drug therapy to the estimated 100,000 citizens who needed it. McKinsey is a venerable American consulting firm that over its seventy years of operation expanded from consulting for business and finance to consulting for the public sector and other areas. By 2001, McKinsey had a division in global public health that advised NGOs. McKinsey performed Botswana’s study in just under three months, culminating in an August 2001 presentation to Parliament. McKinsey consultants reviewed the national health care system of Botswana and identified what needed to be done and how much needed to be spent in order to inaugurate the ARV program by October 2001 and treat 19,000 patients in the first year. The plan, in large part set by Botswana’s political leaders, was very ambitious. The consultants’ report did not question goals; it just laid out what the government of Botswana would need to do to accomplish them and what doing so would

cost: an estimated 170 million pula (between 35 and 40 million US dollars, depending on the exchange rate at the time).³⁸

The McKinsey Report, as it was called in Botswana, existed not as a written report, but as a series of 120 slides. According to my sources in Botswana, McKinsey and Company did the feasibility study for the ARV program pro bono, but charged extra for published, official reports, and the government felt that the final slide presentation sufficed. I personally did not attend the presentation in 2001, but in their electronic form what is really striking is that the client is the government of Botswana, not ACHAP. The government of Botswana—here comprising the Members of Parliament, the President, and his appointed Ministers—was making a commitment to providing HIV drug therapy, and it wanted an assessment of what it needed to do to fulfill that commitment.³⁹

The McKinsey Report pointed out the ways in which the government of Botswana would need assistance to create an ARV program. Slide titles included discouraging summaries such as “will require an unachievable increase in critical resources across the board” and “challenge will accelerate over the long term.” One slide projected that the number of pharmacists working for the government’s health care system would have to increase by 179% for the ARV program to be effective.⁴⁰ Compared to other government planning documents like “Vision 2016,” a list of accomplishments Botswana hoped to

⁴⁰ Ibid.
achieve by 2016, the McKinsey Report was discouraging. Unlike Vision 2016 and similar documents, which could be bought from the government printer in the Main Mall, the McKinsey Report was only circulated as an internal document. It was not designed for the international health policy community or for the citizens of Botswana. Its purpose was to describe—for an inner circle of politicians, bureaucrats, and ACHAP’s newly hired international health policy workers—where Botswana’s government needed help and where it could shoulder the burden on its own.

The government of Botswana was making a commitment to providing HIV drug therapy and wanted an assessment of what it would need to fulfill that commitment. At the same time, the McKinsey Report showed the limitations of Botswana’s health care system, revealing gaps which ACHAP could fill. Examples included the lack of pharmacists and insufficient space for HIV clinical care in the existing hospitals. In response, ACHAP projects were tailored to address the needs identified by the McKinsey Report. As two examples out of many, ACHAP assisted the government in hiring pharmacists by paying for their recruitment abroad, and ACHAP also devised an initiative to build the structures for the HIV clinics. The McKinsey Report was a map of ACHAP’s early role in the ARV program, and reinforced the idea that ACHAP orbited the state by providing ACHAP with ways to assist the government. The government of

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101 Vision 2016 is a document where Botswana’s government laid out major policy goals in advance. Usually they are very ambitious goals such as having no new HIV infections by 2016. http://www.vision2016.co.bw/
Botswana provided services, while ACHAP helped it do so in a timely and effective manner.¹⁰²

The McKinsey Report was not only a product, but a process as well. The interviews, discussions, presentations, and meetings that went into its making were more important than the content of the report itself. One slide indicates that at least 28 people were interviewed to produce the final report. Listed are government officials from all areas of the health care system, including the Ministries of Health and Local Government, and multiple international aid partners like Harvard. By the time the McKinsey consultants started interviewing people, the President of Botswana, Festus Mogae, had already announced that HIV drug therapy was going to be available within the year. The presence of outside consultants laid the groundwork for change in the bureaucracy. It signaled political interest in making the ARV program happen, enrolled and consulted with bureaucrats who might become part of the ARV program, and alerted them to imminent changes in their programs. All of this groundwork assisted ACHAP in creating effective programs, because when ACHAP assisted the government in areas identified by the McKinsey report it was assisting in areas identified as important by an extensive consultative process and accepted as priorities by high-level politicians including the President.

Since the McKinsey Report amounted to much more than a presentation, it is not surprising to learn that the structure of the ARV Team was decided during the time of its drafting. The presentation to Parliament included the final structure of the ARV Team,

but meeting minutes show that the structure had been undecided just earlier that same month. Days prior to the presentation there was a separate meeting of the Permanent Secretary of the Ministry of Health and similar high-level career bureaucrats from various ministries in the national government. These bureaucrats decided the ARV Team’s structure so that it could be included in the McKinsey document. One of several organizational options was chosen, and the ARV Team was situated under the Permanent Secretary of Health, who would report to a newly created National AIDS Council that included the Minister of Health and the President. This arrangement put the ARV Team inside of the Ministry of Health, the governmental arm that provided many state health care services. The timing of this decision—two weeks after the report’s completion and one week before its presentation—suggests that the McKinsey Report acted as a catalyst for government reorganization.¹⁰³

The use of outsiders, consultants, to mediate bureaucratic change was a model of interaction between international health expertise and government bureaucrats that would be repeated many times in the creation of the HIV drug therapy program in Botswana. The McKinsey Report was not just slide presentations and published reports; it was the first step in aligning Merck’s goals of technical assistance with the state’s of providing services to citizens. The McKinsey Report started to harmonize the goals of Merck’s ACHAP and the government’s health care system so that they could create the hybrid social institutions and projects that came later. Hybrid social institutions and social space

¹⁰³ Meeting Minutes, Meeting on Proposed Structure of Implementation Team for Anti-Retroviral Therapy (ART) Launch in Botswana, August 10, 2001; Meeting Minutes, Meeting to brief PS: Health, Local Government and Finance by the Structure Committee, August 14, 2001.
was a way that Botswana’s government collaborated with international health experts, like those hired by ACHAP, to create new health care services within their government administered health care system.

ACHAP

At first glance, the Mectizan Expert Committee and ACHAP look the same, both having boards of experts to provide technical assistance. Most of the members of ACHAP’s board, drawn from Harvard AIDS Institute and other international organizations, would have fit well into roles on the Mectizan Expert Committee. Board members helped with planning and gave final approval for funding large ACHAP projects. Most of the members of ACHAP’s board did not live in Botswana, and their roles were advisory and supervisory. However, this board did include a government appointee, the head of the National AIDS Coordinating Committee. The composition of ACHAP’s board suggests that its work in Botswana was a collaborative effort with a government and thus very different from the Mectizan Expert Committee. ACHAP had around 10 fulltime employees, only one of whom, the project leader, went to board meetings. It was its own international health organization partnered with the government of Botswana on public health and clinical care initiatives for HIV. Part of this partnership was embodied in the people hired by Merck to work for ACHAP and the experts paid by ACHAP to work for the government of Botswana through a process called secondment.

104 In 2000 ACHAP’s board included members from the Harvard AIDS Institute, and the Merck and Gates Foundations in addition to the head of NACA (National AIDS Coordinating Agency.) Personal observations at ACHAP, June-August 2002.
ACHAP was more than an advisory board. I experienced it as an intern in 2002 as a dynamic organization in a state of growth. Through ACHAP, Merck had people on the ground in Botswana. The Merck executives who initiated ACHAP drew on their professional networks to find ACHAP staff. ACHAP started with two fulltime employees, both hired by Merck. The first project leader of ACHAP, Dr. de Korte, was a former executive of Merck’s subsidiary in South Africa. At the senior level of ACHAP were also a number of Batswana citizens who had worked many years in different ministries. At the junior level were a number of employees who had worked for local NGOs in the past. Most employees collaborated with a particular government ministry to develop programs or services that ACHAP could help fund. In addition to the ACHAP staff, ACHAP seconded experts, usually expatriates with extensive training and experience in international public health, to the National AIDS Coordinating Agency (NACA). NACA, the Ministries of Health and Education, and ACHAP employees based in Botswana were the operating core of the projects that emerged out of ACHAP from 2002 to 2004.

In 2002, negotiating consensus between ACHAP and government ministries could involve walking back and forth from ACHAP’s location on the Main Mall to the government offices across the street. Later ACHAP and then the government buildings moved to different parts of the city. This peripatetic method was how consensus was reached on many projects. While it was often successful, it had exhausting consequences;

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105 Here Batswana is the plural for people from Botswana and Motswana is the singular. Although technically Batswana are people from Tswana tribes, here I use Batswana more inclusively to refer to all citizens of Botswana.

not the least of which was an unending series of meetings for ACHAP and government employees. Projects that reached outside of Gaborone, however, were even more difficult because face-to-face negotiations had to occur over a greater physical and bureaucratic distance. This distance between international experts and the national health care system outside of the capital city was bridged by the ARV Team. I now turn to the creation of the ARV Team, which occurred in the first year ACHAP came to Botswana.

**The ARV Team**

Here I will examine the creation of the ARV Team as a hybrid institution at the interface of ACHAP and the Ministry of Health. The ARV Team was assembled in early 2002. It was a Ministry of Health unit in charge of creating and supervising Botswana’s new system of HIV clinical care including drug therapy. The ARV Team was supervised by a high-level career bureaucrat-physician in the Ministry of Health, Dr. Mezonde. He reported to the Minister of Health and a National AIDS Committee, which included the President. Dr. Mezonde and the project leader of ACHAP, Dr. de Korte, agreed to fill the positions in the ARV Team with experts who had international experience working for aid organizations or in health consulting.

Within the early ARV Team, there was no clear boundary between the state health care system and international health experts. This boundary was temporarily erased to produce a new bureaucratic system and new state services. ACHAP and the Ministry of

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107 Personal experiences while intern at ACHAP, June-August 2002

108 Meeting Minutes, Meeting on Proposed Structure of Implementation Team for Anti-Retroviral Therapy (ART) Launch in Botswana, August 10, 2001; Meeting Minutes, Meeting to brief PS: Health, Local Government and Finance by the Structure Committee, August 14, 2001.

109 Interview with P. Mezonde, Director of Health Services, Ministry of Health, Gaborone, August 2, 2004.
Health created the ARV Team as an institution that could function at all levels—international, national, local—and in different types of bureaucratic and international health policy arenas. From 2002 to 2004, the period examined here, ARV Team members were responsible for everything from handling the threat of nurses' strikes over HIV clinic workload to presenting the project's progress at international conferences. Later the ARV Team would become less a hybrid organization of blended international health policy and national government space, and move toward becoming an ordinary part of the Ministry of Health. Experts, at first foreigners with experience in international public health, facilitated social change from within this hybrid space. But once changes had been made, the space became assimilated again into the health bureaucracy. Positions formerly held by international health experts were filled by citizens who had worked for the government health care system for years, either at the national level or in management at one of the hospitals. This process replaced outsiders with insiders.\footnote{Observations and conversations with ARV Team, January 30-February 3, 2004.}

The bureaucratic location of the ARV Team, meaning where it belonged in the hierarchy of government agencies, was not a foregone conclusion when it was created in 2001. As I have mentioned, multiple options were discussed.\footnote{Meeting Minutes, Meeting on Proposed Structure of Implementation Team for Anti-Retroviral Therapy (ART) Launch in Botswana, August 10, 2001; Meeting Minutes, Meeting to brief PS: Health, Local Government and Finance by the Structure Committee, August 14, 2001.} The ARV Team was ultimately placed under the supervision of the highest ranking career bureaucrat in the Ministry of Health, who reported to a National AIDS Committee that included the Minister of Health and the President. It was a difficult decision and one that had consequences for how HIV drug therapy was provided in Botswana. At a Ministry of
Health meeting, members laid out in detail the pros and cons of each choice of bureaucratic location for the ARV Team. For example, the ARV Team could have been located within NACA (the National AIDS Coordinating Agency). This would have put the ARV Team closer to the president's ear since the head of NACA reported to the president. But it would have also put the ARV Team within an organization that did not provide any health care. A location under NACA would have increased the ARV Team's ability to change the bureaucracy at the national level, since the president had the ability to change national bureaucracy, but it would have reduced the ARV Team's ability to create a new national system of HIV clinical care.¹¹²

Because of its bureaucratic location within the Ministry of Health, the national ARV Team was aligned with the hospital-based clinical care system in Botswana. The job of the early ARV Team was to create a clinical care system to deliver HIV drug therapy. Put another way, the ARV Team's job was to create the ARV program. First, HIV clinics were built in the largest cities where referral hospitals were located and then later at the district level and at general hospitals. This process was called the "roll-out." Partly because of its location in the Ministry of Health, which provided health services in the hospitals, the ARV program was designed as a vertically integrated system of hospital-based HIV clinics.¹¹³ Once an HIV clinic was built in a hospital, it was supervised by the head of the hospital, called the Chief Medical Officer, or CMO. The CMO, or his delegated physician, took on an additional role as ARV manager. ARV

¹¹² Meeting Minutes, Meeting on Proposed Structure of Implementation Team for Anti-Retroviral Therapy (ART) Launch in Botswana, August 10, 2001; Meeting Minutes, Meeting to brief PS: Health, Local Government and Finance by the Structure Committee, August 14, 2001.
managers met together regularly with the ARV Team and Dr. Mezonde, the Ministry of Health official supervising the ARV Team. Dr. Mezonde in turn reported to the Minister of Health who in turn reported to the President. The consequence of this vertical integration for the operations of the HIV clinics will be discussed in later chapters. This section instead focuses on how the ARV Team emerged as result of the relationship between ACHAP and the Ministry of Health.

The physical location of the ARV Team also reflected its hybrid nature. The ARV Team was first located on the same floor as ACHAP and across the street from the Ministry of Health. This location allowed team members, most of whom were seconded from ACHAP, to literally go back and forth between the two organizations. It was often difficult to tell who worked for which organization, so constant was consultation between them. However, by 2003 the ARV Team had its own location on the Main Mall, and ACHAP had moved several kilometers away from the government headquarters. In addition, ACHAP had hired a new project leader, a Motswana woman with extensive experience working for Debswana’s HIV prevention and treatment program. In 2003, the ARV Team no longer showed up at ACHAP’s offices daily or even weekly, although their interactions with Dr. Mezonde, still supervisor of the program at the Ministry of Health, remained regular.

Negotiations over who should work for the ARV Team were the first step in the partnership between ACHAP and the Ministry of Health, and these negotiations were

114 Meeting Minutes, Meeting on Proposed Structure of Implementation Team for Anti-Retroviral Therapy (ART) Launch in Botswana, August 10, 2001; Meeting Minutes, Meeting to brief PS: Health, Local Government and Finance by the Structure Committee, August 14, 2001.
fraught with complicated considerations. ACHAP was going to pay their salaries, on a higher scale than what government bureaucrats received. The Ministry of Health’s Dr. Mezonde was going to be the boss of the ARV Team, running meetings with team members and the heads of hospitals. The ARV Team members had two institutional bosses. This meant that, before Batswana members were added to the ARV Team, it was composed of international experts chosen both for their willingness to work for the government, a priority for the Ministry of Health, and for their experience in international health, a priority for ACHAP.

The early ARV Team was a team of foreign experts placed inside the government and supervised by citizen bureaucrat-physicians. In 2002 the ARV Team members, except for their supervisor who was a national bureaucrat, all had training or experience working in Europe or the United States: some were physicians and all were foreigners. One employee had been a consultant to Merck and then consulted for ACHAP and the Ministry of Health on a health education project before being hired to work on the ARV Team. Another person, who was in charge of creating a database and handling the information systems, had worked for years for the United Nations in eastern Europe. The Clinical Training Coordinator, an important figure in the next chapter, was a physician who had done her post-graduate training in the UK. The Clinical Operations Manager, the person who coordinated clinical care in the HIV clinics, had a Harvard MD and MBA, as well as British public health training, and had worked on the McKinsey Report.115 These workers were acceptable to ACHAP because they all had relevant

115 Personal experiences while intern at ACHAP, June-August 2002.
international expertise, but they also had made a good impression on Dr. Mezonde, who had the ability to reject anyone who he thought could not work well within the Ministry of Health.\textsuperscript{116}

These international experts were hired through a process called secondment in which ACHAP paid them internationally competitive salaries while they worked within the government’s bureaucracy. This process was a common way that ACHAP collaborated with different government agencies in Botswana, not only with the Ministry of Health, and it was a common way that different Ministries collaborated with each other.\textsuperscript{117} In his testimony to the African Subcommittee of the US Senate, the Clinical Operations Manager described secondment as a key component of the Merck/Gates and Ministry of Health collaboration. He describes this close relationship in 2004:

\begin{quote}
The Merck/Gates/Botswana Partnership’s “secondment” model—through which key technical expertise has been introduced to supplement the Ministry of Health’s management capacity—has proved particularly effective. Not only does this model allow for an unprecedented level of co-responsibility, mutual monitoring and early problem identification, it allows for real skill transfer to occur between the seconded experts and local staff.\textsuperscript{118}
\end{quote}

\textsuperscript{116} Interview with P. Mezonde, Director of Health Services, Ministry of Health, Gaborone, August 2, 2004.

\textsuperscript{117} Note that in Chapter 5 secondment of Public Health Specialists was used by the Ministry of Health to liaise with the Ministry of Local Government’s rural health care system. Secondment is a bureaucratic practice within Botswana’s government not a practice introduced by international public health experts.

The Operations Manager's description of "co-responsibility" and "mutual monitoring" suggests a collaborative organization, a hybrid of government health care and corporate-funded NGO.\textsuperscript{119}

Employees working for the ARV Team were in a very different institutional context than those working for ACHAP. Not only did they have to create plans that met with the approval of both the Ministry of Health and ACHAP; they also had to deal with the problems of individual hospitals and meet the expectations of the international community of HIV experts. Like other HIV experts in Botswana, members of the ARV Team in Botswana went to the International AIDS Conference in 2002 in Barcelona and in 2004 in Bangkok.\textsuperscript{120} However, unlike most of their colleagues who worked in Botswana, they were familiar with the HIV clinics outside of the capital city. Other foreign experts in Botswana did not combine such disparate roles. To have an active role at international conferences, in the national government, and to be familiar with clinical care outside the capital city were not experiences in combination shared by other foreign experts. The ARV Team members could move from local to international and back again because they were situated in a hybrid institution and not isolated in an enclave. By learning how to present their goals and accomplishments to individual heads of hospitals, national bureaucratic leaders, and ACHAP funders, they moved among social spaces, each of which had its own language, expectations and understanding of HIV clinical care.

\textsuperscript{119} Through his less formal interactions with me, Ernest Darkoh, the Operations Manager of the ARV Team, influenced the direction my analysis has taken, even though its final form remains my own. His descriptions of the complicated relationships he had negotiated between international health networks and local clinical care formed the basis of my conception of hybrid bureaucrat-expert organizations and projects as embodied in the HIV drug therapy program of Botswana.

\textsuperscript{120} Observations with ARV Team, January 30-February 3, 2004. Personal experiences while intern at ACHAP, June-August 2002.
In the next chapter, I explore this versatility further when I contrast the clinical training provided by the ARV Team’s clinical preceptors with that of the Botswana-Harvard Partnership KITSO program.

Operations Manager Ernest Darkoh, who was raised in Africa, of West African descent and an American trained doctor, was the rare example of someone who was known at the international level and the hospital level. He spoke at the U.S. Senate hearing quoted above; he presented at International AIDS Conferences; and he was one of the public health heroes described in the PBS special, and book of the same name, Rx for Survival. Although the Minister of Health was the most important representative of the ARV program at the International AIDS Conferences, ACHAP and the Ministry of Health trusted Dr. Darkoh to represent the program to the public. In addition, he was responsible for the creation of new HIV clinics throughout the hospital system. He, sometimes accompanied by other members of the ARV Team, met multiple times with hospital staff at every hospital in Botswana, and he also attended meetings of the ARV site managers. Only members of the ARV Team had this position of dual authority—authority at hospitals to coordinate the creation of new HIV clinics and authority at international AIDS conferences to represent both parties involved in creating Botswana’s HIV drug therapy program. The secondment process created this type of unusual position and person, one capable of functioning within national government and within international HIV policy circles.

The early ARV Team was special, and this construction of a hybrid bureaucrat-international expert organization was meant to be temporary, just as ACHAP was meant to be temporary. The idea that they were hired temporarily, not permanently, was made very clear to the first expatriate ARV Team members. As mentioned in Chapter 1, expatriates in Botswana generally had a hard time securing long-term visas, and the Clinical Operations Manager never secured more than a six-month visa from the government of Botswana. As the ARV Team became a permanent fixture of the Ministry of Health, Batswana bureaucrats, local people with experience in Botswana's health care system, were added to the team over the course of 2003 and 2004. These people were meant to replace the original seconded members of the ARV Team, although in practice locals and internationals often worked side by side. In its conception, the ARV Team was an instrument of social change, and thus its hybridity was temporary. Once the HIV clinics were established, the boundary between bureaucratic state services and international health policy experts was re instituted.

Also an example of the crossover effect, HIV resource centers were another project that breached the boundary between the bureaucratic space outside the capital city and ACHAP's international health policy space inside it. Unlike the ARV Team, which had multiple international experts collected within the Ministry of Health, the resource centers were the result of one person, here called Mr. Motsumi, who crossed back and forth, from capital city to countryside, in order to build these HIV resource centers. Unlike the members of the ARV Team, Mr. Motsumi was located at ACHAP, not within

122 Personal experiences while intern at ACHAP, June-August 2002; Hilts, Rx for Survival, (2005)
the hybrid space of the ARV Team. As will be discussed next, his project was a success, but because he was a person who crossed boundaries that his boss did not, Mr. Motsumi was not successful at gaining recognition for his work.

The HIV Resource Centers, ACHAP's Hybrid Project

The building of HIV/AIDS resource centers with ACHAP money was an important step in making HIV drug therapy available outside the capital city of Gaborone. Before HIV drug therapy became available at the hospitals, these centers were established as places where patients with HIV could find social services and health education materials. Resource centers would house a social worker, or multiple social workers, and someone to distribute health education resources—mostly paper pamphlets published by the Ministry of Health on HIV and AIDS. The resource centers would include a library, with shelves and desks, and offices for the social workers to meet privately with patients in need of social services. 124

The offices were built with sinks, like exam rooms, because ACHAP planned for the physical structures of the resource centers to become the HIV clinics. Without these structures, the HIV drug therapy program would not have been as successful, since most hospitals had space shortages or limited exam rooms for outpatient care. The space these structures provided was important, but the way that ACHAP established these resource

124 Personal experiences while intern at ACHAP, June-August 2002.
centers also encouraged management staff—doctors, nurses, social workers—to think about how they would manage an HIV clinic in their hospital.\textsuperscript{125}

One major barrier to creating the ARV program was finding space for the HIV clinics. At most hospitals, outpatient services, which were the walk-in clinics for all problems, were located in an outbuilding with a few rooms, and at many hospitals these clinics were overflowing with waiting patients. There was no space to treat the hundreds of new HIV patients or to conduct the rigorous new patient screening process. This shortage of space was compounded by the fact that in 2002 many of Botswana’s most heavily used hospitals had new buildings under construction or ones in advanced stages of planning. Government approval for building was extremely bureaucratic and not designed to respond as quickly as new HIV clinics were needed.

A hospital site that was going to be demolished in the next five years was not going to receive approval for new buildings. At the same time, a new hospital might be under construction for five to ten years. Building HIV clinics on the sites of the new hospitals, which were not adjacent to the current ones, would make the HIV clinics inaccessible while major construction was underway. In the busiest hospitals, there was no space for a new outpatient clinic, but at the same time, precisely because they were so busy, these sites were great locations for HIV clinics. This type of almost impossible bureaucratic difficulty, which was also a specific problem the McKinsey Report had highlighted, was exactly the kind of barrier that ACHAP was interested in removing by

\textsuperscript{125} Personal experiences while intern at ACHAP, June-August 2002.
having a separately funded project to create resource centers, later HIV clinics, on the
ground of working hospitals.\textsuperscript{126}

In many ways, building the physical plant of the HIV clinics was a good project
for ACHAP, which had the money to build on these sites. Not only did brick and mortar
create a tangible record of ACHAP's contribution to the ARV program; buildings created
a public relations opportunity. When a Merck executive visited in 2002, the project leader
of ACHAP was pleased to show him the newly built resource center and to take
advantage of the photo-op. What ACHAP did not have a lot of experience doing was the
bureaucratic grunt work involved with building on government land. Even if existing
structures could be renovated as HIV clinics, blueprints and sites had to be approved by
two different government departments, one dealing with architecture and building and the
other with electrical supply. ACHAP was fortunate to have an employee, Oscar Motsumi,
who was patient and determined enough to do the necessary bureaucratic negotiations,
both at the government offices in charge of building and at the multiple building sites at
hospitals all over the country.\textsuperscript{127}

ACHAP and its employees were not the only actors important to creating these
resource centers. The CMOs in charge of the hospitals had to be persuaded to assist in the
process. One of the difficulties with enlisting the help of CMOs was that they were
incredibly busy. The ideal candidates for ACHAP's buildings were the busiest and most
crowded hospitals. A new space for health care and services, which would focus on HIV

\textsuperscript{127} At ACHAP, I was Mr. Motsumi's intern in 2002 when he was in the final stretch of creating this project.
but was not exclusive to HIV, had an appeal to CMOs that the space for a future HIV clinic would not have had. In 2002, it was not clear when HIV clinics outside of the capital would actually open. At many hospitals, pharmacists had to be hired, and there were many other details yet to be worked out. From the perspective of a CMO, HIV clinics were not only extra work; they constituted a new service, one to be introduced at a time when it was hard enough for hospitals to provide existing services. Since lack of space was a constant problem, a resource center would provide extra space for existing social services, including office space for the hospitals social workers. In addition, this space came with the promise of extra money for specific needs such as computers or money to hire a librarian or HIV educational specialist. In these ways, a resource center offered a solution to some of the problems that CMOs already faced.

Besides the difficult negotiations with the government offices in Gaborone over building permits, another possible barrier was that the CMOs and other hospital staff would view a resource center as a project foisted on them by outsiders, i.e. foreign public health specialists from the capital city. In 2002, the ARV Team was just starting to visit the hospitals where future HIV clinics would be located. The ARV program itself was new, and because the Ministry of Health-based ARV Team handled the roll-out, most hospital staff had never met anyone who worked for ACHAP. Government employees expected outsiders, whether researchers or project leaders, to go through proper channels. This meant being vetted by national bureaucrats at the Ministry of Health and consulting with the hospital staff that would be affected by the change. Because the HIV resource centers were being built by ACHAP and not by the ARV Team, Mr. Motsumi needed to
show to hospital staff that he had coordinated his work with the Ministry of Health officials in charge of the hospitals.

Mr. Motsumi put extra effort into meeting these concerns, which may not have been immediately evident to an ACHAP employee not from Botswana. He borrowed the model and name for the resource centers from Lobatse Hospital, where the CMO had created one for his social workers. Although some of the technology at the Lobatse Resource Center was paid for by UNDP (the United Nations Development Program), it was designed and staffed by government hospital staff. The CMOs perceived the model as one designed by a colleague, someone they knew and respected.128

Another way that Mr. Motsumi avoided resistance to this ACHAP project was by having a workshop with hospital staff. This workshop was a national workshop held at a hotel on the Main Mall. CMOs were invited along with a team of hospital staff of their own choosing. The CMO from Lobatse’s Athlone Hospital, who was the designer of the original resource center and a featured speaker at the workshop, affirmed that the model for the resource centers was a local one. The workshop was also an opportunity to show that Mr. Motsumi had the support of the bureaucrats in the Ministry of Health who supervised the hospital system. Mr. Motsumi had identified and consulted the bureaucrat responsible for supervising hospital operations. I, as an ACHAP intern and his assistant, invited this bureaucrat to attend and carefully accommodated her schedule so that the hospital staff could see that we had taken the proper steps.129 By choosing a model developed locally and by showing that the Ministry of Health approved of this ACHAP

128 Conversations with CMO, HIV Clinic, Mahalapye, (March 22-April 28, 2004)
129 Personal experiences while intern at ACHAP, June-August 2002
Mr. Motsumi avoided resistance that might have attended a model viewed as externally imposed. The workshop served another function; it allowed for a consultation process that would help hospital staff envision how HIV clinics would function at their hospitals. Time in the schedule was dedicated to discussing how resource centers and HIV clinics would fit into the hospital structure as a whole. CMOs were invited via fax and encouraged by myself and Mr. Motsumi on the phone, to bring along a team of health care providers who would be involved in HIV clinical care. Individual CMOs chose different staff members to accompany them: there were the social workers who would be occupying the resource centers before they became HIV clinics; the Matrons who were the heads of nursing at hospitals; and the nurses who were interested in working at the HIV clinic. By inviting the CMOs to create an HIV-focused team, the workshop helped doctors, nurses and social workers identify a new way of collaborating around HIV services. Further, it helped them imagine how to create a bureaucratic space for outpatient HIV patient care. Afternoon small-group sessions at the workshop helped hospital workers plan how the HIV clinic’s management would function and enrolled them in the ARV Team’s goals of providing HIV drug therapy. The resource centers laid the foundation for HIV clinics—both literally and figuratively—by creating for them a bureaucratic space within the hospitals.

The importance of the resource centers was not recognized at ACHAP because the project leader, an outsider and international expert in public health management, had

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130 Personal experiences while intern at ACHAP, June-August 2002.
little interactions with the doctors in charge of the hospitals, who valued these centers as precursors to their HIV clinics. I myself did not fully realize the importance of the resource centers until almost two years later in 2003-04 when I saw that many of the resource centers served as transitional sites for the HIV clinics. At these sites CMOs welcomed my association with the resource centers and with Mr. Motsumi, but they often seemed unimpressed by the fact that I had worked for ACHAP.\footnote{Conversations with CMO, HIV Clinic, Mahalapye, March 22-April 28, 2004.}

Although a completed HIV resource center was featured in an ACHAP public relations photo shoot in 2002, Mr. Motsumi's success in creating the resource centers did not translate into a promotion or more prestige within ACHAP. In part, Mr. Motsumi's position within ACHAP was limited because of the very things that made him so effective at creating the resource centers. His willingness to leave the capital for long periods made him vulnerable as an ACHAP employee. Government services outside of the capital city were less familiar than the national government's offices in the capital city. Mr. Motsumi's work outside of the capital was in unknown territory. Because of his comparative isolation, ACHAP's project leader had no way of determining from his own contacts what Mr. Motsumi was doing, nor could he know the enormous amount of effort that Mr. Motsumi put into his work outside of the capital city.

Another factor that may have made it easy to overlook Mr. Motsumi contributions was the fact that he was a young, locally-trained Motswana and not an internationally trained 'expert' or a former bureaucrat. At ACHAP, the managers all had one or more qualifications that Mr. Motsumi did not have; either an advanced degree from outside the
country and experience in international public health, or experience working as a bureaucrat for one of the ministries in Botswana. Mr. Motsumi's Masters of Social Work from the University of Botswana was not valued as highly as a degree from an American, European, or South African university, and he had no experience in public health work outside of Botswana. Moreover, as a young man, he also had no experience working as a ministry bureaucrat, a position usually reserved for older Batswana who had worked many years for the government. This meant that he was decidedly junior within ACHAP. As he would not be able to acquire any of these qualifications while working for ACHAP, he had limited opportunity for moving up in the organization. It is not surprising, therefore, that he found another job. Mr. Motsumi was an insider and a local, which was useful when creating projects. Yet I believe it was these very same traits that worked against him at an international health donor organization such as ACHAP was in 2002. 132

As Mr. Motsumi's story shows, an ACHAP worker with a project outside the capital city risked his work being minimized by his employer. International public health policy workers, like the project leader at ACHAP, were unable to sufficiently evaluate and value of work that went on beyond the capital city. This difficulty with work outside the capital city was a result of occupying a social space that enabled them to create change in government systems, but restricted them to relationships with others within national government in the capital city. There was a boundary between international health experts and the state-based service networks outside of the capital city.

Institutional location made all the difference. ARV Team experts were located inside the Ministry of Health in a hybrid space where expanding state services across the country would have been recognized as an important goal. Instead, Mr. Motsumi was located inside of ACHAP when it was still run by international experts who were less able to see or understand the value of work that went on beyond the capital city. As a result, ACHAP workers were restricted to relationships with national-level government bureaucrats. This was a result of their bounded social space, an outsider enclave for international aid workers. Besides the ARV Team, there was another hybrid space that included state services and international health experts, but like ACHAP it was located in the capital city. This special social space was inside of Princess Marina Hospital.

Hybrid Social Space at Princess Marina Hospital

The last origin story for the ARV program told here is the story of the creation of the first HIV clinic in Botswana, the IDCC (Infectious Disease Care Clinic), which was located at the capital city’s government referral hospital, Princess Marina Hospital. Although the ARV Team was responsible for creating and supervising the HIV clinics in all of the other hospitals in Botswana, the IDCC was created by doctors with the Botswana-Harvard Partnership and the University of Pennsylvania. This circumstance makes the IDCC different from the other HIV clinics in Botswana, because it was not started, nor directly supervised, by the ARV Team.

133 All HIV clinics in Botswana could be called IDCCs and they were named after this original one at Princess Marina Hospital. For the sake of simplicity and clarity I call the HIV clinics in Botswana HIV clinics, but here the name is mentioned because the ‘Princess Marina IDCC’ is its own entity, named by one of the Penn doctors, and known widely by that name amongst international HIV experts with experience in Botswana.
While the ARV Team was still being assembled in 2001, a number of doctors at the Botswana Harvard Partnership started a research trial that with the help of the University of Pennsylvania's HIV specialists would undergo metamorphosis into the Princess Marina Hospital's HIV clinic, also named the IDCC. The Botswana Harvard Partnership had originally hired staff and asked for space for a research trial on affordable drugs for African patients with HIV. However, when researchers experienced a delay getting research approval from Harvard, they decided instead to use the staff of several nurses and the space to screen patients for HIV drug therapy. Harvard's research coordinator, an American doctor with basic medical training, worked as the full-time clinic doctor. A number of rotating HIV and infectious disease specialist doctors from Penn joined her in planning and running the IDCC.\(^{134}\)

While the Botswana Harvard Partnership and Penn had taken this initiative, the government was still putting together the ARV Team, so drug therapy was not available at first. The IDCC started screening patients to see if they would qualify for HIV drug therapy when it later became available. Harvard and Penn doctors, along with their nurse, tested patients for HIV, gave them a chest X-ray, provided TB prophylaxis or treatment, and measured HIV-positive patients' viral load and CD4 counts. (CD4 counts are a measure of patients' health and ability to resist the virus.) If the CD4 count was below 200 or if the patient had an illness associated with AIDS, then the virus was attacking the patient's immune system, making them vulnerable to opportunistic infections. These vulnerable patients who qualified for HIV drug therapy went onto a waiting list. The

\(^{134}\) Interview with R. R. MacGregor, University of Pennsylvania, Philadelphia, June 8, 2008.
Harvard and Penn doctors sent very sick patients to a private practitioner who provided subsidized care and who found ways to defray the cost of HIV drug therapy. Even once formed, the ARV Team had to overcome the usual bureaucratic hurdles of creating space, new staff positions, and systems of testing and drug distribution throughout the rest of the health care system and as a result, the IDCC operated for almost a year before any other HIV clinic opened.

Over time, the IDCC, like the ARV Team, transitioned from a staff of foreign experts to a staff of citizens. More government employees of the hospital were assigned to it, including nurses and social workers reassigned from elsewhere in the hospital. As one infectious disease doctor from the University of Pennsylvania phrased it, he and his colleagues wanted to make themselves “obsolete.” Two fulltime Batswana doctors with impressive international credentials were found to replace the foreign doctors. To maintain appropriate salaries for these citizen doctors, both of whom had extensive American training, ACHAP had to provide the salaries and second them to the IDCC. New space was found for the growing patient load. By 2004, the IDCC was not run by foreign doctors. The American doctor originally hired as a research coordinator by Harvard stayed on to treat patients, but she was not in charge. Rather, she collaborated with the citizen doctors.

As the IDCC developed at Princess Marina, the national ARV program expanded and the ARV Team focused on creating HIV clinics in the other three referral hospitals.

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ensuring that they had the space, staff, and drugs needed for HIV drug therapy. Since these projects developed parallel to each other, the IDCC influenced some aspects of other HIV clinics, while still remaining different from all of the others. Clinical care protocols for HIV drug therapy were the IDCC's most significant contribution to the other HIV clinics. The Harvard and Penn doctors who ran the clinic focused on developing models for clinical care. The IDCC's doctors, along with its staff of nurses and social workers, developed drug therapy and adherence counseling protocols used in HIV clinics throughout the health care system. The ways that the IDCC doctors managed HIV patient care were also influential because many doctors in government hospitals were given leave to observe at the IDCC as part of clinical training for HIV drug therapy.

Doctors’ work at the IDCC became a model of patient care, both for its combination of clear protocols, written at a time when the ARV program was starting, and for its being the first working HIV clinic in Botswana where other doctors came to observe.

The clinical procedures developed at the IDCC served as the model for HIV patient care throughout the country, but the IDCC itself could not serve as a bureaucratic model for how to situate an HIV clinic within hospital. Unlike the HIV clinics in the other government hospitals, the IDCC occurred by serendipity resulting from its hospital's unusual relationship with the Botswana Harvard Partnership and its new relationship with Penn. The HIV clinics that the ARV Team created in the rest of the health care system were designed to function within the existing hospital system, often

136 I will discuss the complicated relationship between the ARV Team and the Botswana Harvard Partnership in more detail in the next chapter, where I examine the differences between Harvard's and the ARV Team's clinical training programs.
using existing hospital staff supplemented and assisted by international staff and money in very limited ways. As measured in funds and personnel, most HIV clinics in Botswana were staffed by government paid employees, but built with ACHAP money and with drugs and expert supervision paid by ACHAP. By contrast, at its beginning the IDCC was staffed by Penn and Harvard doctors and a nurse paid by Harvard money.

Even when the IDCC was no longer run by foreign experts from Harvard and Penn, it was still an unusual HIV clinic compared to others throughout the country. The citizen doctors at the IDCC, who made the American HIV specialists obsolete, were different from the doctors who staffed the HIV clinics in other hospitals. At other hospitals, foreign African doctors with African, European or Russian training rotated through both the wards and the HIV Clinic. At the IDCC the Batswana doctors were American trained with extensive post-graduate education, had never before worked in the government's health care system, and were paid with international money. Furthermore, they did not work outside of the IDCC. Even at the ARV Team, the citizens who replaced the seconded foreign public health experts had worked in the bureaucratic health care system and were paid on the usual scale. In contrast, the IDCC doctors had more post-graduate training in infectious disease and less experience in the state bureaucracy. They were a special combination—foreign-trained specialists and native-born citizens—a combination particular to clinical care at the IDCC and reflective of the peculiar quality of clinical care at Princess Marina Hospital.

The physician heads of the hospitals (CMOs) elsewhere had a more central role in creating their HIV clinics than the CMO of Princess Marina Hospital had in creating the
IDCC. In general, the HIV clinics were created by the CMO who chose staff from the rest of the hospital and reallocated them to operate the HIV clinic. Both Princess Marina Hospital’s IDCC and other hospitals’ HIV clinics were produced in an environment of preexisting relationships, rivalries, and resources. Unlike at Princess Marina Hospital, other hospitals did not have international health experts onsite. The IDCC was a bureaucratic anomaly, a product of Princess Marina Hospital’s special hybridity. The technical details of clinical care may have been patterned on those of the IDCC, but outside Princess Marina Hospital a different bureaucratic model for HIV clinics emerged from the ARV Team’s site visits and the resource center workshop.

To understand how the IDCC was a product of a hospital environment where Botswana’s government and American research universities provided clinical care side-by-side, we need to understand more about Princess Marina Hospital. Princess Marina Hospital is run by the Ministry of Health, but it is also the major site of international health collaborations between American universities and the Ministry of Health. The Botswana Harvard Partnership, in existence since 1996, had a clinical and research laboratory building on the grounds of Princess Marina Hospital built in 2001. Doctors from Penn, after they started assisting in the Harvard-run IDCC, also began to supplement the government doctors in the inpatient wards at Princess Marina Hospital. In 2003, a fulltime Penn physician supervised several residents, doctors in training, who rotated in from the Hospital of the University of Pennsylvania. Baylor School of Medicine also had a pediatric HIV clinic on the grounds of Princess Marina Hospital that started providing services in 2003. These collaborations between the state of Botswana
and American universities created a hybrid space at Princess Marina Hospital that was like the ARV Team’s, but subtly different. The ARV Team’s experts catalyzed bureaucratic change throughout the entire health care system, but the experts at the Botswana Harvard Partnership and other bureaucrat-expert hybrids of Princess Marina Hospital were localized to the capital city.

Most of the services at Princess Marina Hospital were not provided with international money or by international experts. As in other hospitals, the nurses, social workers, laboratory and pharmacy workers, and most doctors were government employees. HIV clinical care was particularly hybrid because it was the intense focus of international health initiatives, but HIV clinical care also fostered continuing relationships that were not always focused on HIV. The University of Pennsylvania physicians, including rotating residents and a fulltime Penn-employed physician-in-charge, provided medical care in Princess Marina Hospitals general medical wards. Some of the Baylor staff also provided clinical care outside of the Baylor pediatric HIV clinic in the pediatric inpatient wards. As many international projects as it had in place, Princess Marina Hospital was still a government hospital, albeit one where the boundaries between international health and state services were blurred.

I am not claiming that the special character of Princess Marina Hospital was due solely to its being the site of international health collaborations. It was also the flagship hospital in Botswana, located in the capital city, and it was equipped with technology and services unavailable elsewhere. Princess Marina Hospital had a CT imaging machine and eye surgery, for example, which were available nowhere else. Princess Marina Hospital
was also the final referral hospital in the network. When doctors could not help someone in a hospital elsewhere, they sent that person to Princess Marina Hospital. For instance, Princess Marina Hospital was the last hospital to run out of blood for transfusions, so it received anemic patients transferred from any other hospital with a blood shortage. (Anemia was a common side effect of a drug used in one version of triple-drug HIV therapy.) Princess Marina Hospital would have been the epicenter of government health care and uniquely appointed even without being the recipient of international resources and the site of hybrid collaborations.

The oldest partnership at the hospital between an American university and Botswana’s Ministry of Health was the Botswana Harvard Partnership, which began in 1996 as a partnership between the Harvard AIDS Institute and the government of Botswana. By 2000, when the Merck/Gates/Botswana partnership was starting and ACHAP was still forming, the Botswana Harvard Partnership was relocating to a multi-million dollar laboratory building on the government-owned grounds of Princess Marina Hospital. Behind the rambling single-story wards and beside the multi-storied stucco administrative building was Harvard’s multi-story glass and cement laboratory building. It stood off to the side of the other buildings, which were interconnected. This building contained state-of-the-art laboratory facilities, both research and clinical, for collecting population and scientific data.

When Harvard provided services to hospitals besides Princess Marina, the Botswana Harvard Partnership employees did not spend time at those sites. For example, the blood for the HIV specific tests done by the Botswana Harvard Partnership was
brought to their laboratory facility by government couriers. Botswana Harvard Partnership laboratory scientists who were in charge some of the laboratory testing for HIV positive patients did attend national ARV program meetings, unlike the Penn doctors in Botswana who were even more isolated in the capital city. Still Harvard’s employees had little direct experience of the rest of the national health care system since blood testing was managed in the capital at the Botswana Harvard Partnership building and at ARV program national meetings led by Dr. Mezonde, the national bureaucrat in charge of the ARV program. This isolation from HIV clinics outside of the capital city was also true for KITSO, the HIV clinical training program taught by HIV experts from Harvard and Penn. For the Botswana Harvard Partnership’s clinical training program, hospital staff came to hotels or other conference facilities in Gaborone where they watched slides and listened to lectures in a classroom setting. The trainees came to the Botswana Harvard Partnership trainers, just as the blood came to the Botswana Harvard Partnership lab. The Harvard doctors, pharmacists, and laboratory scientists had little reason to leave the capital city for long.

It was this social isolation from the bureaucratic realities of providing state services that explains how in some ways Princess Marina Hospital was an enclave for foreign experts. These experts, however, were the same people generating much of the global knowledge about Botswana’s HIV epidemic. The international health enclave combined with the technical focus of biomedicine and international HIV policy networks, which will be explored more fully in the next chapter, meant that, from the vantage point
of an International AIDS Conference, many essential components of Botswana’s HIV drug therapy program were invisible.

**Conclusion**

In Princess Marina Hospital international health projects were based within a government hospital in Gaborone, but separated from the larger national health care system outside of the capital. This separation allowed the bureaucrats in the government to include internationally funded or initiated ideas, people, and methods in gradual, experimental, or limited ways as the political environment deemed possible or necessary. To create bureaucratic change at the national level the social worlds of bureaucrat and expert were combined, such as when ACHAP and the Ministry of Health created the ARV Team to build a new network of HIV clinics for a new HIV drug therapy program. This nascent state service, populated by international health experts, was initially a state bureaucrat-international expert hybrid, but then was repopulated with bureaucrats as the program became more established. Boundaries between international projects and state services were maintained by bureaucrats who decided when to incorporate international projects at the national level and when international projects would be pursued in the exceptional space of Princess Marina Hospital.

The bureaucrats who managed Botswana’s government health care system, particularly Dr. Mezonde as the acting head of the ARV program, knew both the bureaucratic management practices of the Ministry of Health and the clinical practices common in Botswana. Dr. Mezonde also had access, through his meetings with the ARV
Team and the CMOs, to information about the practice of medicine outside of the capital city inside of the hospitals and HIV clinics. His knowledge of common bureaucratic practices was important when he created the ARV Team. It was his decision that created the bureaucrat-expert hybrid examined here. But Dr. Mezonde did not present the work of the ARV Team at the International AIDS Conferences; the Operations Manager, one of the international experts, did. Perhaps this was because the Operations Manager was more familiar with the international community’s practices of public health, including conference presentations. From the vantage of the international community, bureaucrats were not central to creation of HIV clinical care in Botswana; experts were the driving force. An assessment of Botswana’s national HIV program based on observing Princess Marina Hospital’s IDCC during its early conception might have also given one the mistaken impression that a large portion of care in Botswana was provided by international experts. However, this chapter is built from a point-of-view inside of the Ministry of Health and suggests a different story, one where bureaucrats are central.

Chapter 3

HIV Clinical Training in Botswana

Doctors need to learn new ways of caring for patients throughout their careers. In 2000-01, when the ARV program in Botswana was assembled, the triple drug regimen it used, HAART (Highly Active Anti-Retroviral Therapy), was less than a decade old. One of the three classes of drugs in HAART, the protease inhibitors, had only become available in the United States in 1996. HIV specialists in the United States had learned how to use these drugs through continuing medical education courses offered by their specialty groups, through reading the literature, and through clinical experience. In Botswana, doctors had less access to these sources of clinical training, and hospital staff needed to learn how to use HIV drug therapy, preferably before HIV drugs became available.

Even before the ARV Team was formed, the Botswana-Harvard Partnership was working on a clinical training program to teach hospital staff how to use HIV drug therapy. To address the need for HIV clinical training the Botswana-Harvard Partnership created KITSO (this was both the Setswana word for knowledge and stood for Knowledge, Innovation and Training Shall Overcome). KITSO had two major components. One was a curriculum based on a CD-Rom of separate PowerPoint lectures designed to be taught over several days or in a week. These lectures were designed in Boston. The second component was the Botswana-Harvard Partnership’s KITSO staff.

who organized the training programs—reserving the space, running the sessions, and
adapting the curriculum as needed. The KITSO staffer who coordinated the program had
a degree in education, and the lectures were primarily taught by HIV specialists from
Harvard and the University of Pennsylvania.¹⁴¹ Hospital staff would travel to conference
hotels or similar locations for weeklong classroom training in HIV drug therapy before
HIV drug therapy became available at their hospital.¹⁴² Doctors also had the additional
option of going to Princess Marina Hospital’s HIV clinic to learn how to manage HIV
drug therapy.¹⁴³ However, in general, KITSO was focused on classroom training.¹⁴⁴

Shortly after KITSO started, the nascent ARV Team also addressed the need for
clinical training in HIV drug therapy by creating the Clinical Preceptorship Program.
Their program had a different focus, one closely tied to the creation of HIV clinics in
Botswana’s government hospitals. The Clinical Preceptorship Program was site-based
clinical training with both a classroom and a mentoring component. The ARV Team’s
Clinical Training Coordinator was Turkish born and British-trained doctor, Aycha Riley.
Dr. Riley hired HIV specialists from Britain, the Netherlands, and the United States as
preceptors. Preceptors were experienced doctors, HIV experts with similar backgrounds
to the KISTO trainers, who taught other health practitioners about clinical care through

¹⁴¹ Observations and informal conversations at KITSO Class, Nurses Association Building, Gaborone,
¹⁴² Observations and informal conversations at KITSO Class, Nurses Association Building, Gaborone,
¹⁴³ Observations and informal conversations at KITSO Class, Nurses Association Building, Gaborone,
August 3, 2004. When a doctor was trained at the IDCC in Princess Marina it was called a “practical
training attachment.” KITSO, AIDS Training Program Updates, (September 2003).
one-on-one training. These preceptors spent six months at newly formed HIV clinics to help hospital staff learn how to provide HIV drug therapy.\textsuperscript{145}

These two programs—KITSO and the Clinical Preceptorship Program—ran side by side from 2002 to 2004. Both programs trained doctors, nurses, and laboratory and pharmacy workers. Often hospital staff had training from both programs.\textsuperscript{146} KITSO and the Clinical Preceptorship Program both started out with similar goals: they were designed to transfer the knowledge or skills of HIV specialists to hospital staff working in HIV clinics in Botswana.\textsuperscript{147} However, as these programs evolved over the course of 2003, they responded to different problems. KITSO focused on making sure that hospital staff, particularly doctors and pharmacists, had up-to-date information about HIV drug therapy.\textsuperscript{148} The Clinical Preceptorship Program evolved to address the bureaucratic problem of creating a functioning HIV clinic in a government hospital. By 2004, when the government of Botswana and ACHAP commissioned an external study of clinical training in Botswana, the external reviewers’ report and my observations noted important differences between the two programs.

Even though both programs were funded by ACHAP, these two clinical training programs were shaped by very different institutional contexts. KITSO reflected the Botswana-Harvard Partnership’s focus on universal, portable knowledge, applicable as a

\begin{itemize}
\item \textsuperscript{145} Interview with A. Riley, Clinical Training Coordinator, ARV Team, Gaborone, February 17, 2004; Observations and conversations with ARV Team, January 30-February 3, 2004; Observations at the HIV Clinic, Hukuntsi, June 27-July 2, 2004.
\end{itemize}
potential “best practice” anywhere.\textsuperscript{149} By contrast, the Clinical Preceptorship Program emphasized bureaucratic support. The Clinical Training Coordinator was more concerned with creating new HIV clinics and reorganizing existing clinical care practices within Ministry of Health hospitals.\textsuperscript{150} Both KITSO and the Clinical Preceptorship Program were successful. Each trained large numbers of HIV clinic staff with good results, but their underlying assumptions, approaches, and the consequent ways that they evaluated success and valued outcomes were radically different.\textsuperscript{151} This chapter examines how these two different training methods embodied different ideas about how to teach medical knowledge, how to prioritize types of medical knowledge, and how to assess effective clinical training.

As I discussed in Chapter 1, both international development projects and biomedical knowledge often exclude the political and social context. Thus, although the ARV Team might develop innovative and effective ways of using HIV experts to create HIV clinical care, the international health policy community evaluated clinical training as knowledge transfer, and international development as the creation of portable, universally applicable interventions. Consequently the ARV Team’s program would never gain international recognition the way that KITSO could. By defining clinical training in a technical, anti-political way, the international community made the Clinical

\textsuperscript{149} KITSO website, http://www.aids.harvard.edu/kitso


Preceptorship Program invisible or at least reduced it to a pale variation on KITSO, when really it was an entirely different intervention altogether.

**KITSO: A Portable, Reproducible, Research-Based Model**

In Botswana, KITSO used classroom training, primarily by international health experts, to teach local nurses, doctors, social workers, pharmacy technicians, and laboratory staff about HIV clinical care. Scientific and research-based knowledge was organized into one hour slide presentations taught by teachers with experience in research and clinical care in each area. This method may seem obvious and useful, but here I ask: Why this method? What did it offer the trainers, who were local doctors and educators from Harvard and Penn? What did it offer the funding agency, ACHAP? What did it offer the trainees who were usually government-employed staff at hospital-based HIV clinics?

I find that the knowledge transfer model used in Botswana reflected the teachers' understandings about what constituted important medical knowledge, who possessed it, and who could teach it. Underpinning the KITSO program was the idea that scientific, universal, research-based knowledge ensured good clinical care. Institutional values reinforced this idea. Research universities like Harvard already valued this particular type of knowledge and training. Reinforcing the conception that scientific, universal knowledge should be used was the fact that basing KITSO on this type of knowledge would make it portable and reproducible. It could be used anywhere in the world, and its success (i.e. whether or not knowledge was transferred) could be easily measured by
multiple-choice exams. This portability, universal applicability, and measurability were all highly valued by the international public health community, including NGO donors like ACHAP and its contributors, the Merck and Gates Foundations.

While KITSO was a success by the measures of the Botswana-Harvard Partnership staff who worked on it, trainees sometimes felt ambivalent about their training. This discrepancy between the perceptions of the trainers and trainees pointed to the ways in which knowledge transfer could not address some of the major problems encountered by HIV clinic staff. While KITSO provided a useful service, it was premised on a very narrow understanding of what types of knowledge are essential for good clinical care. By defining the relevant knowledge for clinical training as scientific and portable knowledge, Botswana-Harvard Partnership staff had made it difficult for KITSO to assess and address many of the clinical training needs of Botswana’s HIV drug therapy program. Another method of clinical training emerged to address these needs, the ARV Team’s the Clinical Preceptorship Program, which will be discussed later.

KITSO was a lecture series given in slide format. For the first module, the teaching sessions lasted a week. Classes were conducted in a setting similar to that of a professional conference—either in lecture rooms rented at hotels or in other places with the capacity for PowerPoint projection. Trainees were primarily government hospital

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154 KITSO, AIDS Training Program, CD Rom, July 2002
employees, such as social workers, laboratory technicians, and nurses, and doctors. Hospital staff would obtain release from their normal duties and travel to the site of training. The class was often the first encounter they had with HIV drug therapy.

To a large extent, KITSO was developed and taught by American doctors affiliated with Harvard University. They developed the first module, and, along with others, taught it. The topics and some content were first developed in Boston. The content was then adapted by the team of doctors slated to teach the class and by a Botswana-Harvard Partnership professional health educator hired to administer the program in Botswana. Four doctors and one pharmacist were the core of the initial teaching staff. Three of them worked for the Botswana-Harvard Partnership, and one was an exceptional South African doctor who had started treating patients for HIV in her own private, mostly charity clinic. Many of the lectures were co-taught by a physician from Botswana-Harvard Partnership and another institution, including two co-trainers who worked for the Ministry of Health. In general KITSO trainers were doctors, mostly American, although there were a few pharmacists. No classes were taught by nurses or social workers.

The content of the lectures reflected the interests and values of the trainers more than that of the trainees. In the first version of the first module, the content of the KITSO lectures focused very narrowly on physician and pharmacist management of patients on

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156 Observations and conversations with ARV Team, January 30-February 3, 2004; Observations and informal conversations with trainer, assistant coordinator, and trainees at KITSO Class, Nurses Association Building, Gaborone, August 3, 2004  
HIV drug therapy. The course opened with discussion of how the virus works on a cellular and biological level. It moved on to discuss laboratory determination of HIV, clinical signs and symptoms, drug-drug interactions, adverse effects, opportunistic infections, and drug resistance. The slides focused on the technical aspects of HIV drug therapy, most addressed virology or pharmacology. Given below are the titles of the twelve courses taught in 2002 in the first module:

1. Virologic and Immunologic Concepts in HIV Disease
2. Determining HIV Infection and Disease Progression
3. Principles of ARVT
4. Overview of and Resource Requirements of ARVT in Botswana
5. Drug-Drug Interactions in ARVT
6. Adverse Effects of ARV Drugs
7. Drug Resistance
8. Adherence in ARVT
9. Opportunistic Infections
9a. Some Common Paedriatic Opportunistic Infections & Conditions
10. ARV Dosing and Pediatric Specific Issues [sic]
10a. MTCT and its Prevention
11. Postexposure Prophylaxis
12. The Interaction between TB and HIV in Botswana

Technical aspects covered included how to follow patient test results to determine good drug response, how to identify drug side effects and drug-to-drug interactions, and how to treat opportunistic infections. Only the lectures on adherence and resource requirements focused on problems of primary concern to nurses and social workers (or managers, such as a hospital’s head nurse, the Matron, or head doctor, the Chief Medical Officer). For three-quarters of the other lectures, the topics suggest that this course was designed by

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158 In most documents from Botswana the spelling is British, but there is some American spelling used.
159 KITSO AIDS Training Program, CD Rom, July 2002.
and for doctors and pharmacists, given its heavy emphasis on the technical aspects rather than the managerial aspects of HIV drug therapy.\textsuperscript{160}

The adherence lecture also emphasized public health research performed in the United States. Even though adherence counseling in Botswana was conducted in Setswana and adherence depended on local and social factors, American based research was presented as universally applicable. The lecturer presented, in detail, adherence rates and barriers to adherence in the US. This is not to say that the lecture did not include practical suggestions, but these, too, were derived from American research on adherence. For example, the lecture suggested screening patients to determine whether they had sufficient social support. However, there were few details about what would constitute good social support for Batswana or how to screen for this.\textsuperscript{161} Perhaps the trainers felt the focus of this lecture could not be on Batswana due to a lack of research on adherence in Botswana. Later the Botswana-Harvard Partnership would be centrally involved in research on this very topic of adherence rates in Botswana.\textsuperscript{162} Even when social context was central to the topic in question, the content of these lectures reflected a strong bias towards research-based knowledge and a belief in its universal applicability.

Similarly, the lecture that addressed tuberculosis (TB) co-infection with HIV in Botswana was an epidemiological study appropriate for a research workshop or conference anywhere in the world. It featured data demonstrating that tuberculosis was a major co-infection found in HIV-positive persons in Botswana, but it did not cover how

\textsuperscript{160} KITSO AIDS Training Program, CD Rom, July 2002.
\textsuperscript{161} KITSO AIDS Training Program, CD Rom, July 2002.
\textsuperscript{162} Weiser, Sheri et al., “Barriers to Antiretroviral Adherence for Patients Living with HIV Infection and AIDS in Botswana,” \textit{JAIDS} (Nov 1, 2003), 281-288.
to manage tuberculosis co-infection in the setting of HIV drug therapy or how to review the current medical care provided to tuberculosis infected patients in Botswana. In general, the slides focused on universal scientific knowledge about HIV and drug therapy. This local epidemiological work contributed to the international pool of knowledge about tuberculosis as an HIV co-infection, yet it did not provide a guideline for how to care for patients in Botswana with tuberculosis and HIV. One exception was the lecture “Overview of and Resource Requirements of ARVT in Botswana,” which did focus on the local context of care. This lecture was also the only one taught and developed by an employee of the Ministry of Health and not by the Botswana-Harvard Partnership. It covered in detail the bureaucratic resources needed to provide HIV clinical care in Botswana. By contrast, all of the other lectures could have been presented to a medical audience anywhere else in the world.

KITSO instructors did not leave out references to the local health care system because they were ignorant about patient care in Botswana. Many of them had treated patients in Botswana for years. Before advanced HIV therapy was available, Harvard doctors, some of whom taught for KITSO, had been trying to find a cheap, widely available, and already approved drug to extend the lives of patients with HIV. Still, the slides focused on the universal scientific knowledge of the teachers. Even when the teachers had extensive local knowledge about clinical care and HIV-positive patients in

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165 Interview with W. Wester and H. Bussman, Botswana Harvard Partnership, Gaborone, August 4, 2004
Botswana, they did not incorporate it into their slides or prioritize it as a topic. They systematically excluded their own experiences as clinicians in Botswana when teaching and, with the exception of one lecture, did not address the social or bureaucratic context of clinical care. It is possible that they may have relied upon their extensive experience with HIV positive patients in Botswana to answer questions; however some trainees’ feedback, which will be discussed below, suggest otherwise. In either case, these slides were carefully constructed, and the exclusion of local knowledge suggests that these doctors felt that their own experience was less important or appropriate to the classroom than the scientific, technical, research-based information that they chose to put on slides. This exclusion of experiential, locally acquired knowledge meant that the KITSO course, with few modifications, could be taught anywhere in the world. Excluding the one slide about the resources needed for an HIV clinic in Botswana’s hospital system, the course could have been used to teach HIV treatment to American medical students.

When surveyed, KITSO trainees noted the focus on universal scientific knowledge and lack of information about local issues. These surveys were part of a May 2003 review of clinical training--including both KITSO and the Clinical Preceptorship program--that was conducted by the Health and Development Africa research unit based

167 Classes at the medical school at the University of Pennsylvania, where I took classes for two years before writing up this dissertation, first made me think long and hard about these questions. I spent most of the first year and a half in a classroom watching slide presentations. Topics covered included physiology, pharmacology, biochemistry, and anatomy. At Penn, faculty who had made major research contributions to these fields usually taught these subjects. At the end of the courses, we were tested with multiple-choice exams to measure how much we had learned. From my conversations with other medical students, in American medical schools, this type of clinical training is a common method of teaching the scientific basis of medical care.
at the prestigious Witwatersrand University in South Africa. One private practitioner who attended KITSO stated, "You could have spent less time on virology and lab issues." The authors of the evaluation noted that this sentiment was shared by others: "Some trainees attributed too much training content to an over emphasis of basic sciences." About the lack of local issues, one attendee wrote, "More emphasis should be placed on Botswana specific issues and experience." Another suggested, "Have speakers from African countries to share the African experience." These comments were made after the module was modified and more practical training had been included in the afternoon. The trainees at KITSO were pointing out underlying assumptions in KITSO's curriculum: that transferring scientific and research-based knowledge about HIV was central to clinical training and that the social, bureaucratic and clinical context of care was less important than the technical details of HIV drug therapy.

While the Wits evaluators found trainees critical of KITSO, the evaluators also pointed out the program's two greatest strengths: classes were "quality controlled" and "outcomes [were] assessed by exam." The Botswana-Harvard Partnership developed and implemented the first KITSO module in a way that was very standardized and

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reproducible. There was a premium placed on making the teaching consistent. KITSO controlled who could teach these lectures and under what circumstances. A small number of people taught the classes, always in the same way, and always in a weeklong period at a conference site. KITSO also used multiple-choice exams to measure successful knowledge transfer. After trainees took the class, they took an exam. Most trainees passed the exam, which was taken to be an indication of KITSO’s success. High pass rates showed not just that the trainees learned the material, but also that the trainers effectively communicated the content of the KITSO slides. KITSO was a prepackaged curriculum with a standard method of delivery and an empirical means of gauging its success. This was the great strength of KITSO, and it was noted as such by the Wits evaluation team.¹⁷⁵

These same characteristics gave it the advantage of being able to provide certifiable training. Certification would allow staff to have proof that they had taken and passed the class when they transferred to another government hospital, which was a frequent occurrence in Botswana’s national health care system. This would encourage hospital staff to attend because they would be able to show advanced training in HIV clinical care on their résumés. Employees could use their certification to ask for advancement; also, certification might be useful in the government’s new merit-based pay structure, which was scheduled to be introduced in 2004.¹⁷⁶ Certification was possible because KITSO was taught with the same curriculum, in the same way, on every

¹⁷⁶ Observations and informal conversations with trainers, coordinator, and trainees at KITSO Class, Nurses Association Building, Gaborone, August 3, 2004
occasion. After completing KITSO training, a nurse, social worker, or doctor could officially state that he or she had mastered certain basic scientific knowledge about HIV.

KITSO was carefully developed, the teaching was highly standardized, and KITSO employees asserted their ownership over the content and methods of classroom training that they developed. In Botswana, KITSO staff provided the module to the preceptors hired by the ARV Team, but only Botswana-Harvard Partnership-approved classes could be considered KITSO training. ARV Team preceptors might use the KITSO slides, but they could not run a KITSO training session. The concern was that if Botswana-Harvard Partnership lost control of how the module was taught then it would not be up to the standards of the Botswana-Harvard Partnership. Perhaps KITSO employees were also concerned about losing credit for trainees taught with their module or about being criticized for problems out of their control. Even so, collaboration and cooperation between KITSO and the Clinical Preceptorship Program increased over time. Over the course of 2003, the planning done in the committee on clinical training (discussed in the last section of this chapter) helped the programs schedule their training in tandem, and the two programs collaborated on a plan for future training. Nonetheless, KITSO retained its claim to standardized, reproducible, measurable clinical training for HIV drug therapy.

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177 Observations and conversations with ARV Team, January 30-February 3, 2004
For both of the clinical training programs, 2003 was a time of reassessment. The Botswana-Harvard Partnership staff that ran KITSO modified their module over time in response to feedback. In 2003, KITSO divided up the trainings into two levels in order to include more discussion time. Two new modules, “Nursing and Community Care Issues” and “Comprehensive Patient Care Issues” were introduced in June 2003. The KITSO lectures I went to in 2004 also included an informational packet with 20 pages of materials contributed by one of the ARV Team’s preceptors created during a rotation in an HIV clinic. By adding supplementary paper materials, KITSO staff adapted their classes to Botswana’s particular challenges. KITSO classes were still primarily taught by doctors who practiced in Princess Marina Hospital, but they were much more specific to clinical practice in Botswana.

As clinics were established in more hospitals, doctors at Botswana-Harvard Partnership and Ministry of Health knew more about how to run an HIV Clinic in Botswana. This increased experience with running HIV Clinics in Botswana potentially could have provided KITSO classes with a more concrete, local body of knowledge to transfer. Although extra modules about adherence counseling were added for nurses, KITSO’s introductory module, which was taken by all providers, changed very little.

182 Observations and informal conversations with trainers, coordinator, and trainees at KITSO Class, Nurses Association Building, Gaborone, August 3, 2004.
184 Observations and informal conversations with trainers, coordinator, and trainees at KITSO Class, Nurses Association Building, Gaborone, August 3, 2004.
The way KITSO was modified, by creating new modules, reflects a tension between the desire to standardize the training and the desire to make the training applicable to Botswana and specific sites. The Botswana-Harvard Partnership staff’s emphasis on universal knowledge and standardization meant that KITSO was not site-specific and did not address local problems as well as it taught biomedical knowledge. KITSO’s greatest weakness stemmed from its greatest strength.

The KITSO training model’s weaknesses and strengths were part of the knowledge transfer model of clinical training. Technical knowledge, including pharmacological knowledge about HIV drugs and scientific knowledge about HIV the virus, is useful everywhere and to anyone who might take care of HIV-positive patients, whether in Botswana, Thailand, or Russia. Making the program standard in format, using PowerPoint slides, and making it measurable, with a multiple-choice exam, added to the portability. In order to create this type of program certain types of knowledge had to be excluded. Social knowledge, about Botswana’s national health care system, and experiential knowledge, gained from the unsystematic review of patient care, had to be minimized in this model. It was not just that the content of KITSO was limited to research-based and scientific knowledge, the training itself was standardized, reproducible, and measurable. This meant that local, site-specific challenges and problems were also excluded. This was not a training method designed to address how doctors could get the social workers in the rural health services system to provide food baskets or transportation vouchers to their patients. Such problems were beyond KITSO’s scope.
It is not an accident that Botswana-Harvard Partnership developed this model. KITSO was an internationally funded project run by one of the best research universities in the world. There were strong incentives for conceiving of clinical training as knowledge transfer. First, Harvard staff wanted to be useful, and they had useful knowledge to transfer. Doctors at leading research universities like Harvard and Penn believed that research-based scientific knowledge was important and essential to good clinical care. Transferring this knowledge to people who needed it was an extension of the teaching and research missions of the universities for which they worked. American and European doctors were more qualified as trainers because they had more knowledge and experience treating patients with the new HIV drug therapy, or at least most American and European doctors had more experience than most African doctors treating patients with HIV triple therapy. African doctors were the trainees because they had a presumed lack of knowledge about HIV drug therapy. Even when African doctors’ medical degree or post-graduate training was European, the very fact that they practiced in Africa seemingly meant that they had little relevant knowledge—whether scientific, research-based, or experiential—about HIV drug therapy. HIV drug therapy was something that Western doctors, particularly HIV specialist physicians, knew how to do and do well so they were the teachers.

Second, knowledge transfer could be packaged and presented to the international community. Clinical training programs designed around scientific knowledge and research knowledge were a portable and tangible product of good development work, much like the "best practices" promoted by the United Nations. A series of lectures and a
multiple-choice exam could be stored on a CD Rom and presented at international conferences. In fact, Harvard notes on its website that its first module was developed in time for the 2002 Barcelona International AIDS Conference, where it was available on a CD that played on any computer, with or without PowerPoint. ¹⁸⁵ These CDs were also available to the international health development community through Botswana-Harvard Partnership’s website. KITSO was a development model for clinical training on HIV drug therapy. A computer-based presentation, like this teaching module, was a tangible product: acceptable, understandable, and useful to the international development community.

Third, financial backers of this development project—particularly Merck, who initiated the effort that resulted in ACHAP, but also the Gates Foundation—valued technical, scientific and research-based knowledge. Merck valued scientific knowledge and university training. Merck employees consistently recruited American-trained MDs to work for ACHAP and the ARV Team. Merck employees also recruited prominent faculty at Penn, some of whom taught for KITSO.¹⁸⁶ KITSO itself was not just any international health project; it was a project created by a prestigious research university, Harvard University. Both the institution implementing the training, the Harvard AIDS Institute, and the funding organizations, the Merck and the Gates Foundations, valued scientific knowledge.


There may have been additional influences beyond institutional incentives. One that comes to mind is the general international climate of uncertainty and fear surrounding HIV drug therapy for Africans. Since Botswana was the first national HIV drug therapy program in Africa, there was no good model to follow. There was also a general fear of a drug-resistant HIV pandemic resulting from non-compliant African patients. Merck executives, the driving force behind ACHAP, did not share this perspective; they thought Africans could safely take HIV drug therapy. Even so, the perception in the international community that a pandemic might be possible due to an African HIV drug therapy program was likely to have influence how Merck thought about this project. My sense is that the transfer of technical knowledge by Western doctors specializing in HIV to Botswana's health care providers was a way to inoculate Botswana's health care system against the kind of sloppy care believed to create resistant HIV. Knowledge, particularly Western knowledge of HIV drug therapy, equaled good clinical care.

For these reasons, knowledge transfer was an attractive model on which to base the Botswana-Harvard Partnership's clinical training program. It was a model that fit with an institution that valued research and scientific knowledge; it also met the goal of creating a health intervention with measurable results and transferability. At the same time, the HIV drug therapy program was more than an international health program; it was a government health program. KITSO supported the government health program with technical training for health staff, but it ran independently of HIV clinic openings in the government hospitals. KITSO training went on whether or not the ARV program
failed or succeeded. Even though the Clinical Preceptorship Program shared KITSO's goal to train local health care practitioners in HIV clinical care, it developed in a radically different institutional context and grew to address different problems.

The Clinical Preceptorship Program: Power Brokers and Bureaucratic Support

While KITSO was a classroom-based training program focusing on knowledge transfer, the ARV Team developed another kind of clinical training program. The Clinical Preceptorship Program focused initially on skills transfer from Western HIV specialists to hospital staff involved in opening a new HIV clinic.187 This type of training was onsite, although it used both the classroom and one-on-one interaction to promote learning and improved clinical care for HIV-positive patients.188 Over its first year, it evolved into a program that provided clinical training and effectively promoted the bureaucratic change necessary to start new HIV clinics.

In May 2002, the Clinical Preceptorship Program was started with a large, one-time grant from ACHAP. ACHAP and the Ministry of Health officials responsible for the HIV drug therapy program (called the ARV program) hired the Clinical Training Coordinator, Aycha Riley, and seconded her to the ARV Team. The process of secondment is also described in Chapter 2, and meant that, while her salary and her program were paid for by ACHAP, she was supervised by the Ministry of Health officials in charge of the ARV Team. Dr. Riley was a doctor trained in Britain with a number of

years of clinical experience. She was responsible for hiring the preceptors, providing them with support (such as housing and transportation) while they were in the country, evaluating them, and developing the program in a way that supported the opening of HIV clinics outside of the capital city’s Princess Marina Hospital.\textsuperscript{189}

In the Clinical Preceptorship Program, the preceptors were HIV specialists from certain universities in America, the Netherlands, or Britain who provided six months of onsite training at new HIV clinics. The Clinical Preceptorship Program was very different from KITSO in its model of clinical training and its relationship to the work of the HIV clinics. The Clinical Preceptorship Program was timed with the opening of HIV clinics, so it proceeded at a different pace than KITSO; fewer health care workers were trained at first and then more and more as the “roll-out” proceeded. The Clinical Preceptorship Program had a different method of clinical training than KITSO; it was similar to the American way of training doctors in their internship, a type of skills transfer where trainees learn by treating patients in teams closely supervised by an attending physician. But instead of an attending, the Clinical Preceptorship Program had preceptors who were doctors who taught by one on one interactions at the point of care.\textsuperscript{190} Furthermore, whereas KITSO was more oriented to content and method, the Clinical Preceptorship Program had a different emphasis: who taught and where they taught was more important.

\textsuperscript{189} Interview with A. Riley, Clinical Training Coordinator, ARV Team, Gaborone, February 17, 2004.\textsuperscript{190} Interview with A. Riley, Clinical Training Coordinator, ARV Team, Gaborone, February 17, 2004. Observations at HIV Clinic, Hukuntsi, June 27-July 2, 2004. Using another definition of preceptor, any doctor teaching another doctor clinical skills is a preceptor, but as the Wits evaluation noted, “preceptor” in the context of Botswana’s ARV program was used specifically for members of the Clinical Preceptorship Program. KITSO trainers, who were also doctors teaching other doctors, resisted being called preceptors, as reported in the Wits study. It is unclear whether this was because they felt the word had connotations inapplicable to their teaching (perhaps they thought that “preceptor” suggested one-on-one training) or because they resisted association with the Clinical Preceptorship Program.
than what was taught or how. Although the Clinical Preceptorship Program evolved over
time, even when it began, the ARV Team’s the Clinical Preceptorship Program was more
about people, skills, and relationships than it was about knowledge transfer.

When they started, KITSO and the Clinical Preceptorship Program were
complementary in the sense that they had the same goals with different emphases. KITSO
focused on knowledge transfer and the Clinical Preceptorship Program, according to the
ACHAP website, had “the ultimate goal of skills transfer to local health care teams.”

The most important goal of the Clinical Preceptorship Program was hiring and recruiting
people. In recruiting applicants, the emphasis was on clinical care experience. Preceptors
had to have a minimum of five years experience caring for HIV-positive patients.
Physicians, and later nurses, were recruited through specific institutions in the US,
England, and the Netherlands. These doctors and nurses, who were university-affiliated
senior HIV specialists, were expensive. Having these foreign doctors and nurses come to
every hospital in Botswana for three to six months also posed the logistical challenges of
securing visas and housing.

The Clinical Training Coordinator spent an enormous amount of her time
recruiting, hiring, and arranging for the doctors and nurses to enter the country and to
have housing and transportation. Eventually she negotiated with the Ministry of Health
for government housing for the preceptors. What made hiring the preceptors more
complicated was that these doctors and nurses had to have their visas, housing, and
transportation timed to coincide with the opening of HIV clinics. KITSO avoided visa

192 Interview with A. Riley, Clinical Training Coordinator, ARV Team, Gaborone, February 17, 2004.
issues by using a small pool of available expatriate doctors and by having more leeway in
class scheduling (though classes usually occurred before a clinic opened). Also, the
weeklong duration of KITSO’s classes did not pose the kind of housing difficulties
encountered by the Clinical Preceptorship Program. For the Clinical Preceptorship
Program, unlike KITSO, hiring the right people took precedence over identifying and
delineating what content they taught. The Clinical Training Coordinator’s job was to get
the right people to the right place at the right time.

The Clinical Preceptorship Program did not emphasize reproducibility and
standardization of content and teaching methods, nor did it evaluate trainees with tests.
There was a packet of resource materials given to every preceptor that included the
standard national protocol for providing HIV drugs and the training materials used by
KITSO. However, there was no required content for preceptor-led classroom teaching.
Within the first two years, the preceptors used materials from KITSO lectures, the UK
Some of the first preceptors developed their own materials and explicitly criticized the
KITSO materials as too theoretical. Preceptors were also given forms to fill out in
order to keep track of how many hospital staff they trained, but the forms did not specify
whom they trained or how; instead these forms functioned more as a record of what they
were doing and what they planned to do.

194 Interview with A. Riley, Clinical Training Coordinator, ARV Team, Gaborone, February 17, 2004.
195 Preceptors’ Reports for Hukuntsi given to me on June 29, 2008.
For the Clinical Preceptorship Program, training was not restricted to the classroom. Physician preceptors also taught doctors in the HIV clinic, even in the inpatient wards, and nurse preceptors worked alongside the nurses in the HIV clinic. Each HIV clinic was based at a hospital, and the hospital staff could consult the preceptors or see patients with them in the HIV clinic. Most preceptors did not evaluate trainees using tests. Instead, they gave a qualitative assessment of the trainees’ clinical abilities. Preceptors evaluated themselves and submitted reports on their progress to the ARV Team coordinator. There was no absolute standard for preceptors regarding who they trained, how they trained, or what they taught. The Clinical Training Coordinator expected them to be largely self-monitored and judged their efficacy on whether patients were being put on HIV drugs in the outpatient hospital-based HIV clinic.

The teacher was more important than what was taught, but that was not the only reason why the ARV Team did not specify the content. The ARV Team’s flexibility about whom preceptors taught, what materials preceptors used, and the methods preceptors used to teach and to evaluate their trainees allowed the preceptors to tailor their work to meet the needs of the site. Implicit in the design of the Clinical Preceptorship Program was the idea that each site had different needs and requirements. HIV clinics started in referral hospitals, but in less than two years, they were opening in sub-district and primary care hospitals. These hospitals had different staffing levels, transportation challenges, diagnostic equipment, and social services. Each HIV clinic

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197 Interview with A. Riley, Clinical Training Coordinator, ARV Team, Gaborone, February 17, 2004.
had to be created in a unique environment with its own work culture and resources. The preceptors and the hospital staff had to negotiate their roles with the ultimate goal of creating a functioning HIV clinic. The way that this lack of specifics about who, what, and how to teach allowed preceptors to act as more than trainers will be discussed shortly.

Given that what preceptors should do was left up to them and the hospital where they worked, the actual details of preceptors’ work could be both predictable and unexpected. When I interviewed the Clinical Training Coordinator in 2004, she told a story of both the expected and unexpected successes of the program. She was proud that so many hospital staff had been trained and that hospital staff valued preceptors enough to request them as a prerequisite of starting an HIV clinic. Because they were on site, the preceptors trained many more staff than KITSO could have reached. Preceptors trained huge numbers of people, often hundreds at one site. They trained a broad range of staff, from doctors to the medical supply drivers, even doctors at the District Health Team and nurses who worked in the rural clinics. By 2004, the Wits survey and evaluation of clinical training had shown by multiple-choice exam that the hospital staff trained by the preceptors had amounts of knowledge comparable to those trained by KITSO. Presuming a final goal of skills transfer, the Clinical Preceptorship Program had succeeded.

However, the Clinical Training Coordinator had been surprised at how important bureaucratic negotiations were to preceptors’ efficacy, often as important as or more important than skills transfer. As she told it, her realization came from a number of

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199 Interview with A. Riley, Clinical Training Coordinator, ARV Team, Gaborone, February 17, 2004.
interesting, unexpected events. The first indication she had that “bureaucratic support” (as she put it) was a crucial part of the preceptors’ role came from her observations of the nurse-doctor team at Tutume. At this site, the preceptors arrived, but the drugs did not come for a month. This was something of a disaster for clinical training. If preceptors were transferring either their knowledge about HIV drugs or their skills in treating patients on HIV drug therapy, then the preceptors, a nurse-doctor team, should not have been particularly effective without drugs and without patients on HIV drug therapy.

However, the preceptors, adapting to the circumstances they found themselves in, did extraordinary work. The nurse preceptor created a map describing how to coordinate and integrate the rural clinics into the hospital’s HIV clinic. With the nurses at this site, she designed a system whereby smaller rural clinics would refer their HIV cases to a “mother clinic.” The mother clinic would then take care of testing, screening, and adherence counseling, and refer patients to the hospital’s HIV clinic. The nurse preceptor also trained the nurses in the hospital and rural clinics on how to provide adherence counseling using this model of organization. By training the nurses in both the hospital HIV clinic and in the rural clinics, she facilitated the use of the referral network that she had developed with the HIV clinic nurses.

When the drugs finally arrived, Tutume had a referral network already established due to the diligence of the nurse preceptor and the HIV clinic nurses with whom she worked. Because of this preparation, staff at this site had overcome some of the most difficult challenges of coordinating care better than sites that had been functioning for

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200 Interview with A. Riley, Clinical Training Coordinator, ARV Team, Gaborone, February 17, 2004.
201 Interview with A. Riley, Clinical Training Coordinator, ARV Team, Gaborone, February 17, 2004.
longer. The Clinical Training Coordinator related this story to me and suggested that she had been surprised at how essential the bureaucratic support role was to a functioning HIV clinic. After that experience she started to think about the role of the preceptors she hired and trained in broader and more complex ways.  

Dr. Riley realized that it was not the knowledge or the clinical skills of the doctor-nurse team that alone determined their efficacy as preceptors. As she contemplated what abilities might go into effective bureaucratic management, she came up with some ideas that were both intriguing and problematic. She believed that the Dutch and, in particular the British doctors and nurses, with their greater experience negotiating the bureaucratic public health systems in their own country, did a better job of providing this type of bureaucratic support to HIV clinics in Botswana. This was intriguing to me because she grew to appreciate the process of creating an HIV clinic as a creative one based on politics and people.  

But Dr. Riley's realization that bureaucratic support was crucial to the work of preceptors was also a problematic one. As she changed her understanding of the goals and the process of clinical training, the gulf widened between the Clinical Preceptorship Program and KITSO. She also felt that American doctors in particular were poorly equipped to manage the bureaucratic hospital system that preceptors encountered in Botswana. It is possible, since she was trained in Britain, that she nationalized the ability to handle bureaucratic support in her own mind. This idea also may have been reinforced

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202 Interview with A. Riley, Clinical Training Coordinator, ARV Team, Gaborone, February 17, 2004.
203 Interview with A. Riley, Clinical Training Coordinator, ARV Team, Gaborone, February 17, 2004.
204 Interview with A. Riley, Clinical Training Coordinator, ARV Team, Gaborone, February 17, 2004.
by the fact that as the gulf between the Clinical Preceptorship Program and KITSO widened, those with British training ended up increasingly as preceptors and those with American training ended up increasingly as KITSO trainers.\textsuperscript{205} As the Clinical Training Coordinator was realizing in 2004 when I interviewed her, the ability of the preceptors to provide bureaucratic support was contingent on their identity as experts. Later I will address how preceptors’ identities allowed them to facilitate bureaucratic change.

The Clinical Training Coordinator’s sense that her program offered a type of training and support that was different than, and perhaps superior to, KITSO was reinforced by the way that the heads of hospitals viewed preceptors. The Chief Medical Officers (CMOs), as the heads of hospitals, demanded preceptor assistance in setting up their HIV clinics even when their staff had been extensively trained by KITSO or even when their staff had participated in regional training at other hospitals.\textsuperscript{206}

I myself witnessed the reluctance of doctors, nurses, and social workers at a primary care hospital to begin a clinic without a preceptor. At a meeting I attended, a hospital chief from a local primary care hospital was asked about why he had not opened an HIV clinic at his site. He and his staff had been trained by KITSO. In addition, the primary care hospital’s staff had been involved in planning meetings for the local district hospital’s HIV clinic. In spite of this, the chief of this primary care hospital expressed great reluctance to start an HIV clinic without a preceptor. A social worker and nurse


attending the meeting with him seconded him on this matter. When another doctor urged them to consider starting patients on HIV drug therapy, the physician chief only responded by shaking his head in the negative. His reluctance was palpable in the room. This hospital chief and his staff felt that they needed more than just information about how to provide HIV drugs or even how to organize an HIV clinic. They needed help from a person. When I experienced this I began to ask the same question as the Clinical Training Coordinator: what about the preceptors made them capable of being that person?

Even after interviewing the Clinical Training Coordinator, I did not appreciate how crucial identity of an expert outsider was to a preceptor’s ability to provide bureaucratic support until I observed a nurse-doctor preceptor team in Hukuntsi. The preceptors in Hukuntsi were both British men with both academic and clinical experience in HIV and AIDS. The nurse had a PhD and extensive experience setting up an infectious disease clinic in England. Like all of the doctors and nurses who were HIV specialists from the US and Europe, whether they provided care for the Clinical Preceptorship Program or KITSO, Hukuntsi’s preceptors were very dedicated to helping all HIV-positive patients, and this dedication brought them to another continent. Both of these men were experienced, confident clinicians who came to Botswana ready to train other health care workers and treat patients.

While they seemed extraordinarily well prepared to be preceptors, they were in fact daunted by what they found. They found themselves in a primary care hospital in the

207 Observed at the Meeting of the Combined Hospital and DHT ARV program, Mahalapye, April 6, 2004
208 Both preceptors gave me permission to use their names, but I have tried to emphasize their social position as preceptors rather than their identities.
middle of the Kalahari Desert. Since the hospital was a primary care hospital, it had fewer diagnostic or imaging facilities than the district or sub-district hospitals where HIV clinics were then operating. The hospital was removed from the main route north by many kilometers of pothole-ridden road. The population of the region was not located in the town where the hospital was located, and there were no banks or grocery stores in Hukuntsi, just a general store. Patients often had difficulty reaching the facility by way of the desert’s limited transportation infrastructure. The hospital was new and had plenty of space, but it was short on staff since its location made it an unpopular assignment for doctors. Those who did come tried to transfer out as quickly as possible.\textsuperscript{209} The whole experience of being a preceptor seemed more about making the impossible possible rather than transferring knowledge.

However, neither the isolation nor the problems with staffing meant that HIV drug therapy was impossible at this location. The staff was highly motivated to start an HIV clinic. The CMO had treated many patients with HIV drugs in Kenya, and the preceptors told me that they found him very knowledgeable. For this reason, he did not need classroom training.\textsuperscript{210} The other doctors, both expatriates from African countries, were very interested in training for HIV drug therapy.\textsuperscript{211} The Matron (head nurse) was also enthusiastic about having HIV clinical care facilities available. As she explained to

\begin{footnotesize}
\begin{itemize}
\item \textsuperscript{209} Observations at HIV Clinic, Hukuntsi, June 27-July 2, 2004.
\item \textsuperscript{210} Interview with D. Clutterbuck and K. Miles, Clinical Preceptors, Hukuntsi, June 29, 2004.
\item \textsuperscript{211} Observations at HIV Clinic, Hukuntsi, June 27-July 2, 2004.
\end{itemize}
\end{footnotesize}
me, she felt it was her duty to her country and her people to provide such important lifesaving drugs.\textsuperscript{212}

While hospital staff were very interested in being trained how to provide HIV drug therapy, their interest alone was not always enough to overcome entrenched differences in perspective between the CMO and Matron.\textsuperscript{213} In a hospital with limited human resources, staff allocation was one of several major issues that threatened to stall the development of an HIV clinic at Hukuntsi. Another issue was motivating the nurses in the far-flung rural clinics to pre-screen HIV-positive patients for drug therapy and to refer them to the hospital.\textsuperscript{214} As one of the preceptors wrote in his report to the Clinical Training Coordinator, “The motivation to start and run the ARV clinic is excellent. It has to be said that all of the staff are considerably less motivated to tackle the administrative and organizational work which inevitably accompanies such an undertaking.”\textsuperscript{215}

This “administrative and organizational work” became that of the preceptors. The preceptors negotiated with the Matron over which nurses and how many would be reallocated to the HIV clinic; they selected a particularly enthusiastic male nurse to run the clinic. They coordinated the staff that worked in the hospital’s laboratory and pharmacy so that the special needs of the HIV clinic could be met without overwhelming the capacity of the small laboratory and dispensary. They spent long hours traveling from clinic to clinic in the Kalahari desert trying to make rural clinic nurses aware of how and

\textsuperscript{212} Interview with Matron, Hukuntsi, 2004.
\textsuperscript{213} Interview with CMO, Hukuntsi, June 30, 2004.
\textsuperscript{214} Observations at HIV Clinic, Hukuntsi, June 27-July 2, 2004.
\textsuperscript{215} Preceptors’ Reports for Hukuntsi given to me on June 29, 2008.
where to refer patients for HIV testing and therapy. Much of their work was coordinating, negotiating, and managing. Some of it was about teaching clinical care. They did train the hospital staff, but this was not what they spent the majority of their time doing. Instead, they spent most of their time building relationships within the hospital, and coordinating and negotiating bureaucratic change. The clinical training was a small part of their day. Navigating the social, political, and bureaucratic terrain was the bulk of their work.

Considering their inexperience with Botswana's health care system, I asked them whether they thought a team from a local hospital with a functioning HIV clinic might not do a better job. The thoughtful reply was that a citizen nurse from another government hospital would have been resisted more and perceived as a meddler. They thought that their status as outsiders, with no lasting connection to clinical care in Botswana on account of their short term of service, allowed them to negotiate better between the CMO and the Matron.

The physician member of the team pointed out that if a Motswana nurse had been brought in instead of his partner, who was a white middle-aged male nurse from Britain, she (the Motswana nurse) would most likely have been another woman of the same age and experience as the Matron. Another Motswana nurse would have been a threat and a meddler. A white, male, British nurse who would leave after six months was, by contrast, no threat to her authority as Matron. He could never be a Matron; he did not even speak

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Setswana. He could not replace her. As the physician preceptor argued, it was their outsider status that facilitated their ability to negotiate new staffing allocations for the HIV clinic.218 This outsider status was comprised of their race, nationality and transience, which combined with their technical expertise, and allowed them to negotiate with the hospital staff about how to run the HIV clinic.

Not only did preceptors have special status because they were outsiders with valuable technical knowledge; they also had direct connections to the Ministry of Health national ARV team, who hired them, and to ACHAP, who paid their salaries. Their position allowed them to advocate on behalf of the health care workers in the hospital for either more oversight of government-provided services, such as deliveries of drugs and diagnostic reagents by Central Medical Stores, or for additional resources. In their written reports from the preceptors in Hukuntsi, they often included extensive comments on what would be needed to improve care.219 In fact, preceptors advocated for an ACHAP-funded vehicle for transporting blood samples to the Harvard laboratory in the capital city, although the vehicle did not arrive while the preceptors were still at the site and perhaps never did.220 The preceptors’ potential access to ACHAP money and Ministry of Health assistance for the hospital was not lost on the staff, and this increased the status of the preceptors.

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218 Interview with D. Clutterbuck and K. Miles, Clinical Preceptors, Hukuntsi, June 29, 2004.
219 Preceptors’ Reports for Hukuntsi given to me on June 29, 2008.
At the same time that the preceptors were very successful at facilitating the establishment of an HIV clinic in Hukuntsi, they were deeply frustrated. Some of the source of this frustration seemed to be from how little their extensive specialized medical knowledge really helped them. Although hired to transfer technical medical knowledge, they themselves pointed out how inadequate their medical skills often seemed in the context of medical care in Botswana. One report to the ARV team included this admission: “The variety of patient presentations is fantastic and totally unlike the patient cohort seen at HIV clinics in the UK.” Another portion of these preceptors’ reports said,

Re-learning clinical diagnosis in the absence of scanning, an ophthalmoscope or diagnostic culture or serological test for infection has been uncomfortable. It is interesting to note that some KITSO training lectures appear to be based on the assumption that all of these things are available in Botswana.

Reading these reports gives one the sense that the preceptors felt like they were not properly prepared them for the experience of setting up an HIV clinic in a primary care hospital in Botswana. They came prepared to transfer clinical skills and were taken aback by the fact that their clinical skills, acquired in a different health care system, had limited relevance in the context of a primary care hospital in Botswana.

The preceptors were frustrated with the mismatch between their medical knowledge and experience and the bureaucratic and medical environment of a primary care hospital in Botswana. On the flipside, their relative inexperience with Botswana and the fact that they were foreign experts helped them do the work of setting up an HIV clinic. Their outsider status, their technical knowledge, and their access to important

221 Preceptors’ Reports for Hukuntsi given to me on June 29, 2008.
222 Preceptors’ Reports for Hukuntsi given to me on June 29, 2008.
people at the national level—this combination of factors put preceptors in a position where they could negotiate among existing power relationships to create new ones necessary for a HIV outpatient clinic to open. This explains the apparent contradiction between preceptors’ frustrations at their own lack of knowledge and the fact that they were seen as essential personnel for starting a clinic by both local health care practitioners and national level bureaucrats. Expertise here served a potent social and political function, not a technical one.

Back at the national level, Dr. Riley, the Clinical Training Coordinator, had to navigate her own complex political environment. Preceptors’ roles were completely consistent with the strategy of the ARV Team, which was to create HIV clinics within the Ministry of Health’s hospital system. Dr. Riley’s superiors in the Ministry of Health wanted to see more patients on HIV drugs, and she could show that prescription rates went up when a preceptor worked at a HIV clinic. Also, at national ARV program meetings, some of the ARV managers of the few HIV clinics that had started without a preceptor continued to request an onsite preceptor. The difficulties they had starting the program reinforced the perception within the Ministry of Health that the Clinical Preceptorship Program was effective and important. In general, since the Clinical Preceptorship Program was part of the ARV Team, participating as a member of the

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223 Interview with A. Riley, Clinical Training Coordinator, ARV Team, Gaborone, February 17, 2004.
224 Observations at Meeting of ARV site managers and Heads of Departments, Ministry of Health, Gaborone, April, 26, 2004.
ARV Team and meeting the expectations of the Ministry of Health officials were major concerns for the Clinical Training Coordinator.226

However, the Clinical Training Coordinator did not just report to the Ministry of Health. Dr. Riley also had to ensure that ACHAP renewed funding for the Clinical Preceptorship Program. As previously discussed, the international community and ACHAP’s parent donors, Merck and Gates, favored technical approaches and measurable knowledge transfer. Unfortunately, bureaucratic support was not easy to measure or explain as a technical intervention. Both KITSO and the Clinical Preceptorship Program were reapplying for funding from ACHAP in early 2004, so 2003 was a period of funding anxiety. That the international community favored measurable knowledge transfer was reinforced by the external evaluation done by South African based University of the Witwatersrand researchers (abbreviated to Wits) in May 2003, about one year from the start of the Clinical Preceptorship Program.227

Part of the Wits evaluation consisted of comparing the two clinical training programs by giving trainees of each the same multiple-choice exam. The multiple-choice exam was the only measure of efficacy used and the programs compared well with each other on the multiple-choice exam, which was intended as a measure of knowledge transfer about HIV drug therapy. The Wits study also examined, through surveys and interviews, the “acceptability,” “relevance,” and “appropriateness” of each program to trainees and hospital staff. Both KITSO and the Clinical Preceptorship Program did well

on these measures. There was no evaluation of whether the trainees spent more time seeing HIV-positive patients or whether their outcomes improved. These comparisons beg the question of what would have happened had the Clinical Preceptorship Program been found to be acceptable, relevant, and appropriate by the trainees, but not good at teaching the side effects of HIV drug therapy. That this did not happen must have been a relief to the Clinical Training Coordinator since it suggested ACHAP would continue to support both KITSO and the Clinical Preceptorship Program.

All of the differences described above, set in a period of funding anxiety, contributed in a major way to the difficulties in coordinating the two programs, but it also provided some solutions. KITSO and the Clinical Preceptorship Program had different understandings of clinical training, reinforced by different institutional contexts and personality differences; these differences were exacerbated by reliance on the same funding source with an upcoming reapplication. At the same time that the upcoming application for funding renewal was creating tension, it also made both programs anxious to demonstrate that they were committed to the ARV program and interested in reassessing, expanding, and adapting their programs. The next section will discuss how Dr. Mezonde, the Ministry of Health official responsible for the ARV program, used this moment of funding anxiety, combined with the judicious use of an outsider expert as a power broker, to get the two programs to collaborate and coordinate and to develop a more unified plan for clinical training.

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Committee Work, Comparisons, and Collaboration

In 2003, almost a year into the program, Dr. Mezonde, the Ministry of Health official in charge of the ARV Team, took action to bring the two parallel programs into sync with each other. He commissioned, with money from ACHAP, the external evaluation of the programs by the South African based University of the Witwatersrand HIV Clinical Research Unit, and he formed a committee whose chair was unacquainted with the politics of the two training programs. Both measures solved internal bureaucratic tensions with external expertise. In some ways, these national-level solutions to problems in Botswana’s national ARV program mirror the way preceptors worked to solve problems within the hospital: outsiders mediated national bureaucratic change to help solve problems of entrenched politics, not of hospital management but of a national health care system funded by health development money.

Particularly in the first year that both of these programs coexisted, 2002 to 2003, there was tension between the Clinical Training Coordinator and KITSO staff. Perhaps it was because they had the same funding source and were both applying for grant renewals. However, it seems unlikely that this was the only source of tension since ACHAP renewed the funding of both programs in 2004. Perhaps it was a combination of different institutional masters and different approaches to clinical training that

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contributed to the tension between the two programs. In any case, the rivalry was visible to outsiders, including the Wits study team. The Wits HIV Clinical Research Unit evaluation described the problems as follows:

The programmes are managed as 2 vertical systems, with little attempt to coordinate their activities. . . . At a programme level there is clear understanding of the need to bring the 2 programmes together. However, actually doing this is complicated by issues of ownership, lack of consensus on the core outcomes of the training programme, and the inevitable clash of personalities and culture. In addition, there is now considerable suspicion in both programmes of the motivation of the other.232

The Wits research team could see the chasm—emotional, institutional, and cultural—between these two programs.

What was astonishing was that this chasm was bridged by creating a committee. Forming a committee to solve a bureaucratic problem may seem like a joke. Committee work is more often associated with inefficiency than with creative bureaucratic change, but this section argues that there was symbolic and bureaucratic value in forcing members of two, ultimately three, disparate groups to work together. The chair of the committee was a man from Baylor, an institution not affiliated with either the ARV Team or the Botswana-Harvard Partnership. Baylor was an American medical school that ran a pediatric HIV clinic on the grounds of Princess Marina Hospital, the government hospital in the capital city. Baylor was interested in assisting with clinical training for pediatric HIV drug therapy, enough so that it paid for one staff member to spend almost all of his

232 Health and Development Africa, Wits HIV Clinical Research Unit, Final Report, Evaluation of the KITSO AIDS Training Program and the Clinical Preceptorship Program, (May 26, 2003), 46. Note that the standard spelling in Botswana’s government circles was British spelling, and this is reflected in the quotes here from the Wits HIV Clinical Research Unit evaluation. Of course, both American and British spelling were widely used in Botswana’s development community since many people working for ACHAP were American or American-trained.
time working on this committee. The Chair of KITSO Planning Committee was Peter Navario, an American with a MPH who had extensive international public health experience with the Baylor Pediatric International AIDS Initiative, but little experience in Botswana. He was an outsider, his institution was until recently uninvolved in clinical training, and as such he was not immediately associated with either of the two camps in his committee. His job was to bridge the two, to be a power broker, to allow for bureaucratic change in much the same way that the preceptors did for HIV clinics within hospitals.

The appointment of a Baylor public health specialist with no Botswana experience to the chair of a committee where most members were doctors with long experience in Botswana was not an accident. It was a calculated effort by Botswana’s Ministry of Health to find a solution to institutional rivalries. Mr. Navario and the institution he represented were not invested in the existing deep rivalries between the Botswana-Harvard Partnership’s KITSO and the ARV Team’s the Clinical Preceptorship Program. He was not just any expatriate expert; he was a true outsider. This meant that his leadership on the committee would not reify the existing rivalries, but instead would create an opportunity for restructuring and increasing cooperation. The strategy of using outsiders to facilitate change and cooperation between rival groups also included the evaluation of clinical training by the Wits HIV Clinical Research Unit. The Ministry of Health was successful to some extent since the committee itself brought both sides to the same table and created more collaboration between the groups in early 2004. Members of

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233 Interview with P. Navario, Chair of KITSO Planning Committee, Baylor Pediatric International AIDS Initiative, Gaborone, August 4, 2004.
the Ministry of Health never articulated this strategy, but there is a pattern that suggests that outsiders were used to facilitate change in an environment of bureaucratic rivalry and conflict.

It was a daunting task, but not impossible. One reason that it was possible was the influence of Dr. Mezonde, who was a liaison with ACHAP when the ARV Team was created and represented the Ministry of Health on matters relating to the ARV program. Dr. Mezonde was influential enough that KITSO employees and the ARV Team’s Clinical Training Coordinator had to come to the same table and work together. Dr. Mezonde in the Ministry of Health coordinated the ARV program, and ACHAP and the Ministry of Health agreed that this was how things were supposed to work; ACHAP held the purse and the Ministry of Health supervised the ARV Team.234

Another helpful factor was the timing. The ARV program was changing, about half of the HIV clinics had already opened, and the clinical training had to change also. This meant that the ARV program was making a transition from opening new clinics to supporting existing ones, and the role of clinical training in existing HIV clinics was still open to discussion. It was also a period of funding anxiety for KITSO and the Clinical Training Coordinator; the need to reapply to ACHAP was causing them both to reassess their programs. The committee could legitimately address many unanswered questions about the future of KITSO and the Clinical Preceptorship Program.235 While doing so,

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234 Interview with P. Navario, Chair of KITSO Planning Committee, Baylor Pediatric International AIDS Initiative, Gaborone, August 4, 2004.
235 Interview with P. Navario, Chair of KITSO Planning Committee, Baylor Pediatric International AIDS Initiative, Gaborone, August 4, 2004.
Mr. Navario could enroll both clinical training programs into a shared plan for clinical training in the future, thus bridging the gap between the two.\(^{236}\)

In this moment of funding anxiety, reorganization, and reassessment, ACHAP and the Ministry of Health commissioned the previously mentioned Wits research evaluation by the Health and Development Research Unit. Some of their comments have been mentioned above. The study states, "Reporting on the progress of the evaluation will be to . . . Project Leader ACHAP and . . . the Director of Health Service."\(^{237}\) The external evaluation was a reminder to KITSO and the Clinical Preceptorship Program, and all others involved in clinical training programs, that their differences, both programmatic and political, were visible to outsiders; therefore collaboration and coordination were advisable. The report states,

The main recommendation is the need to embark on a process, agreed and accepted by all stakeholders, to integrate the KITSO training and the clinical preceptors into a single training programme. This should be led by the Ministry of Health, and supported by ACHAP as the major funder of these programmes. The target should be an outcomes based training programme that meets the needs of Botswana, is sustainable over the next 2 to 3 decades and is coordinated by the Ministry of Health.\(^{238}\)

The report goes on to list some of issues that require consensus. This study, which was performed at the same time that the committee on clinical training was formed, created a political environment that motivated all of the "stakeholders," in development terms, to work together to create a more integrated and coordinated clinical training program.

\(^{236}\) It is an interesting point that Mr. Navario had a public health degree and not a medical degree. He was not a doctor unlike almost all of the other attendees at the Clinical Training Committee meetings, at the ARV Team, and within the Ministry of Health.


It was not just that there was a moment of funding anxiety that created change. Dr. Mezonde used this moment to orchestrate change with outside assessments and expertise. The committee on clinical training brought the groups involved to the same table, and the external review reminded them of the importance of collaboration and coordination under the direction of the Ministry of Health. Disagreements persisted—about methods of clinical training, about how much emphasis to place on adult versus child treatment, about physician versus nurse training, to give a few examples. Nevertheless, everyone knew the plan, and ACHAP and the Ministry of Health could use it later as a point of reference to assess the progress of clinical training. At the very least, the plan for a future clinical training program was created with everyone at the same table. Even if the members of the committee deviated from the plan, Dr. Mezonde had a reference point from which to critique them and the Ministry of Health remained in charge of the direction of HIV clinical training.

Conclusions

There were major international pressures to frame HIV drug therapy as a technical problem of clinical knowledge transfer. African doctors had little experience with the complicated HIV drug therapy regimen, so it made sense to develop interventions that transferred the enormous knowledge and experience of Western HIV specialists to African doctors, nurses, social workers, pharmacy and laboratory workers in Botswana’s health care system. This inclination towards knowledge transfer as a development model was reinforced by the international climate of fear over poor clinical care and poor patient
adherence as potential triggers for the evolution of a drug-resistant HIV strain and a possible pandemic.

Knowledge transfer was also consistent with the expertise and networks available to one of ACHAP's parents, Merck, which as a pharmaceutical company was very invested in the application of science to medical care. Similarly, Harvard University, as a premier research institution, perhaps the premier research institution in the world, was very interested in providing clinical training on the knowledge transfer model. The international development community rewarded technical interventions because they were portable and thus applicable to more than one developing country, and because the very fact they are universal makes them comprehensible and easily packaged for presentation at events such as the International AIDS Conference or on a website. Technical transfer suited the needs of academic institutions and technically driven corporate donors.

However, there is a problem with understanding health development projects as technical transfer. Although knowledge is necessary, it is not sufficient. Bureaucratic change created the HIV clinics, which were necessary for HIV drug therapy in Botswana. Presented in this chapter was evidence that experts are not just useful for the knowledge they bring, but also for their ability to negotiate existing power structures. In Botswana, the Ministry of Health expected foreign expertise to play this role and so deployed experts in strategic ways to effect bureaucratic change.

Having experts--doctors in particular--play the role of power brokers had its problems, though. One was that they were often more prepared, in their expectations and
experience, for the work of knowledge transfer than they were for the work of negotiating or brokering power. In addition, making clinical training about knowledge transfer made it difficult for the ARV Team's Clinical Training Coordinator to represent bureaucratic change as an important outcome of clinical training.

The institutional context of international health development makes it easy to assume that the success of technical people like doctors is due solely to their knowledge and not to the power ascribed to the knowledge and to their willingness to act on that power—in this case for positive bureaucratic change. This makes much of the work of the ARV Team, the social and political aspects, invisible to the wider world. The terms of engagement with international health development excluded some of the most effective work of doctors that were trying to create positive social change.
Expatriate nurses acting as preceptors were just as effective as expatriate doctors in negotiating the reorganization of care in the hospital to make organizational space for HIV clinics. In the last chapter I discussed how the ARV Team’s clinical preceptors assisted HIV clinics in the first six months, and I used the experiences of the preceptors in Hukuntsi to discuss how clinical training for preceptors was less about teaching and more about facilitating organizational change. Now I will turn to the citizen nurses in the HIV clinic, who were not brought in as experts, and examine their role in organizing HIV clinical care.

HIV clinics presented nurses with new challenges. The HIV clinics were organized in an unusual way, with all aspects of patient care integrated into one unit. The pharmacist, or pharmacy technician, dispensed not from the pharmacy but from the HIV clinic; a social worker was onsite; and the laboratory results came from offsite and onsite labs. All of this was coordinated by nurses who made the HIV clinics work as integrated units. However, unlike members of the ARV Team, national bureaucrats or Chief Medical Officers, nurses did not take part in national ARV meetings. Their problems were either addressed onsite or were brought to these meetings by the Chief Medical Officer (CMO) and/or ARV manager who represented them. As a result, nurses had no way of sharing their solutions at a national level.239

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239 The ARV Team did have a way of addressing the concerns of nurses from a national level, by 2004 the ARV Team had included a nurse to support nurses’ needs in the HIV clinics but nurses did not have a way of meeting each other to participate in national decision making.
Unlike the preceptors and HIV experts who worked at the ARV Team who were outsiders, American and European women and men, the nurses who worked in HIV clinics were insiders, Botswana-born and state employees. While they played a central role in making the HIV clinics work, these nurses were considered by both the national health care system and by development workers as local actors and non-technical staff, conceptions which had profound consequences for their access to national decision making. Nurses were important workers, but their role in problem solving was invisible at the national level.

Setting the Scene—Mahalapye Hospital

Mahalapye is the sixth largest sub-district in Botswana, with a population of about 100,000 people, located on the eastern side of Botswana along a railway line and a major highway that connects South Africa, Botswana, Zambia and Zimbabwe. Mahalapye is located between two of Botswana’s major cities, Gaborone and Francistown. The hospital there serves a populous area and is busier than many other sub-district hospitals, though it is much smaller than the referral hospitals at Serowe and Gaborone. Mahalapye hospital is on the opposite side of the tracks from the city center where people shop and where the main Ministry of Local Government building, the Rural Administration Center, is located. The hospital in Mahalapye is on the same road as the offices of the District

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Health Team, a team of rural doctors who rotated through the Ministry of Local Government's rural clinics.

The hospital is a sprawling complex of buildings located behind an impressive gate. Just before the gate and to its right is a collection of small shacks where women prepare and sell food during lunch hours. To the left is the outpatient clinic with its own fence, waiting area, and series of low buildings. The HIV clinic is located beyond the gates to the left of the network of buildings making up the main hospital. The clinic is located in two buildings, each a series of rooms opening either to an outdoor corridor where patients wait or directly to the outside.

The clinic buildings were originally an abandoned school that had been renovated as a resource center in 2002 with a grant from ACHAP. As described in Chapter 2, resource centers were built for social workers to provide HIV counseling and were outfitted with the amenities needed to become outpatient HIV clinics when drug therapy became available. The HIV clinic had functioned as a resource center for more than a year and had housed the social workers and a library with health educational materials on HIV and AIDS for patients. The social workers and the library, whose librarian was paid by ACHAP, were still located in the HIV clinic when I began my observational research there in 2004. The social workers had moved to the unattached, adjacent part of the clinic when hospital staff at Mahalapye started providing HIV drugs in October of 2003.

The yearlong delay from when the resource center was built until the HIV clinic started functioning had not been unexpected. The national ARV Team’s plan had been for HIV drugs to be available first at referral hospitals, then at district and sub-district
hospitals, and finally at primary care hospitals. Referral hospitals were better prepared to provide HIV drug therapy right away because they already had all the necessary staff. The ARV Team's agreement with drug manufacturers required that HIV drugs be dispensed by licensed pharmacists. Sub-district hospitals only had pharmacy technicians at the time. The position of pharmacist had to be created at the national level and pharmacists had to be recruited internationally before the head of the hospital, the CMO, could hire them at these hospitals. The Mahalapye hospital had to wait for a pharmacist to be recruited in Nigeria through an ACHAP-funded recruiting drive. The pharmacist was the final staff member needed to run the HIV clinic, all of the others were re-assigned from elsewhere in the hospital.

Before the pharmacist was hired, the ARV Team came to Mahalapye and asked the CMO and ARV manager to create a plan for providing HIV drugs in their hospital. The plan focused on staffing needs. The CMO and ARV manager filled out paperwork describing how they would redistribute staff from the hospital to the HIV clinic. The HIV clinic was set up as its own entity, and the staff involved had an initial meeting with the ARV team and then ongoing meetings with the CMO and ARV manager. The staff at these meetings included nurses assigned to the clinic, social workers, the pharmacist and pharmacy technician, and the head of laboratory. Later in this chapter I will examine how nurses' participation on the organization and management empowered them to take a greater lead in managing care in the HIV clinic.

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It took several months to redistribute staff and have them trained to provide HIV drugs. In the first six months, the ARV Team's Clinical Training Coordinator had sent preceptors, both an English nurse and a doctor, to help set up the clinic. The expatriate nurse had trained most of the nurses in the hospital and surrounding rural clinic. She had also helped organize the nurses' referral network. The doctor had trained physicians on how to provide HIV drug therapy. His labor also eased the physician shortage at the hospital by ensuring that the HIV clinic always had a doctor available. By March, when I started my observations, the expatriate nurse and doctor had just finished their time there, and the clinic staff had taken over the responsibility of providing care. The smooth functioning of the HIV clinic was constantly threatened by the ever-growing number of patients and the loss of labor and management support. During this critical period, nurses were taking a leading role in solving many of the crises that arose.

Nurses had administrative work in addition to their patient care duties. They guided patients from their first HIV-positive test through their enrollment in the clinic, CD4 screening, and first physician visit. Nurses scheduled patients, tried to contact no-shows for rescheduling, filled out paperwork on patient care, issued forms for and directed patients through the complicated process of laboratory testing and imaging required for drug therapy. Because of this close interaction between nurses and new

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patients, nurses had firsthand knowledge of some of the barriers to care that patients faced.246

Nurses wanted their fellow citizens to have access to HIV drug therapy, but at their time and resources became stretched by ever larger numbers of patients nurses had to make hard decisions about how to balance the needs of different patients. Nurses worked in the hospital’s wards taking care of patients dying of AIDS, so among them there was a palpable sense of urgency about getting patients access to HIV drugs. However, their concern for adding new patients had to be balanced with the needs of returning patients, who were seen every three months. At these visits the doctor and nurse team reviewed the efficacy of the drug therapy with laboratory tests and asked the patients about drug side effects. Physician’s time were one limiting factor in how many returning patients could be seen, but nurses time was the crucial limiting factor for new patients. New patients were guided through the enrollment process by nurses, who had special knowledge of the needs of new patients because they themselves managed the process.247 To understand HIV clinic nurses’ concerns, one has to understand the process by which new patients gained access to HIV drugs.

Nurses’ Work, Part One—New Patient Screening

To understand the problems nurses encountered with new patient screening, I will begin with an examination of a patient’s path from positive HIV test to HIV drug treatment. This process was called new patient screening. Before becoming a patient, a
person first had to follow these steps: pre-test counseling for HIV testing, blood draw for HIV test, positive result from blood test, post-test counseling. Then that person came to the HIV clinic for new patient screening, which included registration as an HIV clinic patient, a blood draw for CD4 screening, and an x-ray for tuberculosis screening. A patient who had CD4 counts of less than 200 and who was tuberculosis negative qualified for enrollment in the ARV program and was scheduled for adherence counseling. Enrolled patients returned for adherence counseling, after which they were scheduled to see the doctor. They returned, had their doctor’s visit, and picked up their prescriptions. The process by which a person became an HIV clinic patient was long and complicated. Each step will be discussed in greater detail below.

The first step for any new patient was testing positive for HIV. There were two places to be tested: the Voluntary Counseling and Testing site or the hospital. The voluntary counseling and testing program (VCT program) was also named Tebelopele, a Setswana word that meant “look to the future.” It was funded by USAID money (an arm of the United States government that distributes international aid to developing countries.) The hospital’s social workers also provided HIV counseling and testing for patients in the wards who were referred by a physician or who came as walk-ins. The hospital-based testing took longer, partly because the rapid test machine was broken, partly because materials were in short supply, and partly because the tests run at the hospital were of the more accurate, time-intensive type. The voluntary counseling and testing site had same-day testing. The doctor who served the rural clinic referred a patient

to the voluntary counseling and testing when the need for HIV drugs was urgent. Both testing sites provided not only testing, but also pre-test counseling and post-test counseling. For people who tested negative for HIV, post-test counseling consisted of information on how to stay negative; for those who tested positive, post-test counseling consisted of information about the biology of HIV and about living with HIV. After picking up a positive HIV result, a patient-to-be had to take it to the hospital’s HIV clinic in order to receive new patient screening.²⁴⁹

The hospital was the ultimate destination for patients who needed HIV drug treatment, because at the time of this study HIV drug therapy was only available at the hospital’s HIV clinic. The HIV clinic was a short walk from the hospital’s main gates. Most of the clinical care for ambulatory HIV patients was provided in these buildings. Examinations took place in a series of attached rooms with a covered walkway in the front. The space for clinical care was between a conference room at one end and a library at the other. The space consisted of four rooms; it was in these four rooms that patients spent most of their time. The one that opened onto the walkway was where patients were weighed and registered by the nurses at a large table piled with files. The two examination rooms and the counseling room were located off of this registration room. Waiting patients sat outside on benches under the covered walkway. Nearby was another building where the social workers had their waiting room and three offices and the pharmacist had his waiting room and office.²⁵⁰

When would-be patients arrived with positive test results, nurses started files for them and screened them to see if they were eligible for treatment. First, patients were screened for tuberculosis either clinically or through a chest x-ray. (Tuberculosis treatment was administered before HIV treatment because many patients responded so well to tuberculosis treatment that HIV therapy could be postponed.) Then the nurse or the laboratory staff drew blood for a CD4 count and viral load. Patients were instructed to return to the hospital, pick up their results from the laboratory, and take them to the clinic (unless this was done by a staff member). The CD4 count, a measure of the immune system’s health, determined whether one was eligible for HIV therapy. A high count was good for HIV-positive patients; it meant that the virus was not compromising their immune system. If it was above 200, then the risk of the drugs, including side effects and resistance, was considered greater than the benefit of treatment at that time. Those who did not qualify for drug therapy had their files set aside. They were expected to need drug therapy at a future point and were instructed to return periodically to the clinic so that their CD4 count could be tested.251

HIV positive patients being screened for eligibility often experienced a long wait for results of their CD4 count. This was in part because the laboratory test was not done on the hospital grounds. Instead, the blood was sent to the capital city for testing in the Harvard-run laboratory. A driver took blood to the laboratory and returned to the hospital with tested samples. At the time of my observations, results were taking longer and

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251 Observations at HIV Clinic, Mahalapye, March 22-April 28, 2004. Although the intention was to follow up with these patients, there was no set interval for reassessment because the staff at the nascent clinics were overwhelmed by their immediate clinical care duties.
longer to return, often four to six weeks. Without a CD4 count, one could not qualify for HIV drug therapy unless hospitalized with an AIDS-determining illness. Some got sicker waiting. Some became lost to follow up: perhaps they sought care in another city or died without reaching the hospital. What happened to those waiting for HIV drugs was a major concern of the staff at the clinic, including the nurses. But nurses, and hospital staff in general, had no ability to influence the wait time for the CD4 lab reports since they were not conducted at the hospital. The ARV site manager and the CMO had the responsibility of dealing with problems at the national level, and they both brought up this problem at national meetings with the ARV Team.\textsuperscript{252}

On the day patients found out whether they qualified for HIV drug therapy they picked up their CD4 and viral load results at the hospital's laboratory, took the results to the clinic, and, if they qualified for therapy, were scheduled for adherence counseling. The wait time for an appointment for adherence counseling varied but at times was more than two weeks. Nurses were very distressed that a patient who had already waited a month or more for test results would then have to wait again for adherence counseling. Nurses wanted to be able to give adherence counseling immediately to those who had a qualifying CD4 count; instead they had to tell them to return at a later date because staffing, space, and coordination with Harvard labs was beyond their control.\textsuperscript{253}

New patients waiting for adherence counseling would show up early in the morning, sit on the benches under the walkway, and wait for their names to be called.


\textsuperscript{253} Observations at HIV Clinic, Mahalapye, March 22-April 28, 2004.
Nurses instructed them to bring along a family member, a caretaker of the patient’s choice, to both adherence counseling and to doctor’s visits, if possible. Patient–family member pairs would sit with a nurse in a small room to discuss HIV and drug therapy. In adherence counseling, nurses went into great detail about the biology of the disease, the course of drug therapy, and a patient’s responsibility to eat well and abstain from beer and traditional medicines. Nurses also assessed a patient’s understanding of the disease, his or her willingness to comply with instructions, and his or her support structure. When support structure was lacking, a patient would be referred to the social workers.

Adherence counseling was time-consuming. If a person understood the disease and the responsibilities of drug therapy, and if the person’s support structure was adequate, a nurse would then schedule a return visit with a doctor. Only when a person had met all these criteria was he or she officially a patient of the HIV clinic.²⁵⁴

For their doctor’s visits, new patients would again show up early in the morning and wait on benches under the walkway until called by the nurses for registration. Some had family members with them and some did not. When the physician arrived, the patient would be seen by him and by the nurse translator in an exam room. The physician reviewed the patient’s medical history and physical health. Some patients, such as women of childbearing age, received different drug regimens, and the doctor went over what drugs he was prescribing. Then the nurse explained what the drugs looked like and how they were to be taken. For this she used a visual aid that included examples of the actual pills and a chart describing when and how to take them. The nurse and doctor often

emphasized to patients the importance of abstaining from alcohol and traditional medicine while on drug therapy. Patients would also be warned about side effects. The doctor told them about the minor, expected side effects and the major side effects that required their immediate return to the hospital. At the end of the doctor’s visit, patients received a prescription for drug therapy. The nurses also scheduled patients for their follow-up appointments in three months and gave them the forms needed to get their blood drawn one week prior to their return.255

Patients walked over to the adjacent building with their prescriptions and waited in a small room to see the pharmacist in his office. This office was only used for dispensing HIV drugs. The pharmacist personally dispensed HIV drug therapy, although he sometimes needed his technician to translate for him since he did not speak Setswana. He focused on giving patients directions on how to take the drugs and, when they returned, assessing whether they had taken the correct number of pills. When patients appeared confused about how to take their pills or there was some reason to believe they were not taking them correctly, the pharmacist referred them back to the nurses for additional adherence counseling. New patients, after all the intensive counseling they had received over the past few weeks, were rarely confused about how to take the drugs. They had their prescription filled and returned home. Three months later they would return to the clinic—no longer a new patient but a returning one.256

The description above is the routine process of new patient screening at the HIV clinic in Mahalapye. However, if patients needed social services, nurses referred them to a social worker. If patients were having trouble getting to the hospital, social workers would arrange transport vouchers. If nurses were concerned about a patient’s support network, social workers assessed the patient’s home and family situation. This was rarely done for the HIV clinic, but when discharging hospital inpatients it was routine. If patients were not eating well because of poverty, social workers at the clinic could also liaise with social workers at the Rural Administration Center to help patients get food baskets. In addition, the social workers provided grief counseling and counseling for suicide prevention. Social workers were the gateway to these social services for the entire hospital.

For the HIV clinic, social workers provided additional services. Social workers and nurses shared responsibility for follow up—finding the patients who did not attend their appointments and forming support groups. The first time patients did not attend an appointment the nurses put their file in the “Did Not Attend” pile. Most patients would come to the clinic after a day or two, without being contacted, and either be seen at that time or rescheduled for later. Once a week the nurses would call the patients in this file. Most of the time the phone was no longer connected or there was no way to leave a message. Sometimes several attempts were made, but at some point the nurses, or other

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258 Interviews with Social Workers, HIV Clinic, Mahalapye, April 7, 2004.
workers delegated by nurses, would fill out the appropriate form to refer the patient's file to social workers.\textsuperscript{259}

Initially if patients did not attend their appointments, social workers would try to contact patients by phone. If the social worker could not reach the patient by phone, the social worker would go talk to the Family Welfare Educators, who were based out of the rural health care system, and ask them to find the patient or someone who knew what had happened to the patient.\textsuperscript{260} Family Welfare Educators had less formal education than nurses or social workers, but had extensive local knowledge of who lived where and with whom. They also assisted social workers in the rural health care system with home visits and helped make hospital discharge plans for home-based care. To follow up on patients from the HIV clinic, a Family Welfare Educator would find the patient or inquire from the family where the patient was. Sometimes the patient was away: traveling to work, searching for work, or visiting family. Sometimes the patient had died. Sometimes the patient needed something as simple as a transportation voucher or as complex as the encouragement of family support. The Family Welfare Educator would report back to the hospital's social worker who would then inform the nurses.\textsuperscript{261}

Family Welfare Educators were not a new category of worker in the dedicated HIV care system; they provided services for both the rural health clinics and the hospitals. This type of follow up was also available to the outpatient clinic that did not focus on HIV, but international and national concerns about poor adherence had made

\textsuperscript{260} Interviews with Social Workers, HIV Clinic, Mahalapye, April 7, 2004.
\textsuperscript{261} Interviews with Social Workers, HIV Clinic, Mahalapye, April 7, 2004.
follow up a priority when creating the HIV clinic. Most patients at the HIV clinic never
required this level of investigation, but social workers had the resources to do this type of
detailed follow up. They had the manpower and had been given a vehicle by ACHAP to
help them follow up on HIV clinic patients.262

Social workers and nurses also worked with local support groups for People
Living With HIV (PLWH). These groups were support groups for patients and were
understood by health care providers as one way to promote good adherence. The social
workers organized these groups, recruiting patients and, initially, running the meetings.
Many of these support groups had been created when the HIV clinic was formerly a
resource center. Patients met in the HIV clinic conference room; a social worker or nurse
attended so that patients could ask questions. When the HIV clinic replaced the resource
center, nurses became more involved in hands-on patient care, and social workers
continued to run these meetings, although it was never clear whether these meetings were
part of the work of the HIV clinic or an extension of the usual duties of the social
workers.263 This distinction was important only because, as will be discussed shortly,
nurses and social workers were in constant conflict over who was part of the HIV clinic
and who was not.

Social workers played a supporting yet important role in new patient screening.
They were indispensable when a patient did not attend an appointment or needed access
to social services or a support group. New patients could be referred by nurses to social

262 Interviews with Social Workers, HIV Clinic, Mahalapye, April 7, 2004.
263 Interviews with Social Workers, HIV Clinic, Mahalapye, April 7, 2004; Observations of social workers at HIV Clinic, Mahalapye, March 22-April 28, 2004.
workers and vice versa, but social workers did not consider themselves part of the HIV clinic staff. Nurses and social workers did not have a close working relationship in this hospital. They coordinated their care of HIV clinic patients through a referral system where nurses used a form to send patients or their files to the social workers. Nurses would have preferred that social workers have more direct responsibility for patient care in the clinic. Their efforts to negotiate with social workers will be discussed later in this chapter.

If all went well, new patient screening involved, at minimum, four trips to the hospital’s HIV clinic before a patient left with medicine, and each of these trips involved a visit with a nurse. Nurses spent much of their time shepherding new patients through the complicated process of screening, but this was not their only duty. They were essential for all aspects of clinical care in the HIV clinic.

Nurses’ Work, Part Two—Translation

One might expect nurses to interact with patients more than doctors do; they provide the care and the doctors manage it. But in Botswana’s HIV clinics the role of nurses in patient care was amplified by their ability to speak Setswana, a language that patients spoke but doctors did not. The nurses were all female citizens of Botswana and spoke Setswana most of the time. Their interactions with each other and with patients were all carried out in Setswana. This included morning meetings, lunch discussions, and patient counseling sessions. Nurses spoke English to the doctors and to me, but not to

patients or to each other. Most patients spoke Setswana to one another and to the nurses. Elementary school was taught in Setswana for four years before English was taught in school, so a person’s ability to speak English depended on their age and their level of education. Educated people spoke both English and Setswana. Since free education only became widely available after the 1980s, the younger a person was, the better that person’s English tended to be. Still, most patients spoke Setswana when talking to the nurses and the doctors.266

The doctors, who were expatriate Africans, generally did not speak Setswana well. Most could only greet people in Setswana. All of the doctors spoke English, which was the official language of Botswana and its health care system. Nurses translated in almost all physician–patient interactions. Because of the cultural and language barriers, doctors gave nurses a prominent role in educating patients and eliciting their health complaints.267 One example of this that I observed happened when a young woman came to the clinic pregnant. She at first flatly denied that she was pregnant, saying she had a uterine cyst. To convince her, the physician had to leave the office to find an instrument to listen to the heartbeat. The machine was so loud that the physician in the next office came over happily exclaiming that he heard a baby’s heartbeat, an unusual experience in an HIV clinic and one that under other circumstances might have been cause for celebration. The patient was very unhappy and almost started crying. The doctor, as he

266 On one occasion a young woman, who was trained as a health educator and who was one of the caretakers of an elderly female relative, described her relative’s symptoms in English. Some patients would also speak English to the doctor if asked a question directly in English.
later explained to me in private, was concerned that this woman would try to abort the child illegally, which might result in serious health consequences. He started to explain how a child was a blessing, but after a sentence or so he stopped, turned to the nurse, and said, “Tell her.” The nurse launched into five full minutes of rapid Setswana on a similar theme as the doctor’s discussion, but with an intensity and fluency he couldn’t have matched. The doctor could not function without a nurse by his side.

Translating for doctors was only one of a nurse’s many responsibilities in the clinic and was not the only one that depended on her ability to speak Setswana. Nurses performed adherence counseling in Setswana when orienting new patients. Adherence counseling was particularly time-consuming since it was done one on one and the nurse had to make sure that the patient understood the information. It was this responsibility that the nurses found most difficult to keep up with. They made constant efforts, which will be discussed in more detail later, to reduce the proportion of their time spent doing adherence counseling. They tried to limit new patients to certain days of the week and to shift this responsibility either to the social workers or to the nurses in the rural clinics.

Nurses were central to all of the functions of the HIV clinic. Their language abilities meant that either they provided patient care directly or they mediated the care of doctors. Their administrative duties were also extensive: nurses were responsible for new patient screening from the time of opening a patient’s file until the time for filling a patient’s prescription. Through a system of forms, schedules, and files, nurses coordinated new patient screening. It was a time-consuming process for both patients and

269 Ibid.
providers, so nurses enrolled the help of ancillary clinic staff—including the librarian, data
entry manager, cleaner, and me—to get the paperwork done.

Nurses’ Work, Part Three–Paperwork

Every time a patient saw a provider other than a nurse or doctor, a nurse had to fill
out a form telling the social worker, lab technician, or whomever what it was that the
patient needed. Forms were the tickets on the (metaphorical) bureaucratic railway that
moved patients from one point of care to another. Forms were required for patients to see
the laboratory staff for a blood draw, the x-ray technicians for tuberculosis screening, the
social workers for follow up or social services, the pharmacist for drugs. For all but
pharmacy scripts, forms directing patients through the clinic’s care were provided by the
nurses. Paperwork, ever-growing piles of files and forms, demanded the attention of
nurses and pulled them away from direct patient care. To keep from becoming buried in
it, nurses had to recruit assistance. They actively recruited ancillary staff, including the
cleaner, the librarian, the data entry manager, and me, to fill out routine forms and assist
patients in finding the location of the service they needed. This delegated paperwork was
in addition to the ancillary staff’s usual duties.270

Filing was one of the most overwhelming aspects of paperwork. The number of
files, like the number of patients who required care, simply kept multiplying. Files

270 Observations at HIV Clinic, Mahalapye, 22 March-28 April 2004; Other hospital’s HIV clinics handled
some of the paperwork differently, although it was a managed by the nurses at all sites. At Serowe there
were data entry clerks who kept the electronic files up to date, but nurses still used the paper filing system.
At the time I observed at Serowe the hospital system in Botswana was having a new computerized
electronic medical records system installed. When it worked, it was replacing some of the paper referrals
that nurses had to write. Observations at Serowe HIV Clinic, May 3-18, 2004.
expanded beyond the capacity of the filing cabinet, which was located in one of the examination rooms. There was no space to create new files, nor was there space to file lab results, sort files for follow up, or do data entry. The result was that the one filing cabinet became packed more and more tightly with files. The HIV clinic's exam rooms, although secure, were cramped and heavily used for patient care. The library was a very large space with tables and a computer; however, nurses were not sure whether they could store confidential patient files in the library since it was public space. Instead it became the location for nurses, or their delegates, to sort and fill out the reams of paperwork. As long as someone was with the papers, they were secure; when paperwork was finished, files were crammed back into the filing cabinet in the examination room.271

Two people worked in the library, the data entry manager and the librarian. Unlike all the other hospital workers, who were government employees of the Ministry of Health, they had been hired directly by ACHAP to assist the HIV clinic. The data entry manager was hired for his computer skills. The HIV clinic was computerized before the rest of the hospital and had its own data management system. The ARV program tracked patients outcomes with a database designed by a member of the ARV Team, who also provided support for the database. The database kept track of patients both for the purpose of patient care and for the purpose of statistical tracking so that sites could be compared at the national level. These statistics were compiled by the data entry manager and the ARV manager and submitted regularly to the national ARV team.272
Hiring a data entry manager was necessary because most of the nurses had no experience with computers and one had never used a keyboard before. This became clear to me by the hysterical laughter from the other nurses when she once sat at the computer "typing" as a joke. When nurses needed an agenda typed, usually the data manager or I assisted them. Physicians were more experienced with computers, but they were in short supply and all their time was spent seeing patients. Even if the nurses and doctors had entered their own information in the database, the laboratory results also had to be entered. There was no computer in the laboratory, though, and the laboratory technicians had no more ability to use the computers than the nurses did.

This gap was filled by the data entry manager, who had clerical training. Mr. Barero, as I will call him here, took every paper file of the patients seen that day (or the day before if he had fallen behind) and entered the necessary information into the database.\textsuperscript{273} His computer was located in the library, and he was surrounded by stacks of files. The ones on the left were to be entered and the ones on the right were to be filed away. His workload varied over the course of the month. Before the national ARV meetings, which occurred quarterly, he spent a lot of time frantically entering data and poring over the results with the ARV manager; otherwise he usually he had some free time, particularly in the morning when nurses were busiest and he assisted them in many ways.\textsuperscript{274}

Perhaps because Mr. Barero was located in the library or because he was already so intimately involved in paper files, nurses recruited him to help them with the paper

\textsuperscript{273} A pseudonym is used here because Mr. Barero did not waive confidentiality.
\textsuperscript{274} Observations at HIV Clinic, Mahalapye, 22 March-28 April 2004.
files. They encouraged him to pick up the new patients' laboratory results from the lab and file the results in the patients' paper chart. Although, theoretically, the patient number and name on the form from the lab was sufficient to enter the data correctly, the paper files were created and the laboratory results filed before Mr. Barero entered the data in the computer. It was understood that the physicians and nurses needed to have paper files up to date when providing clinical care, and this took precedence over data entry. The statistical data was useful once a month, but the files were used daily.

Every day Mr. Barero provided the nurses with a computer-generated list of patients to be seen. Nurses used this list to pull the patients' files from storage, but they still made up a paper schedule. They were ambivalent about data entry. When patient files would go missing, they were most often found in the stacks around the computer used for data entry. Nurses' efforts to make sure that paper files were complete did ensure that the computer data was complete, but their motivation for doing this was patient care, not improving the accuracy of database information. Nurses contributed to the computerized data through their careful filing and recording. But they were much more invested in the paper files used in the clinic than they were in computer data needed for national advocacy by the ARV manager and the CMO.

The librarian was a young Motswana woman, who here I call Ms. Mpho. She stocked the library and helped patients find informational pamphlets on topics they might be interested in. Although this is what she was officially hired to do, it did not take up much of her time. Patients did not seek her out, and when she distributed pamphlets to

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276 A pseudonym is used here because Ms. Mpho did not waive confidentiality.
those waiting to see the nurses or doctors, the pamphlets were politely, though unenthusiastically, received. Ms. Mpho did not resist taking on extra duties if it helped the nurses get their work done. She filled out most, if not all, of the forms referring patients to the social workers for the extensive follow up described above. She also spent a lot of time giving patients directions to the laboratory. Since Ms. Mpho had to stay in the library in case patients came in to request resources, the person who cleaned, an older Motswana woman, often guided patients around the hospital ground if they were weak and had no family member to assist them.277

Nurses expected all of the clinic’s ancillary staff to contribute towards keeping the clinic running. We--the cleaner, the data manager, the librarian, and me--worked as one unit to keep the clinic running under the direction of the nurses, while they tended to patient care tasks such as translation and adherence counseling.278 This paperwork was a necessity: files kept track of how patients were doing; schedules determined when and where a patient should get care; forms linked patients to other providers to insure coordinated care. Nurses not only saw patients more than other providers; they were also responsible for the forms that were the physical representation of referral links. Nurses were at the center of patient care, whether such care involved paper or people.

Nurses’ Work, Part Four—Managing Barriers to Care

The heavy workload made nurses recruit ancillary staff to do paperwork, and it made them eager to streamline new patient screening. There was a palpable sense that

277 Observations at HIV Clinic, Mahalapye, 22 March-28 April 2004
278 Observations at HIV Clinic, Mahalapye, 22 March-28 April 2004.
any day the workload might overwhelm the nurses and the clinic would grind to a halt. They took no tea time and they routinely left the hospital after eight hours of work or more. Before working in the HIV clinic these nurses had been able to leave earlier and have breaks, but as the workload in the clinic expanded, they were increasingly pressed for time. As one nurse in another hospital explained to me, the staff in the HIV clinic, unlike other outpatient clinics, had a long-term responsibility to care for every single new patient for the rest of his or her life. One nurse discussing the potential for burnout among nurses in HIV clinics summed it up in this way: “We don’t discharge patients.” Fear that the number of patients would overwhelm the capacity of the clinic was part of what drove nurses to negotiate with social workers and work to develop a referral network where the rural clinics would do much of the patient care. Nurses feared that just as one plan to address patient load and wait times was beginning to work another wave of patients would flood in due to a new national advertising campaign, a local politician's publicized comments, or the introduction of universal screening.

Most of the HIV clinic’s problems had been problems experienced by the entire hospital for a long time. These included physician shortage, late delivery of drugs, and reagent shortages requiring the lab to borrow supplies from nearby hospitals. Nurses had to pick their battles and decide what problems they could solve and what problems were out of their control. Some of the HIV clinic’s problems were ones that could only be addressed at the national level. These included the long wait for CD4 results from Harvard’s laboratory, missed deliveries of laboratory supplies from Central Medical

279 Observations at HIV Clinic, Princess Marina Hospital, July 21-30, 2004
Stores, and the shortage of doctors. Nurses experienced these problems while running the clinic but had no ability to address them since they were not problems that could be solved within the hospital. At this site, nurses trusted the CMO and the ARV manager to take these problems up at the national level, and they did so actively, although often with little result. Mahalapye was so successful at treating patients that the CMO was often told that until the clinic was struggling, newer sites would take priority. Even though they felt overwhelmed and concerned that collapse was imminent, he and his nurses were managing their problems so well that the national ARV team considered their HIV clinic one of the most successful and least in need of assistance from the national level.

Much of the success in Mahalapye was a result of active nurse management of HIV clinic problems. Nurses, with the backing of the CMO, fixed many important problems with clinical care. They accommodated the increased workload. As mentioned above, they created a flexible rotation schedule to manage their work; they also worked harder and longer and recruited ancillary staff to assist them. They tried to reorganize the way work was coordinated within the hospital and between the HIV clinic and rural clinics. Sometimes they were successful. The rural clinics were screening increasing numbers of new patients. This effort had been started by a nurse preceptor sent by the ARV Team, but she had recently finished her six months in the clinic and moved back to England. Nurses at the hospital’s HIV clinic actively maintained the relationships that the

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281 Observations at HIV Clinic, Mahalapye, March 22-April 28, 2004; Observations with ARV Team, January 30-February 3, 2004
nurse preceptor had established with rural clinics by training their staff members on adherence counseling and procedures for clinic referral.282

Not all of their attempts to reorganize HIV clinical care were successful, however. During my tenure there, nurses tried to coordinate lab results with the HIV clinic’s schedule. This effort failed. They also had asked the social workers to take on the responsibility of adherence counseling, again to no effect. Why nurses failed at both of these attempts to reorganize care will be described below. Whether their individual efforts succeeded or not, nurses in Mahalapye spent a large portion of their time trying to solve the HIV clinic’s problems in addition to managing patient care.

As mentioned, nurses failed to convince the laboratory staff to coordinate the return of CD4 results with adherence counseling. The lab was asked to give out CD4 results only on days that nurses did adherence counseling for new patients. Nurses wanted to assess whether a patient was eligible for therapy and, if so, give that patient adherence counseling at the same time. Although the head of the laboratory posted a sign, in English, about when laboratory counts should be picked up, the patients never got the message, and the laboratory would not enforce the policy. The head of the laboratory preferred that nurses pick up the results or send another clinic staff member to pick them up. But nurses were too busy to pick up patient results every day, so this rarely happened. Instead, patients often picked up their CD4 results and appeared at the clinic on a day

282 Observations at Clinic Adherence Counseling Meeting, Shoshong, 2 April 2004.
when the nurses did not have time to give them adherence counseling. The result was that patients were scheduled for counseling at a later time.\textsuperscript{283}

This created a wait between the time a patient qualified for therapy and the time the patient was counseled, hence a delay between qualification and treatment. Nurses blamed the head of laboratory for this situation. However, even if the head had only given out results twice a week, it is probable that the clinic would still have had too few nurses and too little space to ensure that every patient with CD4 results could have same-day counseling. Nurses had tried to reorganize their work, but they found that the laboratory staff, who themselves were overwhelmed with extra work, had their own ideas about when and how to return CD4 results to patients. Neither group changed how they provided care; in turn, patients ended up waiting--first for their CD4 results, then for adherence counseling.\textsuperscript{284}

Adherence counseling was the focus of most of the nurses' efforts to reduce patient wait time and their own workload. Nurses recognized the importance of counseling but felt that these detailed conversations with each patient took up an inordinate amount of their time. If a nurse was out because of illness, it was difficult for the other nurses to accomplish all of her duties. Adherence counseling was also difficult due to space limitations in the clinic. It had to be done privately, and there was only one office dedicated to it. If the nurse assigned to adherence counseling fell behind schedule or if returning patients required remedial adherence counseling the result was a space crunch. The head nurse’s office was occasionally used, but it was felt that taking away

\textsuperscript{283} Observations at HIV Clinic, Mahalapye, March 22-April 28, 2004.
\textsuperscript{284} Observations at HIV Clinic, Mahalapye, 22 March-28 April 2004.
space important to her managerial duties was inappropriate. With just one office available, only one patient could receive adherence counseling at a time. Such counseling was too important to cut short. So, if the nurses fell behind because of it, they would simply have to stay later. There was no other way to speed up their work and shorten the line by seeing more patients. Nurses' space and time limitations led them to encourage other workers to do adherence counseling or, even better, all of new patient screening.\textsuperscript{285}

During her six months at the HIV clinic, the nurse preceptor had begun a referral system to encourage rural clinic nurses to do some of the new patient screening before the patient reached the hospital. She created the referral forms, trained most of the nurses in the rural clinics, and created a plan for a referral network that put "mother clinics" with more resources as the first point of referral for smaller clinics and health posts. The nurses showed me the forms she had created and made it clear that without her assistance in this matter and the encouragement of one of the rural health team doctors, the nurses would not have felt as comfortable training and working with the nurses who ran the rural clinics. This was quite an administrative leap, literally reaching out across a bureaucratic divide from a Ministry of Health hospital to the Ministry of Local Government rural clinics.\textsuperscript{286} At this site, it was the nurses who led this effort; however, as will be discussed in the next chapter this initiative at the national level was led by Public Health Specialists who were based in the rural health care system.

Nurses at the HIV clinic were enthusiastic about rural clinic nurses screening new patients. They hoped that eventually patients could even have their blood drawn there and

\textsuperscript{285} Observations at HIV Clinic, Mahalapye, 22 March-28 April 2004.
\textsuperscript{286} Observations at HIV Clinic, Mahalapye, 22 March-28 April 2004.
then have their laboratory tests delivered to the clinic. If all went as planned, a patient would not become a patient at the HIV clinic until he or she was ready for a doctor’s appointment. Although the referral network had been designed and introduced by an expatriate nurse, who also trained nurses both at the hospital and in the rural clinics, the nurses at the HIV clinic had to maintain relationships with nurses at the rural clinics. They designed a refresher training on adherence counseling and referral management, and one of the nurses was sent to the rural clinics to conduct it. During this training, the HIV clinic nurse went over how to fill out the referral form and invited feedback from rural clinic nurses about problems they were having with the referral network. Through onsite visits at the rural clinics and at regional planning meetings held in Mahalapye, the HIV clinic nurses worked hard to encourage their counterparts in the rural clinics to pre-screen and pre-counsel patients for them.287 At the time of my observations, ARV Team records suggested that rural clinics were giving adherence counseling to almost as many patients as they screened, so it would seem that the nurses’ organizational efforts were paying off.288

While nurses were trying to transfer new patient screening to the rural clinics, they were also looking for ways to transfer some of the responsibility of new patient screening to social workers. Since adherence counseling took up time and space in the clinic, nurses were particularly interested in having social workers do the HIV clinic’s adherence counseling. Social workers were appealing candidates for this job since they had counseling experience and plentiful office space. Many of the nurses meetings

287 Observations at Clinic Adherence Counseling Meeting, Shoshong, 2 April 2004.
focused on how to get the social workers to do adherence counseling. The hope was that one social worker could be dedicated to the clinic either full time or part time. This was the case in another clinic nearby, although that site was larger, had better staffing, and more space. At morning meetings there was much energetic discussion in which the nurses expressed their expectation that social workers not only *could* help them but *should* help them.  

Nurses were encouraged by the CMO to negotiate directly with the social workers, perhaps because he did not want to embroil himself in a sticky situation. Nurses and social workers had a meeting, a very tense meeting, to discuss the role of the social workers in the HIV clinic. The nurses sat on one side and the social workers on the other. A well-respected older nurse who had worked with the social workers in the HIV resource center outlined the nurses’ case. She pointed out that before the clinic was functioning she had worked in the resource center with social workers. Together they had screened new patients and referred them to the capital city for drug therapy. In that setting the social workers had done adherence counseling. Social workers were trained to do counseling and, like the nurses, had received dedicated HIV training through the expatriate nurse and KITSO (the Harvard-run clinical training program discussed in Chapter 3). The social workers did not say much, but the head social worker rebuffed the nurse’s arguments. He asserted that KITSO was not adequate training for them. He stated

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290 Observations at HIV Clinic, Mahalapye, 22 March-28 April 2004.
concisely that adherence counseling “was a clinical matter” and therefore beyond their purview.  

As it became clear that the social workers were not swayed by the arguments, other nurses made a plea for social workers and nurses to work together in running the clinic. One nurse protested the fact that “Ke two units” (It is two units.) She was suggesting that having two units—one of social workers and one of nurses--was unacceptable. Instead, as she saw it, these two units should work as one inside of the HIV clinic. Nurses suggested that even earlier assistance with follow up was a way for social workers to participate more fully in the day-to-day operations of the clinic. The social workers insisted that they would continue to do follow up per referral rather than have a social worker rotate through the clinic. By their silence they conveyed their unwillingness to change the status quo. As will be discussed later the social workers had their own view of how the HIV clinic fit into their work, a view which differed sharply from that of the nurses.

At the time of my observations, nurses were unsuccessful at recruiting social workers to become part of the daily functioning of the clinic. Social workers insisted that nurses employ the same referral system used by the rest of the hospital. They pointed out that they worked on behalf of the entire hospital, not just the HIV clinic. They also resisted going to the sub-district ARV meetings and refused to participate in knowledge sharing with rural clinics and the primary care hospital, which did not have HIV drugs at

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291 Observations at Meeting of Nurses and Social Workers, HIV Clinic, Mahalapye Hospital, March 31, 2004.
292 Observations at Meeting of Nurses and Social Workers, HIV Clinic, Mahalapye Hospital, March 31, 2004.
the time. In general, they wanted to limit what they did to what they always had done as a unit, their own social workers unit. The head social worker made it clear in my interviews with him that they were “a separate unit” and served the entire hospital, not just the HIV clinic. They refused to reorganize their work around HIV drug therapy by assigning a social worker to the clinic or even having one attend regional meetings. Instead they incorporated HIV follow up as one of the many things they did in their unit, not something to reorganize how they worked.293

Social workers’ resistance to work in the HIV clinic had roots in the history of social workers’ role in managing HIV-positive patients in Mahalapye. As mentioned earlier, the HIV clinic was first renovated as a resource center staffed by social workers. Before drug therapy became available, the exam rooms, library, and head nurse’s office were all spaces previously occupied by social workers. They handled new patient screening with a nurse to assist them with blood draws for CD4 counts. With the introduction of drug therapy, social workers moved from the center of HIV patient care to the periphery, literally, when they relocated to smaller office space off to the side of the HIV clinic.294 Consequently, they viewed the nurses as interlopers who had taken their territory.

This resentment was not just evidenced by social workers’ unwillingness to work with HIV clinic nurses or to participate in regional ARV program meetings. It played out through the issue of space. Social workers had the only photocopier for the entire clinic

293 Observations at Meeting of Nurses and Social Workers, HIV Clinic, Mahalapye Hospital, March 31, 2004.
294 Interviews with Social Workers, HIV Clinic, Mahalapye, April 7, 2004.
locked in one of their offices. If a nurse wanted to photocopy something, she had to enter an occupied office or, if it was locked, had to ask a social worker to help her. The laser printer, one of only two printers available to the clinic, was in the head social worker’s office.  

The woman who cleaned the building was also part of an ongoing disagreement. The social workers claimed that she was their cleaner and so should clean their offices first. The clinic opened very early, usually when the cleaner was arriving for work. When the cleaner attended to the social workers offices first, she then had to clean the clinic while the nurses were collecting their files for the day or even registering patients. Through small gestures such as this, the social workers made it known that they felt displaced from their rightful spot at the center of managing HIV-positive patients.

The disagreement between social workers and nurses was a clash of two ways of managing clinical care in the hospital. Nurses conceived of the HIV clinic as a unit. They wanted all services essential to the HIV clinic’s operations to be provided by the unit. They would have preferred to have a designated social worker assigned to the HIV clinic. Social workers, conversely, wanted to manage their own time and preferred that the nurses refer the patients to them. They wanted their independence as a unit of social work: they wanted to decide how, when, and who would address the concerns of patients referred to them, and they were concerned that being incorporated into the HIV clinic would potentially make them subordinate to nurses. In Mahalapye, social workers resented the loss of their space and position to nurses. They actively resisted the HIV

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Nurses’ Work, Part Five – Creating the HIV Clinic as a New Bureaucratic Unit

Having the HIV clinic run as a unit was a new way of managing clinical care in Botswana’s government hospitals. Most hospital medicine was managed vertically, meaning that each type of worker, whether cook or social worker, reported up the management chain, to the nutritionist or head social worker respectively. Each head of a vertical work unit would discuss solutions with other heads and then communicate decisions back down the chain of command. If the clinic ran the way the rest of the hospital ran, the head of the laboratory, the head social worker, the head nurse, and the pharmacist would have negotiated among themselves and made managerial decisions vetted by the CMO, who was ultimately responsible for all decisions made at the hospital. Instead, the national ARV Team, when introducing the clinic idea to each hospital, had encouraged each CMO to have his HIV clinic meet together as a unit. This idea was
even built into the way the resource centers were introduced as future sites where teams of different workers would provide HIV clinical care.  

The HIV unit was run by incorporating all of the hospital workers involved into one unit. This unit met often, usually monthly. At these meetings participants discussed problems, solutions, next steps for expanding the clinic and its referral network, and the national ARV meetings, which the CMO and ARV manager attended every three or four months. The HIV clinic was managed through these meetings, as well as by ongoing daily negotiations among providers as described above. The meeting included the CMO (who was usually the ARV manager), the head of the laboratory, the head nurse at the HIV clinic, the head social worker, and the pharmacist. The CMO ran the meeting. Many of the doctors who rotated through the HIV clinic and most of the nurses at the HIV clinic also attended. Nurses from the HIV clinic often outnumbered the other providers, although usually only one nurse, the head nurse when she attended, brought nursing issues to the forefront. Many HIV clinic management issues were addressed at these meetings of the HIV clinic as a unit, but some issues could only be addressed at the national level.

As a result of the new managerial structure of the HIV clinic in Mahalapye, nurses there viewed all providers as part of one unit instead of being separated into units of nurses, pharmacist, social workers, and laboratory staff. They didn’t wait for the heads of different units to have a meeting and hash it out. The nurses made the needs of the

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301 Personal experiences as an ACHAP intern, June 2002-August 2002.
302 Observations at HIV Clinic, Mahalapye, March 22-April 28, 2004; Observations at the Meeting of ARV site managers and heads of departments of the Ministry of Health, Gaborone, April, 26, 2004
Direct negotiation was successful, partly because, when the HIV clinic was established, a position of head nurse was located within the HIV clinic. The head nurse, on account of her title, had managerial power of her own to negotiate across provider lines without referring to the matron or principle nurse officer. Nurses were the only providers with a full time manager in the HIV clinic, and the head nurse often negotiated directly with other providers over HIV patient care.

Nurses in the HIV clinic also negotiated with the pharmacist over his responsibilities to the HIV clinic. Because the nurses conceived of the HIV clinic as a unit, they took it upon themselves to make sure that all members of the HIV clinic unit worked equally hard to provide care for patients. At one point the nurses were very concerned that the pharmacist was leaving early, so early that some patients, who were delayed in an earlier step in the process or who showed up late, had to return to pick up their prescriptions. This was brought up in the morning nurses' meeting, and immediately after this meeting I observed the head nurse discussing this matter with the pharmacist. I was not privy to their conversation, but I do know that they resolved the matter in a way that satisfied both the nurses and the pharmacist because it was not discussed again at the morning meeting. The pharmacist had been specifically hired to dispense HIV drugs and apparently responded well to the HIV clinic nurses seeing him as part of their unit. The

304 Observations at HIV Clinic, Mahalapye, March 22-April 28, 2004; The ARV manager at Mahalapye was not full time in the HIV clinic. He rotated through the clinic and had other responsibilities in the hospital.
pharmacist, unlike the social workers, conceived of himself as part of the HIV clinic unit.  

The HIV clinic’s head nurse had increased power to negotiate with other providers because she had increased access to the hospital’s CMO. On my first visit to this site the CMO immediately introduced me to the head nurse. After introducing me, he urged her to continue having meetings with other hospital staff. She nodded and seemed much encouraged by his words. This CMO was known as an energetic advocate of the HIV clinic at national meetings, where he often substituted for the ARV manager. This was the one of the rare sites where the CMO and the ARV manager were not one and the same, so these two men shared the management of the HIV clinic.

At Mahalapye, nurses’ concerns about clinic management were taken very seriously by both CMO and ARV manager. This was evident at the first nurses’ meeting I attended. The morning meetings were for nurses only and conducted in Setswana, but that morning was different. During the meeting, someone knocked on the door. The ARV manager timidly stuck his head in the door and asked if he could come in. Deference not being his normal demeanor, it was rather surprising behavior and could only be explained by the fact that he was interrupting the nurses’ morning meeting without notice. He took a seat in the center of the group and proceeded to update them on what had happened at a national meeting. Then he listened to their concerns about their workload and their unsuccessful attempts at recruiting the social workers to help them. After that, he left.

307 Observations at HIV Clinic, Mahalapye, March 22-April 28, 2004; Observations at Meeting of ARV site managers and heads of departments of the Ministry of Health, Gaborone, April, 26, 2004.
Later that week, in the library, I heard him stressing the same concerns to the CMO while they were going over the statistics produced by the database.\textsuperscript{308}

The introduction of the HIV clinic as a new unit within the hospital did not just change nurses' relationship with the ARV manager and the CMO. The emphasis on new patient screening both for HIV drug therapy eligibility and tuberculosis brought nurses into closer contact with other hospital units like social work, laboratory, and pharmacy. Nurses' closer relationships with other providers gave them more opportunities for managing how those providers functioned as part of the HIV clinic.\textsuperscript{309} But, these new relationships between HIV clinic nurses and other hospital providers also created conflict, an example of which will be discussed shortly.

The organization of the HIV clinic as a unit changed existing relationships among CMO, doctors, nurses, social workers, pharmacist and lab workers, but the effect of creating the HIV clinic varied depending on the pre-existing relationships between nurses and doctors. In Mahalapye, doctors and nurses had a history of good working relationships even before the HIV clinic began.\textsuperscript{310} With the establishment of the clinic, nurses' concerns became more central to the CMO's managerial decisions. In Serowe, the close working relationship between nurses and doctors in the HIV clinic had almost the opposite affect. Nurses and doctors there had been in conflict before the building of the HIV clinic, and this conflict played itself out at the ARV site meetings. Doctors and nurses argued so publicly and unproductively that site meetings ceased for a while, and

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\item \textsuperscript{308} Observations at HIV Clinic, Mahalapye, March 22-April 28, 2004.
\item \textsuperscript{309} Observations at HIV Clinic, Mahalapye, March 22-April 28, 2004.
\item \textsuperscript{310} Conversations with the ARV Team, January 30-February 3, 2004.
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the head nurse personally took the concerns of the nurses to the CMO, who was also the ARV site manager. As the comparison of Mahalapye to Serowe shows, shared managerial duties and closer nurse–doctor relationships in the HIV clinic had different results at different sites.

The HIV clinic’s establishment at hospitals in Botswana brought change. The HIV clinic functioned horizontally across providers’ vertical management structures. Sometimes this caused conflict, and at other times increased cooperation between nurses and other providers. In all cases it changed the relationship between the nurses and the CMO. Nurses in the HIV clinic managed the day-to-day operation of the HIV clinic, and the success of the HIV clinic was of vital importance to the success of the CMO. For the clinic to succeed different providers—lab technicians, pharmacists, social workers—all had to coordinate their work with the work of the nurses who ran the HIV clinic. This changed the work of the hospital and the relationships between workers in the hospital. However, while it transformed the relationship between nurses in the HIV clinic and the head of the hospital, the HIV clinic did not give the nurses increased access to national decision making and thus nurses’ managerial role in HIV clinical care remained invisible.

Nurses’ Work, Part Six—Invisible on the National Scene

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312 Observations at HIV Clinic, Mahalapye, March 22-April 28, 2004; Observations at Meeting of ARV site managers and heads of departments of the Ministry of Health, Gaborone, April, 26, 2004.
While observing at Mahalapye, I attended a national ARV Team meeting where there were no nurses. This was a contrast to what I had observed at the HIV clinic functioned at Mahalapye, and again at the other sites I studied. Observing within the HIV clinics, I was deeply impressed by the work of the nurses, who were essential to every component of HIV clinic care. They ran the clinic. Because of their responsibility for paperwork and patient scheduling, they coordinated the work of the clinic with lab technicians, social workers, pharmacy technicians and pharmacists. Even the work of doctors was not possible without the nurses because of the language barrier between African expatriate doctors and Setswana-speaking patients. How was it that nurses and their centrality to HIV clinical care was invisible at the national level?

Whether they were the ARV Team’s expatriate experts, African heads of hospitals, or citizen bureaucrats, doctors dominated management meetings for the ARV program at the national level, and this was seen as normal and natural. When I asked Dr. Mezonde, the Ministry of Health official directly responsible for the ARV program, why doctors were so prominent in his program, he said that he was swayed by ACHAP and Merck executives, who had led him to believe that “technical people” were necessary to deliver HIV drugs successfully. At the same time, one of the ARV Team members, an expatriate, pointed out that the national bureaucrats in the Ministry of Health were all doctors and that nurses had held many more positions in the past and this person argued

313 Observations at HIV Clinic, Mahalapye, March 22-April 28, 2004; Observations at Meeting of ARV site managers and heads of departments of the Ministry of Health, Gaborone, April, 26, 2004.
314 Interview with P. Mezonde, Director of Health Services, Ministry of Health, Gaborone, August 2, 2004.
that nurses still had influence because many of them were the wives of prominent politicians.\footnote{Conversations with the ARV Team, January 30-February 3, 2004}

These two observations encapsulate the reasons I think that nurses’ roles at the national level were relatively minimal, particularly in the early years of the ARV program. First, nurses were not seen as “technical people” when HIV drug therapy was initially conceived of as a development project and a technical problem. Second, nurses were local women and were expected to have access to power through men, either their bosses, such as CMOs, or their husbands.\footnote{One complexity here is that while not many women were national-level bureaucrats, there were women appointed to high office. The Minister of Health at the time was a woman, and the subsequent Minister of Health was also a woman and a nurse. I do not think that having women represented as political appointees contradicts an argument that nurses in the hospitals had more difficulties coordinating their work nationally than doctors when the HIV Clinics were created and that nurses position in the hierarchy was related to gender.}

When the clinical training programs were being designed early in the ARV program’s creation, nurses and social workers were seen as central to HIV drug therapy not because of the role they played in coordinating patient care, but because they could provide adherence counseling to the patients.\footnote{This is an argument that I am making based on the focus of clinical training in Botswana; see Chapter 3.} As adherence counselors nurses were appreciated for their local knowledge of language and culture. This knowledge was not incorporated into the KITSO training for clinical care providers, many of whom were African expatriates. It is almost as though local knowledge was thought best to act locally, within the confines of the clinic. Nurses’ knowledge was conceptualized as bound to its locale and therefore it was believed that it could not transform clinical care nationwide the way that universal, scientifically based knowledge could. As examined in
the last chapter, there was a way in which it was true that outsider experts, like the clinical preceptors, could initiate the transformation of clinical care. What was unacknowledged in the initial planning for the ARV program was that many of the people who coordinated HIV clinical care and continued the work of preceptors were nurses.

The ARV Team did come to recognize this fact quickly while they were setting up HIV clinics and assigning clinical preceptors to them. As mentioned in the last chapter, the training coordinator at the ARV Team, herself a doctor, told me that as the ARV team gained more experience assisting hospitals with opening HIV clinics they realized that nurses spent an enormous amount of time managing patient care. The first nurse preceptor, although she had extensive clinical experience with HIV, was hired because she was the wife of a physician HIV specialist hired to be a preceptor. As a nurse–doctor team these preceptors were more effective at coordinating referral care than previous preceptors. As more expatriate nurse trainers were introduced, it became evident that nurses coordinated patient care both within the hospital and between the hospital and rural clinics. After the first two years of the program, the ARV Team added a citizen nurse with extensive experience working in the government hospitals. Her role was to assess the needs of nurses at individual clinics and advocate for them at the Ministry of Health. This was during a time when the ARV Team was changing and citizens were replacing expatriate development workers seconded by ACHAP. It would be interesting to examine whether the restructuring of HIV clinical care around a vertically

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managed system allowed a greater role for nurses in national bureaucratic positions, at least when it came to HIV drug therapy.

In 2004, even with the growing realization that nurses were crucial to the management of clinics, there were still not many ways in which nurses could directly share information between clinics about how to manage the clinic workload. Not only did they have fewer opportunities than doctors to share information across sites horizontally; they had no direct access to national-level discussions about resource management. Nurses relied on doctors, their hospital’s ARV manager or CMO, to advocate for them at the national level. The ARV Team had clinical support for nurses, but during my time at Mahalapye it was not mentioned nor used as a resource, and the nurse I met at the ARV Team herself did not attend national meetings. Instead she met nurses needs by traveling to sites or through phone conversations. HIV clinic nurses also had no access to other nurses trying to establish HIV clinics elsewhere in the country. They had to make important decisions about how to provide efficient patient care, but their training had been focused far more on the technicalities of HIV drug therapy than on the managerial challenges of coordinating multi-provider care. Initially, expatriate nurses helped HIV clinic nurses establish new ways to manage patient flow and coordinate with rural clinic nurses through a referral network, but once these expatriate nurses left, the native-born nurses who took over were on their own, with no forum for sharing advice as they tried to maintain these networks and change clinical care in response to increasing patient loads.\textsuperscript{320}

\textsuperscript{320} Observations at HIV Clinic, Mahalapye, March 22-April 28, 2004.
As discussed in Chapter 3, expatriate nurses had access to national planning due to the fact that they were hired by the ARV Team and paid for by ACHAP. Women outsiders were experts. Women insiders had local knowledge and a type of power that was, like the domestic power of wives, localized in the home and expressed through male proxies, either husbands or male physician managers. Nurses' power was confined to their hospitals or to ad hoc meetings with other nurses in their referral networks. Nurses power was profoundly local, not only because they were viewed as “non-technical” by development workers, but also because there was a subordinate management position for them as women and nurses within the Ministry of Health. These two factors combined to make the work of nurses invisible at the national and international level. They had no universal knowledge to offer to those seeking development models, and they were represented male doctors at national ARV meetings, which was considered sufficient to address the nurses needs.

An important point of inquiry is when the invisible, including local knowledge and nurses' work, becomes visible. One point discussed above was when nurse preceptors started working for the ARV Team’s Clinical Training Coordinator. In the next chapter I will examine a crucial meeting where Public Health Specialists, i.e. doctors who worked for the rural health system, became the spokespeople for female health practitioners in the rural health care system, including nurses. By including their knowledge of barriers to care and their perspectives on health care Public Health Specialists brought to the national level ideas that would transform the ARV program.
Chapter 5

HIV Drug Therapy & Botswana’s Rural Health Care System

In 2004, after the ARV Team and hospital staff had established HIV clinics in most of the government hospitals in Botswana, they turned to the problem of coordinating care between the Ministry of Health’s hospital HIV clinics and the Ministry of Local Government’s rural health care services. Public Health Specialists, doctors who were based in the rural health care system, understood HIV clinical care differently than Chief Medical Officers, doctors who were in charge of the hospitals and who managed the HIV clinics in hospitals. The different positions that these two types of physicians held within the bureaucratic structure of Botswana shaped how they understood clinical care; in short, their institutional position and bureaucratic context shaped what they knew. This chapter examines a moment when the national ARV Team meetings were just starting to include Public Health Specialists, and it will show how and why Public Health Specialists had the potential to transform HIV clinical care with their different views of clinical care delivery. To understand the nature of changes initiated by the Public Health Specialists, I will examine one Public Health Specialist’s plan for fixing the problems involved in coordinating HIV drug therapy between these two bureaucratic systems. By examining how these actors confronted health care problems, both old and new, we will see how the knowledge of the Public Health Specialist, situated in a different context of care, had an important role in bringing about changes in Botswana’s national HIV drug therapy program.
Botswana's HIV drug therapy program (the ARV program), as described in previous chapters, was vertically organized. HIV clinics were located in hospitals, and the heads of hospitals, Chief Medical Officers, were the ARV managers. This system worked well because it allowed national-level bureaucrats, like Dr. Mezonde and his experts in the ARV Team, to initiate bureaucratic change quickly from within the Ministry of Health. The ARV Team and Dr. Mezonde recruited Chief Medical Officers as key managers to create this new service in their hospitals, and these managers worked directly with the ARV Team and reported to Dr. Mezonde. The ARV managers (who were mostly Chief Medical Officers) had a quarterly national meeting with the ARV Team and other agencies related to the ARV program. Consolidating most of the actors important to establishing HIV clinics into one vertical structure bypassed many problems of coordination within the Ministry of Health and made individual managers accountable to Dr. Mezonde. Nevertheless, some important actors stood apart from the Ministry's authority even though they attended the meetings. For example, staff at the Botswana-Harvard Partnership and the head of Central Medical Stores were not entirely beholden to the authority of the ARV Team. However, these parties participated in national-level meetings. It was in these meetings that problems with HIV drug therapy were raised, negotiated, and, usually, resolved. National planners and managers created a countrywide
vision of the national ARV program at these meetings and developed nationwide solutions.\footnote{Observations of Meeting of ARV site managers and heads of departments of the Ministry of Health, Gaborone, April 26, 2004.}

From 2002-04 the system of vertical integration worked well. At the impetus of the ARV Team, HIV clinics were set up first in the referral hospitals, next at district hospitals, and last in primary care hospitals. The initial focus during this period was on solving the hospitals’ problems of coordinating with national services such as drug and laboratory supply delivery, and laboratory testing.\footnote{Observations of Meeting of ARV site managers and heads of departments of the Ministry of Health, Gaborone, April 26, 2004; Observations with ARV Team, January 30-February 3, 2004.} As patient loads grew, however, the integration of rural clinics, where many patients accessed their day-to-day health care, became more important. A patchwork of solutions was developed to address the problem of horizontal coordination between the HIV clinics in the hospitals and the rural health system’s doctors and nurses. These solutions varied from place to place. In some locations, as described in the previous chapter, nurse-to-nurse relationships or rural doctor-to-HIV clinic relationships created a referral network.\footnote{Observations of nurses at HIV Clinic, Mahalapye, March 22-April 28, 2004.} As the workloads at the hospital HIV clinics grew exponentially, the success or failure of the program became increasingly dependent on coordination between hospitals and rural clinics.

During the period from 2002-04, the ARV Team was setting up many new HIV clinics, and the coordination of rural health care was a lower priority in national-level planning. It was the ARV Team’s decision to focus national planning on setting up the hospital HIV clinics before deciding how these services could be coordinated with those offered by the Ministry of Local Government. When establishing a hospital-based HIV
clinic, the ARV Team encouraged the hospital chiefs, Chief Medical Officers who were also the ARV managers, to coordinate with Public Health Specialists, rural health doctors, and other service providers under the auspices of the Ministry of Local Government. Local coordination at the level of the hospital was initially encouraged both because there was precedent for local coordination and because initially the problems of establishing hospital HIV clinics were more pressing.

The ARV Team encouraged local coordination in three ways. First, at the preliminary planning meetings for the HIV clinics, which were held in each hospital, the ARV Team invited the heads of the hospitals (the Chief Medical Officers) and the Public Health Specialists, as well as other doctors who were members of a rural health team called the District Health Team. Many Chief Medical Officers followed the ARV Team’s lead and invited District Health Team members to their regular meetings in the HIV clinics. The ARV Team also encouraged the ARV site managers to attend or assign a delegate to attend meetings of the District-level AIDS Coordinating Committee. Second, rural health doctors and some rural clinic nurses were also recruited into the training programs run by the Botswana-Harvard Partnership’s KITSO program and the ARV Team’s clinical preceptors program. Third, in addition to clinical training, the ARV Team’s clinical preceptors, particularly the expatriate nurses, promoted nurse-managed referral networks as ways for rural clinics to coordinate care with HIV clinics in

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325 Ibid.
326 Conversations with DHT (rural health) doctor at HIV Clinic, Mahalapye, March 22-April 28, 2004.
the hospital. During the first two years of the ARV program, when HIV clinics were being established in almost every hospital, these three methods produced an ad hoc system linking the HIV clinics to the rural health care system. There was no systematic way that the ARV program established formal relationships between the HIV clinics and the rural health services.

There were preexisting formal relations between the Ministry of Health’s hospitals and the Ministry of Local Government’s rural health networks. The position of the Public Health Specialist was created to be a bridge between these two bureaucratic systems. The Ministry of Health seconded the Public Health Specialist to the Ministry of Local Government. This meant that the Ministry of Health paid him but that he worked within the Ministry of Local Government. The system of secondment put in place a person, the Public Health Specialist, who served two ministries and thus bridged the two health services: hospital-based clinics and rural clinics. The Public Health Specialist, in partnership with the heads of local hospitals, was officially responsible for coordinating the social services, epidemic control, and health care provided in Ministry of Local Government’s rural clinics and health posts with the clinical care provided in the Ministry of Health’s hospitals. This arrangement was designed to encourage the Public Health Specialist to liaise with the Chief Medical Officer and coordinate care among social workers, rural health doctors, rural health clinics, and the hospitals.

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328 Observations with the DHT and Public Health Specialist (rural health doctors), Palapye, June 7-11, 2004.
Such complex coordination, however, was often beyond the abilities of one person, and with all this on his plate the Public Health Specialist was often not available to develop a separate HIV referral network. Moreover, in theory, a hospital’s Chief Medical Officer, the local Public Health Specialist, and the rural health doctors coordinated with one another in treating many epidemic and endemic infectious diseases. Each district covered a large area with many different types of services, and each hospital had a complicated network of relationships with the rural clinics and social services available in the rural health care system. An HIV clinic’s referral networks also depended on preexisting referral patterns among rural clinic nurses, rural health doctors, and nearby hospitals. Even before HIV clinics had been established, nurses and doctors in the rural clinics referred patients to the hospital for many reasons, such as x-ray imaging or intravenous fluid rehydration. In theory, these preexisting relationships served as the basis for a system of bureaucratic coordination at the provider level, but the result in practice was uneven.

Coordination at the local level often built on pre-established site-specific networks developed by motivated nurses or an unusually energetic Public Health Specialist. At some places, like Serowe, the Public Health Specialist and Chief Medical Officer had a history of working well together, and the HIV clinics were just another project on which they collaborated. At other sites, like Mahalapye, the rural health

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330 Ibid.
team doctor spent one day a week seeing patients in the hospital’s HIV clinic. When rural health doctors saw patients in both the rural clinics and in the local HIV clinics, they created a new link that had not existed before the creation of the ARV program.

Nurses also played a role in these networks. In Mahalapye, the nurse clinical preceptor encouraged nurses in the HIV clinics to establish relationships with nurses in the rural clinics. HIV clinic nurses trained rural clinic nurses, telling them when to refer and how to screen and counsel patients for HIV drug therapy. As the ARV program expanded, there was an incentive for health care workers to coordinate care with the rural health care system so as to distribute some of their workload into the rural clinics even at sites where previously there had been little functioning relationship between the hospital and Ministry of Local Government. As the patient load grew at hospital HIV clinics, ARV site managers looked to the rural health team doctors and the Ministry of Local Government rural clinics and social services to take on some of the enormous burden of caring for young patients who were on complex drug regimens and needed social services for the rest of their lives. The combination of past working relationships and new pressures meant that for some time local coordination worked well enough at enough places that local providers were not seen as necessary participants in national planning until 2004 when most HIV clinics were up and running with growing patient populations.

334 Observations at HIV Clinic and conversations with Chief Medical Officer, Mahalapye, March 22-April 28, 2004.
By 2004, it was clear at the national meeting of ARV managers that sites with better coordination could care for more patients.\textsuperscript{335} Where coordination existed, rural services were carrying part of the burden of HIV clinical care. HIV clinics did not have the workers to provide clinical care to the estimated 200,000 patients who needed HIV drug therapy without the help of rural health clinics for work like screening, testing, referrals, and follow up for social services and missed appointments.\textsuperscript{336} The ARV Team decided that the best way to expedite the coordination of the rural health services with the HIV clinics was to incorporate the Public Health Specialists into the national meetings, previously attended only by ARV managers who were Chief Medical Officers and other hospital-based doctors.\textsuperscript{337}

\textbf{Different Bureaucratic Models of Clinical Practice}

Both Public Health Specialists and Chief Medical Officers were foreign doctors with supervisory positions, but Public Health Specialists understood HIV clinical care in Botswana in different ways than Chief Medical Officers. To understand how and why the two sets of physicians had different understandings of clinical care, I will compare the Ministry of Local Government’s rural health care system with the Ministry of Health’s hospital-based health care system and compare the work of Public Health Specialists with Chief Medical Officers. Chief Medical Officers and the Public Health Specialists

\textsuperscript{335} Observations of Meeting of ARV site managers and heads of departments of the Ministry of Health, Gaborone, April 26, 2004.
\textsuperscript{337} Observations of Meeting of DHT, Public Health Specialist, and ARV site managers, Gaborone, July 5, 2004.
practiced medicine in different bureaucratic contexts and had different relationships with patients and colleagues. The scope of the care they provided, the other health care workers they worked with, and the setting in which they practiced all differed notably.

In the system of rural health services, Public Health Specialists were in charge of the provision of health services and epidemic control within one district. The Public Health Specialist collaborated with a nurse supervisor to manage the health care in the rural clinics, carry out vaccination campaigns, and supervise the rural health team doctors. In the district that I observed, the Public Health Specialist also rotated through the rural health clinics. The Ministry of Local Government’s rural health care system was coordinated at the district and sub-district level from the rural administration centers, which were large multistory buildings full of offices.  

In any one district, a Public Health Specialist had an office in the rural administration center, a building he shared with a variety of other government employees tasked to provide social services on the local level. The rural administration center housed the social worker in charge of home-based care and food baskets, and the nurse supervisor who worked with the nurses in rural clinics. It also housed the District AIDS Management Services Coordinator, an office which was staffed by a Peace Corps worker and sometimes a fulltime staff person. This coordinator received money from the National AIDS Coordinating Agency to fund local organizations involved in HIV-related health services.

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338 Observations with the DHT and Public Health Specialist (rural health doctors), Palapye, June 7-11, 2004.
339 Peace Corps had left Botswana due to its relative prosperity in 1997 but returned to Botswana in 2003 with a mission to address HIV/AIDS. In 2004, Peace Corps workers were assigned to assist the home-based care social worker and the district-level coordinator of HIV/AIDS services in the rural administration centers. Observations with Peace Corps Worker, Mahalapye, April 14 and April 19, 2004, and Hukuntsi, June 27-July 2, 2004.
prevention, education, or support. Also located in the rural administration center were the bureaucrats who oversaw a broad spectrum of services, including waste management. This work environment was radically different from a Chief Medical Officer’s hospital. The Public Health Specialist was located in a bureaucratic context where a broad range of social services were provided.

The rural administration center was a base of operations for those managing and coordinating rural services rather than a location of service provision. District or sub-district level workers had an office at the rural administration center, the home base, but also traveled to supervise and provide social services. The rural health doctors’ offices were in a separate District Health Team building, not in the Rural Administration Center, but the rural health doctors who worked for the District Health Team had the same itinerant lifestyle as all rural health service providers. Because Public Health Specialists were a part of this diffuse network of rural health services, they were responsible for a huge amount of territory. Public Health Specialists and rural health doctors went to the patients, whereas in the hospital the patients came to the doctors. A Public Health Specialist was often away from his office at the rural administration center. He might be at one of the buildings housing the rural health team’s offices, or he might be at rural clinics seeing patients. He would do this either as a supervisor of or as a substitute for rural health doctors when they were not available. He also might be out supervising door-to-door vaccination campaigns. In 2004 there was a polio scare in Africa (in Botswana only one child was infected), and every child in every district in Botswana was vaccinated for polio by rural health care providers under the supervision of Public Health
Specialists. A Public Health Specialist might also be at the local hospital having a meeting with the Chief Medical Officer about referral networks and coordinated responses to disease. Given that Botswana is not very densely populated, a Public Health Specialist generally spent a lot of time being driven around his district in a government vehicle. The Public Health Specialist knew more about the geography, demography, and epidemiology of his patients than a typical Chief Medical Officer, and from his travels he had seen where and how many of them lived.\footnote{Observations with the DHT and Public Health Specialist (rural health doctors), Palapye, June 7-11, 2004.}

Public Health Specialists and rural health doctors were much more dependent on a diverse array of female health care workers than Chief Medical Officers. These coworkers included not only the nurses who staffed the rural clinics, but also health auxiliaries, who often were the only staff at the small health posts, and family welfare educators. These women had little formal training but an enormous amount of knowledge about who lived where and with what disease. Social workers at the rural administration center and nurses at rural clinics depended on family welfare educators to find patients who did not show up for their appointments or to identify families in need of social services such as food baskets, transport vouchers, and home-based care. Health posts were staffed with workers who came from the local community and knew their patients as neighbors.\footnote{For more about female care providers in Botswana see Julie Livingston, \textit{Debility and the Moral Imagination in Botswana} (Bloomington: Indiana University Press, 2005).} This informal and dynamic network of female care providers was
essential to the efficacy of a Public Health Specialist’s vaccination campaigns and to his
ability to supervise health care in rural clinics.  

A Public Health Specialist’s responsibilities included epidemic control; he had
been addressing the HIV epidemic for years, directly and indirectly. One indirect way he
did so was by coordinating the TB therapy program with the clinic nurses and their
supervisor. Rates of TB, which were directly tied to the prevalence of HIV and AIDS,
had been on the rise for the previous 10 years. A Public Health Specialist also had
another, more direct role in HIV epidemic control; for several years before HIV drugs
became available outside of the capital city, the rural health care system provided a short
course of HIV drug therapy to pregnant HIV-positive women. This program, called
Prevention of Mother-to-Child Transmission, was sponsored by USAID, an international
aid program of the U.S. government. The program was based at rural clinics where lay
counselors recruited pregnant women for HIV testing, and if they tested positive, nurses
treated them with a short course of drug therapy to reduce the risk that their child would
be born HIV positive. After delivery, HIV-positive mothers would be supplied with
formula by the clinic nurses to prevent HIV transmission through breast milk. The
programs for TB and HIV-positive mothers were based at the rural clinics. Because they
supervised these epidemic control programs, Public Health Specialists already had a
sense of HIV’s impact on Botswana. Rural clinics were the first point of care for many
patients, including those with infections secondary to immune suppression from HIV.  

342 Observations with the DHT and Public Health Specialist (rural health doctors), Palapye, June 7-11,
2004.
343 Ibid.
From observing Dr. Chipandwe, a Public Health Specialist in the Serowe/Palapye district, it became clear to me that the Public Health Specialist often knew where individual patients lived and what their family situation was, including how many children they had and whether they traveled for work. Some of this information was certainly learned during the recent door-to-door vaccination campaign; however, such information was also known about patients sick at home with TB. In one case that I observed, the local social worker asked the Public Health Specialist to intervene by encouraging a family to access social welfare and health services for one of their members who was physically declining (perhaps on account of starvation or AIDS). In conversations I overheard between clinic nurses and the Public Health Specialist, the Public Health Specialist was expected to have the same detailed knowledge of a patient’s whereabouts, health status, and history as the nurses did. In cases of HIV or TB, the nurses expected him to have even better knowledge of the patient. Patients did not come to the Public Health Specialist; he went to them. He also worked with family welfare educators, nurses, and social workers, who visited patients in their homes on a regular basis.\textsuperscript{344} This mode of operation contrasted with that of a Chief Medical Officer. In the hospital the patients came to the care providers, and when the patients did not come, the hospital’s social workers relied on the rural health networks to identify and remediate the problem.\textsuperscript{345}

Public Health Specialists and rural health doctors, just like Chief Medical Officers in Botswana’s hospitals, were expatriate doctors from other African countries. However,

\textsuperscript{344} Ibid.
\textsuperscript{345} Observations at HIV Clinics, Mahalapye, March 22-April 28, 2004.
they were much more familiar with the context in which their patients lived and worked than were their hospital-based counterparts. Because Public Health Specialists were driven all over their district, they had a sense of the distance from their patients’ homes to the local clinic as well as some familiarity with patients’ transportation options. Visits to rural clinics and door-to-door vaccination campaigns brought Public Health Specialists into the homes of ordinary people and familiarized him with the health care problems their patients faced daily. The Public Health Specialist that I met knew intimate details about how people lived, and he pointed out how this affected patient care. For example, we discussed how labor migration meant that children often lived in rural areas with relatives other than their parents. The setting in which the Public Health Specialist saw patients and encountered disease was not just outside of the hospital; it was also the setting in which patients experienced disease. Public Health Specialists had a special type of knowledge derived from their position as a doctor who encountered patients in their homes and who shared information with female health auxiliaries and nurses who had their own situated knowledge of patients. This knowledge about patients—as workers, as family members, as neighbors—was reflected in the issues that Public Health Specialists brought to the table during the first national planning meeting they attended.346

My assessments of what the rural health care system had to offer the ARV program are based on limited experience with the Ministry of Local Government’s rural health care system. My generalizations about the rural health care system come from observations conducted in primarily in one health district in 2004. In June 2004, I

346 Observations of Meeting of ARV site managers and heads of departments of the Ministry of Health, Gaborone, April, 26, 2004.
observed for one week a Public Health Specialist and the rural health team doctors he supervised. Previously, I had observed the HIV clinic with which he coordinated and had met him at a meeting at a hospital in his district. In addition, I observed a rural health team doctor in an adjacent sub-district in both the local HIV clinic and the rural clinics. Compared to many other districts and sub-districts, both districts were densely populated and had good roads. In a district with poor roads, the Public Health Specialist may not have had the ability to have the close interactions with the rural health practitioners that I observed. However, after the first national ARV program meeting that included Public Health Specialists I interviewed a Public Health Specialist from a more sparsely populated district, and he had a perspective similar to Dr. Chipandwe’s. However, unlike Dr. Chipandwe, who was focused on coordinating the hospital HIV clinic with the District Health Team’s doctors, this other Public Health Specialist was more concerned about coordinating the hospital HIV clinics with local rural clinic nurses. In very large districts with difficult geography rural health doctors from the District Health Team spent less time in the rural clinics and more time traveling. This distance must have changed the dynamic between rural health doctors and the other health care providers, but based on my observations at a primary hospital’s HIV clinic in this Public Health Specialist’s district, distance also made female health providers in the rural clinics even more central to the work of the HIV clinics.

The HIV clinic with which Dr. Chipandwe coordinated his rural health services was at one of the four major referral hospitals and had been established as one of the first

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347 Interview with Public Health Specialist after Meeting of ARV site managers and DHT, Gaborone, July 5, 2004.
HIV clinics in Botswana. The Public Health Specialist and Chief Medical Officer had therefore been coordinating their services for a year, much longer than most other sites. This was one of the reasons that Dr. Chipandwe had a plan to integrate the two systems; he had been working at it longer than most other Public Health Specialists. At other districts where the relationship between the HIV clinic and the rural health services was less established, both the plans for integration and the existing coordination would have been different. However, many of the concerns raised by Public Health Specialists at the national meeting paralleled the concerns of the rural health doctors whom I observed.\textsuperscript{348}

Though my observational base is fairly limited, my experience with other Public Health Specialists, those at the meeting discussed below, reinforced my sense that the way Public Health Specialists understood health care was different than the way Chief Medical Officer understood it. The difference between rural health providers and hospital doctors was an issue first raised by a rural health doctor at an ARV Team meeting I observed. Several ARV Team members were traveling to a hospital site for one of the initial meetings with health providers about locating an HIV clinic in that sub-district. The Operations Manager of the ARV Team was running the meeting, and it was very well attended by health care workers from the local hospital and from the rural health service. One doctor from the rural health team who may have been the Public Health Specialist used an unusually aggressive tone when he asked, "Are you a doctor or a public health specialist?" Dr. Darkoh replied that he was both. He did not explain further,

\textsuperscript{348} Another issue not addressed here is the coordination of the city council clinics with the HIV clinics in cities. There are few cities in Botswana and thus few government hospitals coordinated with city council clinics. I did not observe this particular dynamic.
but having a MD and a public health masters degree, he did have qualifications in both areas. The doctor who asked was clearly not mollified because he sat back and glared during the entire meeting. He seemed to feel that Dr. Darkoh either was lacking some significant qualification in training or perspective. It was this division that had to be bridged in July 2004. I argue that, based on my observations of Dr. Chipandwe and the national ARV program meeting I will discuss next, this doctor’s concerns with the ARV Team’s approach reflected a common sentiment among Public Health Specialists and rural health team doctors. Even in 2007, a Ministry of Health official visiting the University of Pennsylvania told me that incorporating rural health providers into the ARV program is still a work-in-progress but one well worth the effort in terms of the expanded ability to care for patients with HIV.

**Public Health Specialists and Chief Medical Officers at a National Meeting**

The first national ARV program meeting that Public Health Specialists were invited to occurred on July 5, 2004, and lasted several hours. Most in attendance were male, expatriate African doctors; a few were Batswana citizens. The meeting was run by a member of the ARV Team. The goal of the meeting was to discuss the coordination of ARV therapy between the hospital HIV clinics and the Ministry of Local Government rural clinics, but beyond this topic the meeting had no preset agenda. The attendees had many diverse opinions about what the problems were and how they might be solved. This was a beginning, a brainstorming session about change. Everyone understood that not all

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of the problems addressed at this meeting had easy or immediate solutions. At the meeting's end, the ARV Team member in charge made a list of issues that would be addressed at the next meeting of the Ministry of Health's department heads.350

When the ARV Team made the decision to involve Public Health Specialists in national planning, they expected them to change the way that HIV drug therapy was provided because the Chief Medical Officers and the ARV Team needed the resources of the Ministry of Local Government to assist the overburdened HIV clinics and to coordinate referral networks for HIV clinical care. For these reasons, Public Health Specialists were invited to the ARV site management meeting, which heretofore had been attended only by Chief Medical Officers. Public Health Specialists also wanted to address how to coordinate their programs, most notably Prevention of Mother-to-Child Transmission and TB treatment and prophylaxis, with the HIV clinics in the hospitals. However, Public Health Specialists also raised many concerns that went beyond coordination of patient care. Informed by their work with rural health nurses, social workers, and family welfare educators, and by their more nuanced sense of how patients lived, Public Health Specialists brought new problems to national-level meetings. Topics such as patient use of traditional healers, patient poverty, and labor mobility had never previously been discussed at the site managers meetings. These new issues had the potential to transform the ARV program in unexpected ways, and the solutions needed to

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solve these problems prompted the ARV program to evolve in ways that Chief Medical Officers could not have easily imagined.\(^{351}\)

At the July 2004 meeting, patient mobility was one of the Public Health Specialists’ concerns. Botswana had high levels of labor mobility, especially among young adults, who had proportionally higher rates of HIV infection than other age groups.\(^{352}\) Patients carried their health cards with them so that a doctor or nurse at any health care location could have their patient records. However, because patient adherence was so important and because patients who missed visits were flagged for follow up, HIV care seemed to require a better system. Providers at the clinic that had initiated care were responsible for following up on patients who did not attend appointments, yet there was no good system for notifying the originating HIV clinic that a patient was currently seeing a doctor at another site.\(^{353}\) One Public Health Specialist talked about the less common case of students studying abroad. This Public Health Specialist wanted to know if it would be possible to give patients several months’ worth of drugs to take with them. This was a problem for which no one present had a ready solution. Most Chief Medical Officers and Public Health Specialists were both worried that if they sent patients off with little follow-up care, they might develop side effects outside of the country. Chief Medical Officers were also aware of labor mobility as a problem, but it was the rural health care systems family welfare educators who tracked down the patients; therefore it

\(^{351}\) Ibid.
\(^{353}\) Observations at HIV Clinic, Serowe, May 3-18, 2004.
was no coincidence that the issue of labor mobility was raised at the first meeting that included Public Health Specialists.\footnote{Observations of Meeting of DHT, Public Health Specialist, and ARV site managers, Gaborone, July 5, 2004.}

Another concern raised by Public Health Specialists was that patients had to choose between traditional healing and HIV drug therapy, a decision that could cause conflicts. During adherence counseling, HIV clinic nurses told patients that if they went on HIV drug therapy, they could not take traditional medicines. This national policy was designed to avoid serious interactions between herbal remedies and HIV drugs—the most serious interaction being liver failure. However, this rule meant that patients who might otherwise have pursued both options were now pressed to pick either HIV drug therapy or traditional healing. Nurses in the rural clinics had been reporting, with some concern, that patients were choosing traditional healing over HIV drug therapy in one specific instance: that of purifying themselves after a spouse’s death. In the case of such a death, the surviving spouse had to take traditional medicine, for the purpose of ritual purification, before resuming sexual relations. Faced with this situation, many patients discontinued use of the HIV drugs in order to receive the necessary purification. This was a common problem because many HIV-positive patients had HIV-positive spouses who were dying from AIDS. In my experience, this issue had been consistently raised by rural clinic nurses and rural health doctors but was never mentioned by hospital workers.
Again it seems that issues involving traditional healing were more visible to nurses in the rural clinics than they were to the nurses in the hospital. At the national meeting, there was the further concern raised that patients saw traditional healing as a viable alternative to longer, more intensive HIV drug therapy and that some traditional healers took advantage of people by selling them questionable remedies. It was not clear how these concerns could be addressed, since there were no formal ways, or even informal ways, of coordinating the care of traditional healers with that of the government health care system. Local doctors, all of them expatriates, had no experience with traditional healers (dingaka tsa Setswana). I observed a rural clinic nurse at Shoshong suggest to a rural health doctor that he talk to the local chief about convening a kgotla meeting, which was a traditional way of resolving community issues. But a kgotla meeting would have been conducted in Setswana by a local tribal official, and the rural health doctor spoke little Setswana and had no experience with the local chief or tribal officials. The nurse I observed clearly thought that this was the doctor’s

355 I had also heard this issue brought up by rural clinic nurses in another sub-district. Observations, Shoshong Clinic Adherence Counseling Meeting, 2 April 2004. The rural health team doctor who saw patients in the hospital HIV clinic had heard the same information from rural health clinic nurses, and he tried to solve the problem by suggesting to his patients on HIV drug therapy that they need only abstain from traditional medicine given orally. He told them to ask their traditional healers for fumigation or some other method of purification. As a Zambian, this doctor had little knowledge of Setswana traditional healers or their common medical practices. Observations Mahalapye Hospital HIV Clinic, 22 March-28 April 2004.

responsibility and not hers. However, the doctor, who had the appropriate social position to talk to the chief about medical problems involving traditional healers, did not have the social position of a citizen, a Motswana, which was necessary to participate in tribal governance. Ideally the person who addressed this issue should have been not just a Motswana but also local to the area since tribal officials were responsible to individuals based on their tribe or place of birth. Public Health Specialists could not solve problems through the traditional rural governing system, but after this meeting that integrated the Public Health Specialists into the ARV program, they did bring this issue to the attention of national planners. All in all, because of the divisions between traditional governance structures in Botswana and national ministry services there was no direct nor ideal way of addressing this problem.

Patients were also making choices about TB drug therapy that concerned Public Health Specialists. Some patients preferred the six-month course of TB drugs to a lifelong commitment to HIV drugs. Patients with HIV would go on a course of TB drugs, but they were not willing to be screened for eligibility for HIV drug therapy. Some patients did this even when they knew that they were HIV positive. In addition to the shorter course of therapy, the TB program was more attractive than the ARV program because the TB program offered food baskets for the six months of drug therapy. This meant that patients were likely to choose TB treatment over HIV screening because the government offered an incentive. Rural clinic nurses were reporting that the patients took

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357 Observations with the DHT and Public Health Specialist (rural health doctors), Palapye, June 7-11, 2004.
their TB drugs, but when referred to the HIV clinic at the local hospital, the patients did not go for HIV screening. Public Health Specialists thought that if HIV and TB drug therapy could be better coordinated, perhaps if HIV screening and TB drug therapy were located in the same place, then these patients could be easily transitioned from TB care to HIV care. This problem was one that had not been addressed before at the national level but was now on the table since Public Health Specialists had been asked to attend the meeting.  

Another concern of Public Health Specialists was that inter-ministry confusion resulted in patients being “fired,” meaning that their enrollment in the ARV program was discontinued because of a lack of adherence or a record of missed appointments. Public Health Specialists pointed out that some patients were fired from the HIV clinics because of poor communication between rural health staff who coordinated social services and the doctors in the HIV clinics. Food baskets and other social services, such as home-based care, were provided not by hospital social workers but by social workers from the Ministry of Local Government. Social workers within the hospital were supposed to be available to liaise with the Ministry’s social workers, but this did not always work out. The hospital social workers were often overworked or on leave for education. And at many smaller hospitals, the position of social worker was simply empty. Without a social worker available, the doctors in the hospital HIV clinics did not always know where to send a patient. This was particularly true in clinics started by preceptors who lacked familiarity with Botswana’s health care system. Often the patients were sent by the HIV

\(^{359}\) Observations of Meeting of DHT, Public Health Specialist, and ARV site managers, Gaborone, July 5, 2004.
clinic doctors to the wrong person for assistance, or the doctor gave the patient misinformation about what services might be available from the rural health care services. In general, the meeting attendees agreed that coordination between the social services in the rural health care system and the HIV clinics was lacking.\footnote{Ibid.}

At the same time that many patients had difficulty accessing social services, the numbers of patients referred by hospital HIV clinics were overwhelming the system.\footnote{Observations at HIV Clinics, Mahalapye, March 22-April 28, 2004.} Social workers within the Ministry of Local Government were overwhelmed with time-consuming assessments of patients from the new HIV clinics. Rural health social workers often viewed these patients as seeking services simply because they were HIV positive, not because they were destitute or very sick. Social workers and nurses in the rural clinics complained that HIV-positive patients expected to be signed up for a food basket automatically. The TB program included this benefit, and it was falsely rumored that the HIV clinic also provided it. This meant that many more patients in the HIV clinic asked about social services than was common in other outpatient clinics at the hospital; consequently patients who really needed the services had to wait in longer queues than normal. The result was that many patients either did not receive the help that they needed or they did not receive the help that they thought they deserved. Both results were problems that could be addressed by better communication between the nurses and
doctors in the HIV clinics and the rural health service social workers. The attendees at the national meeting discussed these difficulties in coordination.\footnote{362 Observations of Meeting of DHT, Public Health Specialist, and ARV site managers, Gaborone, July 5, 2004.}

Public Health Specialists at the July meeting also mentioned that destitute patients were getting lost in the bureaucratic morass of inter-institutional referrals. Walking was the cheapest form of transportation in Botswana, but it took time, health, and calories. Furthermore, there was often significant distance between many a patient’s home and the nearest HIV clinic. Even when destitute patients were recommended for poverty relief, many had to walk to the rural administration center at least once. If they were sick or malnourished, however, they might not be able to make the trip. Often patients who were poor missed their HIV clinic appointment and then later turned up extremely ill at their local clinic or health posts. Rural health doctors and Public Health Specialists were the ones who organized ambulances to transport these patients to the hospital. For these poor patients, having more care offered at their local health post or clinic would greatly reduce their transportation costs, the distance they had to walk, or the time they lost from work. Moving some portion of HIV drug therapy to the rural health clinics and health posts would also allow for better ancillary services such as home-based care, food baskets, and transportation vouchers.\footnote{363 Ibid.}

Because of their experience with the Prevention of Mother-to-Child Transmission Program, Public Health Specialists were also worried about the HIV drug therapy that pregnant women received. Public Health Specialists wanted to discuss whether pregnant
women should receive the short course of HIV drug therapy, which was designed only to protect their baby from contracting HIV, or, alternatively, whether pregnant women should be automatically screened for eligibility for the full course of HIV drug therapy. The problem was that women presented to the program at different times in their pregnancy, usually in the second or third trimester, and the screening process took time; in particular the CD4 counts could take weeks to return. Pregnant women would have to be prioritized at every level in order to be screened and on ARV drugs before giving birth. Even then, their CD4 counts might be too high to qualify them for long-term drug therapy. Although no one knew for sure, the doctors attending the meeting, both Chief Medical Officers and Public Health Specialists, thought that most pregnant women would not have CD4 counts low enough to qualify for ongoing HIV drug therapy. At this meeting, most doctors were uncomfortable with having pregnant women “jump the queue,” as they called it in Botswana, but at the same time they were concerned about providing good care. Because the program was administered in the rural clinics, Public Health Specialists had a clearer understanding of all the potential issues involved. It was at the national meeting that all the issues above, and more besides, were raised—most for the first time. In the end, the group asked the presiding ARV Team member to request that the policy on pregnant women be clarified at a future meeting of department heads, and the group called for care of pregnant women to be coordinated between the Public Health Specialists and the Chief Medical Officers.\textsuperscript{364}

\textsuperscript{364} Ibid.
Public Health Specialists, like Chief Medical Officers, were foreign doctors who spoke little Setswana; also like Chief Medical Officers they represented the concerns of their female, Setswana-speaking coworkers at the national meetings. However, the Public Health Specialists and other rural health care providers were in a very different bureaucratic system of care than the Chief Medical Officers, hospital social workers, and HIV clinic nurses. The problems raised by the Public Health Specialists suggested a more intimate knowledge of patients' circumstances. Needs such as transportation, family planning, food, and mobility featured prominently at this meeting where before they had been rarely discussed. Also new at this meeting was a discussion of patients' decision making, their preferences for shorter courses of therapy, and their difficulty choosing between HIV drug therapy and traditional healing. By the end of the meeting there were simply too many issues raised by too many people to address them all properly, so the discussion focused more on raising problems than on finding solutions. But it would be a mistake to underestimate the importance of this meeting by pointing to the paucity of solutions. The meeting had as much a symbolic function as a managerial function.\textsuperscript{365}

Through this national meeting, the Ministry of Health and the ARV Team sent a strong message: Chief Medical Officers and Public Health Specialists were on the same team. This meeting symbolized a commitment by the Ministry of Health’s ARV Team to facilitate the relationship between Chief Medical Officers and Public Health Specialists for the purpose of increasing the numbers of patients on HIV drug therapy. The meeting demonstrated to the Public Health Specialists and the Chief Medical Officers that the

\textsuperscript{365} Ibid.
problems of the Public Health Specialists were also the problems of the ARV Team and the hospital HIV clinics. Public Health Specialists and Chief Medical Officers were expected to go back to their districts and coordinate the hospital HIV clinics’ services with those of the Ministry of Local Government. One solution to both the Public Health Specialists’ problems with inter-ministry coordination and the Chief Medical Officers’ problems with increasing workloads in the HIV clinics was to move some HIV clinical care into the rural clinics, where the Prevention of Mother-to-Child Transmission Program and TB treatment were already in place. Since patients were already receiving most of their care in the rural health clinics and since many of the social services were provided through the Ministry of Local Government, providing more HIV care at that level would allow for better coordination among all of these programs. Even though attendees all agreed on what to do, how to do it was another matter. The question that remained unresolved was what manner of transformation would allow for coordinated care.  

In 2004 there was one Public Health Specialist who proposed a solution for how rural health services and hospital HIV clinics could integrate and expand their care for patients with HIV.

**Dr. Chipandwe’s Proposed Integration of Rural Clinics with Hospital HIV Clinics**

The national meeting is an important window into the new problems that Public Health Specialists introduced into national planning and how these problems reflected the

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366 Ibid.
context in which they practiced medicine. This section will introduce one particular Public Health Specialist’s views on the ARV program, which he viewed at once as both a threat and an opportunity, and will also describe how he imagined a reorganized ARV program capable of addressing the problem of coordinated health care. Dr. Chipandwe, like all of the doctors in this particular district, was an African expatriate, but unlike most others, he had been working in Botswana for over a decade and spoke Setswana well enough to talk to his patients without constant mediation from an interpreter. In his length of service, in his close relationship with the Chief Medical Officer, and in his investment in the ARV program, Chipandwe was unusual, but his responsibilities and the way he understood epidemics and disease was typical of a Public Health Specialist.

Dr. Chipandwe, like all Public Health Specialists, had a wide variety of responsibilities. In the morning he would be in his office at the rural administration center. He would talk to the matron who coordinated nursing care in the clinics. He also would often talk with the rural health doctors about their work. Chipandwe was based at the rural administration center, but he spent most of his time in a car, being driven from place to place. He occasionally went to the referral hospital in his district for meetings with the Chief Medical Officer, who was also the ARV site manager of the local HIV clinic. While I was observing him, we went on several trips to rural clinics. At these clinics he saw a few patients, but he spent most of his time troubleshooting with the nurses about problems with clinical care or facilities. In one case he reassured a clinic staff distressed over a family’s having blamed them for a patient’s death. He told them

368 Observations with the DHT and Public Health Specialist (rural health doctors), Palapye, June 7-11, 2004.
that the woman had long been sick with a fatal disease and that the nursing staff had done everything possible for her. At another clinic he discussed the odd color of the clinic’s water with a nurse who was afraid that the change might render it unsuitable for use. At a third he discussed the ARV program and the reasons for pregnant women’s low enrollment rates with the lay counselor responsible for the Prevention of Mother-to-Child Transmission Program. Chipandwe’s daily routine made it clear that he was engaged with the problems of the workers who staffed the rural health clinics.\textsuperscript{369}

Dr. Chipandwe had several concerns about how HIV drug therapy would affect rural health services. Already several rural health doctors were seeing patients on HIV drug therapy, and this took them away from seeing patients with other illnesses. He was concerned that the HIV drug therapy would compromise other services by commandeering too many resources—human and otherwise. In 2004 I saw him complain vociferously about a rural health doctor because this doctor spent so much time at the hospital HIV clinic. He said loudly to me and another rural health doctor, “What? Does he think he is a HIV doctor only? He never comes this side. Only to pick up his paycheck.” By “this side,” he meant the rural administration center, which was based in Palapye (The HIV clinic was at Sekgoma Memorial Hospital in the adjacent town of Serowe.) Chipandwe’s cutting comment points to a tension between the rural health doctor’s work in the hospital HIV clinic and his other responsibilities.\textsuperscript{370}

This doctor, whom Chipandwe criticized for being too committed to the ARV program, saw ARV drug therapy patients at both the hospital HIV clinic and in several of

\textsuperscript{369} Ibid.
\textsuperscript{370} Ibid.
the rural clinics, one of which was in Serowe. The fact that he lived there, drove himself
to the clinic, and had experience in ARV drug therapy made his work crucial to
Chipandwe’s success in getting drug therapy prescribed in the clinics. While Chipandwe
found it frustrating that a rural health doctor spent most of his time in Serowe doing ARV
drug therapy, he nonetheless benefited from the doctor’s commitment to ARV drug
therapy. Chipandwe’s frustration was brought on by systemic factors: a tension between
the very successful ARV program, which in 2004 operated primarily in the hospital HIV
clinics, and the rural health team’s competing obligations to treat other epidemic diseases
and to provide general health care in the rural clinics. 371

At the same time that the HIV clinic drew Dr. Chipandwe and the rural health
doctors away from their other duties, it also created new opportunities. Chipandwe told
me that he hoped that “the baby of ARV,” a reference to its special status, could provide
increased services, both social and medical, for patients with other diseases such as TB.
While the incredible resources poured into HIV at the national level had the potential of
pulling resources away from other programs, there was also the potential that ARV’s
success would make more resources available for other programs. TB was a common co-
infection with HIV, and there was reason to believe that TB treatment could become part
of the ARV program. Chipandwe’s follow-up teams, described below, had the potential
to provide coordinated care for other epidemic or endemic diseases, including TB. The
resources might come from the ARV program for these follow-up teams, but there was
no reason to limit their work to HIV-positive patients. Dr. Chipandwe believed that

371 Ibid.
epidemic control in general would benefit from a coordinated team uniting highly trained doctors and nurses with family welfare educators who had little formal training but a wealth of local knowledge.\footnote{Ibid.}

There was another benefit to the ARV program. The rate of HIV was so high at the time, about one in five people in the broader population, that Public Health Specialists were already spending enormous resources on HIV-related medical problems.\footnote{Seventeen percent of the general population tested positive in the 2004 Botswana AIDS Impact Survey conducted by the government of Botswana. Government of Botswana, NACA, *Botswana AIDS Impact Survey,* (2004).} HIV clinics within hospitals had the potential of reducing the burden of HIV care in the local health network. This could free up resources for other programs. Not only would the solutions to HIV epidemic control, as envisioned by Chipandwe, assist epidemic control more broadly, but the ARV program addressed a major disease burden. This meant that when most of the patients who needed HIV drug therapy were receiving it, there could be more time and resources for other diseases.

Dr. Chipandwe was particularly interested in ARV therapy because, unlike other Public Health Specialists, he and Serowe hospital’s Chief Medical Officer had been part of a multidisciplinary planning team sent to Brazil in 2001.\footnote{Observations and conversations with the Public Health Specialist, Palapye, June 7-11, 2004.} Although he had not participated in national planning with the ARV Team and the Ministry of Health before 2004, Chipandwe, along with the local Chief Medical Officer and clinical preceptors, had been working to create referral networks for the HIV clinic. The Serowe/Palapye sub-district was not the only site with a referral network, as was noted in the descriptions of Mahalapye in the last chapter; however, Serowe/Palapye was the only site where the
Public Health Specialist created a model for integrating the social services provided in the rural administration centers with HIV clinical care. Dr. Chipandwe’s model, although many of its elements were not unique, provides enormous insight into how a Public Health Specialist envisioned HIV patient care in a broader context than was apprehensible to physicians at hospital HIV clinics.

Dr. Chipandwe’s plan was laid out in a slide presentation delivered on April 19, 2004, to the district social workers. (Please note that spellings here are British not American.) It is titled “Organisational Structure of ARV Programme for Serowe/Palapye Sub-Sites (Clinics): ARV Pilot Project.” This structure created follow-up teams, each based at a rural clinic. These teams coordinated patient education, referrals, side effect monitoring, and social services such as home-based care and food baskets. These follow-up teams were interesting because they included many health care workers not mentioned in the planning meetings at hospital HIV clinics: e.g., “Lay Counsellors; FWEs; Drivers; GDAs; TCM Volunteers.” This string of acronyms refers to workers who had no formal degree in health care yet were essential to Chipandwe’s plan for HIV care in his district. These were not workers incorporated into planning at the national or hospital level, but when Chipandwe described the people needed to provide HIV care at the district level, he included such workers alongside doctors, nurses, pharmacy and laboratory technicians, and social workers.

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376 Ibid.
377 Ibid.
When Dr. Chipandwe conceived of the follow-up team, not only did he include workers who were not part of the ARV program in 2004, he also designed the follow-up teams to have functions, home-based care for example, that were not currently integrated into the ARV program. Quoted here is how Dr. Chapandwe described the work of follow-up teams:

1) To follow up patients in their homes. Most patients on ARVT initially are extremely ill, unable to walk & need check-ups at home
2) Follow up team members mobilize the community
3) They educate patients & care givers on adherence to treatment, Nutrition, Hygiene & review dates
4) To detect side effects of A.R.V early enough & ensure corrective measures are done timely & correctly
5) Follow up team members maintain timely link between patients, care givers & clinics
6) They report on improvements, transfers, deterioration & deaths of patients
7) They report on environmental situations of patients
8) They refer care givers for food supplementation by S&CD or social workers
9) They are key on quality of care at home.
10) Health Education for community, individuals & care givers
11) They collect important data from families
12) They identify those in need of special interventions
13) In some cases they cook, wash, and sweep houses for patients

Drug therapy—only alluded to in the “side effects” of item four—appears just once in the 13 functions listed. Chipandwe’s conception of HIV clinical care was noticeably less centered on drugs and more centered on patients’ living conditions. Family welfare educators, social workers, home-based care volunteers or other volunteers would perform many of these functions in patients’ homes. Chipandwe’s solutions were very different than the type of care provided in the hospital HIV clinics at that time.

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378 Ibid.
379 Ibid.
Dr. Chipandwe's 13-point list also indicated a different perspective on the barriers to providing HIV drugs. For the ARV Team and the hospital HIV clinics, the problems were adherence, drug side effects, low uptake of testing, and shortage of technical staff in the way of pharmacists and doctors trained in HIV drug therapy. For Chipandwe, as a Public Health Specialist, the problems were patients traveling to/for work, patients being "too poor to feed themselves," and patients diagnosing themselves with TB rather than HIV because they preferred TB drug therapy. He also mentioned that "Patients who have no care givers have real problems of compliance, adherence and care despite the efforts of the H.B.C. providers, T.C.M. volunteers and F.W.E.s." Again these acronyms refer to women with little education who provided patients services in their homes. At the level of rural health care, problems of poverty, patient mobility, and lack of family support and care were more visible and more causally linked to problems with HIV drug therapy adherence. From the perspective of the hospital, patients who could be adherent received treatment, whereas from the perspective of the rural administration center, patients needed assistance with those conditions in their lives that prevented them from getting to the hospital for appointments and taking their drugs afterward. Dr. Chipandwe had a detailed understanding of the social problems that patients faced and of available social services and their limitations.

Follow-up teams, as Chipandwe envisioned them, would not only address a different set of problems than those addressed by a hospital's ARV clinic, they would do so with access to a different type of information: data on living conditions, patient

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380 Ibid.
381 Ibid.
location, and deaths—much of which was unavailable to the HIV clinics based in hospitals. Chipandwe organized his system of care with particular attention to mapping the location of these patients by ward. His role as a Public Health Specialist in epidemic control gave him the skills, resources, and networks to gather this type of information.

Follow-up teams combined “technical” people who knew the scientific and medical details of drug therapy, such as doctors and pharmacists, with “non-technical” people who had little education but commanded critical local knowledge about patients. The follow-up teams designed by Dr. Chipandwe met weekly or biweekly, with workers at different sites coming together in one place. In this way, meetings served as a mechanism to link the technical knowledge of doctors, nurses, lab and pharmacy technicians, and social workers with the local knowledge of family welfare educators and volunteers. If a nurse wanted to find out why a patient was not showing up to his or her appointments, other members present at the meeting could supply her with pertinent information. This reorganization would require a change in how hospital HIV clinics managed care, but at the national meeting there was general agreement that hospital-based HIV clinics could never manage HIV drug therapy alone.382

Dr. Chipandwe understood the solutions and problems of the ARV drug therapy program in a way that took into account how patients lived. He understood that labor mobility was high and that patients were often poor and underfed. He included families, caregivers, family welfare educators, and volunteers in his reckoning of who was needed to provide quality clinical care. This emphasis on local knowledge was radically different

from the way that KITSO, the ARV Team, and even ARV Team managers understood the problems and people relevant to HIV drug therapy. Public Health Specialists, though doctors themselves, understood health care in Botswana differently than their physician peers. They brought to national planning an understanding of the epidemic that was different from the understanding of ARV Team managers. The ARV program was at a transition point, and Dr. Chipandwe had a plan for how to change it.

Conclusions

Throughout this chapter, I have argued that these two very different bureaucratic systems gave health care practitioners two very different perspectives on HIV clinical care. The rural health care system was spread over a considerable distance and often provided health care in patients' homes or close to where they lived. The rural health care system valued, used, and relied upon networks of Batswana women who had knowledge about where patients lived and how they lived. This was a different approach to medical care than was found in the hospital. In the hospital, patient care was separated from how patients lived, both because patients had come from a distance and because hospitals existed as independent institutions. The technical focus of the HIV program, with its emphasis on drug therapy and the knowledge of doctors and pharmacists, reinforced the hospital's focus on the details of patient-doctor and patient-pharmacist interactions, not on patient access to care. The Public Health Specialist, as a representative of the rural health care system and its way of providing patient care, brought a new perspective to the ARV program.
The story of Public Health Specialists’ early involvement in the ARV program is also interesting because it shows the different solutions conceived under a different bureaucratic model of clinical care. The types of solutions that Dr. Chipandwe proposed were not ones that could have been conceived by national planners in the Ministry of Health, the ARV Team, or even national-level bureaucrats in the Ministry of Local Government. A Public Health Specialist had access to the concerns of a variety of health workers who knew where people lived and why they skipped their appointments at hospital HIV clinics. These workers included nurses who worked in rural clinics, social workers who coordinated home-based care, and family welfare educators. They knew how the patients lived, worked, got sick, got treated, and died. Public Health Specialists also supervised rural health team doctors, who were increasingly asked to provide HIV drug therapy in a rural clinic setting. This meant that a solution like Dr. Chipandwe’s, which coupled the expertise of doctors with the local knowledge of rural health practitioners, was actually possible in the rural health care system but would have been nearly impossible in a hospital HIV clinic. The incorporation of Public Health Specialists into national planning inevitably changed the landscape of clinical care for HIV patients in Botswana.

Including Public Health Specialists in ARV Team meetings may have added new names to the meeting minutes, but it did not change the gender, citizenship, or training of those around the table. Public Health Specialists joined Chief Medical Officers who represented HIV clinic nurses and social workers. Foreign male doctors continued to represent Batswana health care workers. Perhaps a Public Health Specialist’s training as a
doctor, combined with his gender, made him more qualified in the eyes of national bureaucrats, who themselves were usually male physicians and pharmacists, even though his foreign status made the Public Health Specialist an outsider to those he worked with and those he treated. My experience in the field did not give me a good sense of whether this arrangement was a source of conflict. Perhaps the occasional threats of nursing strikes were an alternative for nurses to make themselves heard on a national level. Further inquiry into the consequences of this hierarchy of participation on Botswana’s national health care system would help answer these questions.

Another recurring theme here is the use of meetings—in both their symbolic and managerial significance—to solidify bureaucratic change. Meetings served many functions. Participating in national planning for the ARV program through meetings made Public Health Specialists more invested in the program than they had been previously. Before the July 2004 meeting, many Public Health Specialists felt slighted by the fact that the ARV Team’s roll-out focused on hospital care and did not include them from the beginning. The ARV program was a high-status government endeavor, publicized in the nation’s newspapers and watched with interest internationally. To many of these expatriate doctors with international ties, the ARV program offered a résumé booster. Participants in the ARV program were not just doctors but HIV doctors with training and experience. Participating in national-level ARV program planning also offered a way to gain high-level bureaucratic attention and resources for recalcitrant problems. Only the ARV program had its own meetings bringing together the heads of departments in the Ministry of Health and the Ministry of Local Government. Only the
ARV program had the President of Botswana's word that it would succeed. Only the ARV program had a multi-million dollar commitment from an international donor, ACHAP, to fill in the resource gaps in Botswana's national health care system. For Public Health Specialists, involvement in this meeting held the promise of increased power and resources.

The policy of addressing only one clinical care setting or echelon of actors at a time was a pattern consistent with a general strategy I observed from the ARV Team. The ARV Team identified the fewest number of people who could achieve a specific goal and then limited meetings and planning to that group. This is one of the reasons that nurses, discussed in the last chapter, were represented by their Chief Medical Officers, the designated ARV site managers. Similarly, it is the reason that Public Health Specialists were not included in the process until most of the hospital-based HIV clinics were functioning; their continued functioning depended on better coordination with the Ministry of Local Government's rural health clinics. By not addressing these problems at the national level, the ARV Team kept the complicated and often recalcitrant problems of geography, demography, and personality from slowing down their progress towards providing HIV drugs in the hospitals. Add to this the fact that most Ministry of Local Government providers and problems were not under the authority of the Ministry of Health or the ARV Team; it made sense that the national meetings leave the problem of local coordination to local committees and individual initiatives. Meetings were not just symbolic representations of who could be helpful; they were also strategic choices about
who would be committed to the bureaucratic changes that the organizers were charged with facilitating.
At the start of this project, I was frustrated by how few easily available and published documents there were on Botswana’s HIV drug therapy program. Most of the planning documents from Botswana that I have collected on the ARV program are still not available outside of the country six years after the program started. In contrast, South African HIV drug therapy programs had much more extensive documentation available through online databases and the internet, perhaps because they were a subject of political conflict, both internally and internationally. I believe that the absence of clearly articulated public plans (there were internal planning documents of course) is indicative of two things. First, it points to the fact that Botswana’s partnership was stable, ongoing, and solvent. Neither partner needed to look to the broader international community for funding or support, only for recognition. Second, Botswana experienced a dynamic process of planning and bureaucratic change that involved both the donors and the Botswana government, so that the solutions that emerged were nationally specific.

Despite the absence of detailed plans available for public consumption, Botswana’s ARV program moved forward and provided life prolonging drug therapy to tens of thousands of citizens. James C. Scott in *Seeing Like a State* talks about beautifully articulated plans that fail; however, Botswana’s HIV drug therapy program is the opposite—it was a project with little in the way of publicly visible planning that
succeeded. Botswana’s government and ACHAP were committed to the messy process of creating a new bureaucratic service, and not obsessed with the stylized performance of technocratic statehood and international development that might have appeared in widely disseminated public planning statements. Published plans designed for the policy community are portable so that they can be used in the international search for funds and public support. However, published plans, particularly ones that do not leave space for negotiation at the national and local levels, are in stark contrast to the fluid process of bureaucratic and clinical change that takes place in a creative nationwide project.

Although there were many internal planning documents for the ARV program, the problems, solutions, and participants changed radically as the program evolved and expanded. Botswana’s bureaucratic practices allowed for this flexibility. Relationships among bureaucrats, international actors, and health care providers were constantly being renegotiated. Chapters 2, 3, and 5 talk about how meetings among participants, organized on the basis of a delicate politics of inclusion and exclusion, were one place where this renegotiation occurred. In addition, the planners of the ARV program used the process of secondment to create hybrid organizations, and to bring experts with international public health and medical experience into a fruitful relationship with the Ministry of Health. Chapter 2 discusses how the ARV Team itself was created through secondment, which inserted experts from the international community into the bureaucratic workings of the Ministry of Health. The obverse could also happen. Emissaries were sent from the national bureaucracy to work inside on the international community’s side of the

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partnerships. In 2004, the Ministry of Health seconded a Harvard trained microbiologist, Dr. Mine, to the Botswana Harvard Partnership to help coordinate the relationship between the Harvard laboratory where CD4 counts and viral load tests were performed, and the Ministry of Health’s HIV clinics that relied on those tests. Secondment is just one example of how Botswana’s government practices provided the context in which international expertise helped create the national ARV program.

The portable knowledge that international experts brought, with their degrees, experience, and university affiliations, was only productive because it existed in a social context in which it could be useful. The power of experts was both acknowledged and harnessed by the bureaucratic practices of Botswana’s Ministry of Health. International experts and projects, integrated through partnerships with Botswana’s government health care system, were able to experiment with new medical services, as at Princess Marina Hospital, and to create new bureaucratic forms of clinical care, as in the HIV clinics. Botswana’s HIV drug therapy program succeeded not in spite of bureaucrats, but because of a bureaucratic culture that allowed international expertise viability.

Most of the experts described in this dissertation were either doctors from the international health policy community or university-affiliated, infectious disease specialists. However, a close look at the approach and success of Dr. Ernest Darkoh, the early ARV Team’s Clinical Operations Manager, and also at the efficacy of the clinical preceptors who provided training on site at new HIV clinics, shows something important about the nature of their roles. It was not only their medical knowledge and skills that made them effective. As mentioned in Chapter 3, international experts with more
experience working within national health care systems had more success at negotiating the successful opening and operating of HIV clinics. Even for international experts, the ability to work within a national healthcare system, a type of bureaucratic expertise, helped them create the organizational innovations in Botswana necessary for HIV clinical care.

Bureaucratic expertise, held by bureaucrats and international experts, was crucial to the creation of Botswana’s HIV drug therapy program. The ‘experts’ were experts not only because of what they knew or the medical skills that they had, but also because of their ability to work in a bureaucratic health care system. Furthermore, the experts had their status conferred on them by bureaucrats and they were supervised by bureaucrats. Dr. Patson Mezonde, the Director of Health Services, participated in the creation of the ARV Team along with ACHAP’s project leader, Dr. Donald de Korte, who had administrative responsibility for paying international experts' salaries. Dr. Mezonde also commissioned, again along with ACHAP, the external review of clinical training that facilitated the path-breaking work of the clinical training committee. This clinical training committee, discussed in Chapter 3, harmonized the work of the two existing clinical training programs, KITSO and the ARV Team’s Clinical Preceptorship Program. These committee meetings created an environment where clinical training could expand and adapt to the changing needs of the recently established HIV clinics in the government hospitals. Dr. Mezonde’s central role in the work of the ARV Team, at national ARV meetings, and in the creation of the clinical training committee suggests that bureaucratic and medical skills were not confined to the international experts. The social position of
international expert was one maintained and facilitated by bureaucrats, and skills transfer from bureaucrats to experts was as important as skills transfer from expert to bureaucrat.

In a sense, expert, used as a term only for those who were internationally recruited to provide expertise, is a misnomer since bureaucrats, who were also physicians, had as much expertise as the ‘expert’ international physicians. At the same time, the international public health experts were paid more, and they were often given most of the credit for creating the HIV drug therapy program. The television series, Rx for Survival, features Dr. Ernest Darkoh as a “public health hero”, but no mention is made of the fact his boss was a career bureaucrat. President Festus Mogae does appear as an important player, but even the fact that Botswana has a national health care system is not evident in the program. In general, the international community acknowledged the prestige and achievements of the internationally recruited group of doctors, who were perceived to have the medical knowledge or public health management experience required to create a new HIV drug therapy program, while remaining fairly unaware of another group of doctors in the Ministry of Health (career bureaucrats, not politicians), who also had crucial knowledge and skills.

As described in the first two chapters of this dissertation, bureaucratic knowledge created the social space wherein expertise could be put to good use. One reason why bureaucratic knowledge and expertise is not visible on the international stage is because bureaucratic knowledge, however useful, is not particularly portable. Part of the technical

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focus of international health policy includes an emphasis on portable, universal knowledge. But this focus excludes the local, context-dependent skills crucial to developing effective public health initiatives. In a sense, international expertise and knowledge only appear portable; as experts work within the bureaucratic context in which they find themselves even international expertise is reconstituted anew. The perception that expertise is entirely portable is created by the fiction that local context can be excluded. Excluding the social context of medical care and development renders the problems technical and thus seemingly solvable with universal tools. Denying the social, however, does not erase its power.

Like the practices of the international public health community, the bureaucratic practices of Botswana’s Ministry of Health also included some perspectives and excluded others. Because nurses managed the day-to-day operations of the HIV clinic and spoke the same language as the patients, they had special knowledge about certain problems with HIV clinical care. But nurses were excluded from national planning. While nurses’ work was important and valued within hospitals and clinics, at the national planning meetings they were represented by male African expatriate doctors. This reflected a gendered professional hierarchy within the Ministry of Health where male citizen doctors were national bureaucrats, male African doctors were heads of hospitals, and female citizen nurses were local care managers. The Ministry of Health’s hierarchy of participation was reinforced by the international health community’s emphasis on doctors and pharmacists and their portable, universal knowledge.
Nurses were made doubly invisible. First they were marginalized by the practices of international health that valued their knowledge, particularly their social, localized knowledge, less important than international experts' specialized knowledge of HIV drug therapy or public health management. When national and international actors excluded nurses from planning, they limited the ways that nurses could participate in reorganizing HIV clinical care. By excluding nurses as a focus of HIV clinical interventions, donors excluded important agents of change. While public health interventions are shaped by local bureaucratic and clinical practices, international health development actors also had the potential to transform local practices. Workers with social and local knowledge cannot realize their potential to transform health care in positive ways when the international community restricts funding and participation so as to focus overwhelmingly on scientific, technical, portable knowledge.

An international focus on the knowledge of doctors and pharmacists had placed the clinical care of doctors and pharmacists, located in the hospitals, central to the work of HIV clinics. This focus on hospitals deemphasized the resources and providers in the rural health care system, and had consequences for both what national planners knew about barriers to care and what options they had for providing it. As discussed in Chapter 5, doctors at national planning meetings for the ARV program had very different perspectives depending on whether they were based in the hospital system or the rural health care system. Doctors in the rural health system had access to the knowledge of social workers, health educators, and health auxiliaries who routinely gathered information about patients' welfare and medical condition. Rural health doctors also had
access to a network of health posts and clinics that provided patients with health care and social services close to where they lived. Initially, normal Ministry of Health practice was followed, and only the heads of hospitals participated in national planning for HIV drug therapy thus doctors in the rural health care system were excluded. Two years after the ARV program started, rural health doctors were brought in to the national planning process, and their presence led to the discussion of new challenges and opportunities. Even after rural health care providers were represented, doctors still dominated national planning. While a person’s profession shaped what he or she knew about clinical care, Chapter 5 shows that where a doctor or a nurse was situated in the national health care system – where she was located in providing care – also shaped his or her practical knowledge base and perspective.

Just as representations of the problems and solutions for HIV clinical care varied within Botswana, so international representations of how new health care programs are initiated and funded should be taken as only one context-specific representation of reality. International policies and plans are shaped, inevitably, in ways that are oriented towards their particular audience. They emphasize the universal over the particular, creating a hierarchy of credit for innovation that obscures the reasons Botswana’s

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385 Julie Livingston in _Debility and the Moral Imagination_ suggests that clinic workers were also community activists. In this dissertation nurses and clinic workers do see themselves as patient advocates, but they participated in national planning in limited ways from within the government health care system. International donors often lauded community participation and advocacy, but no formal attempt was made to incorporate clinic workers into district level AIDS advocacy organizations. The international community often imagines a separation between civil society and government and perhaps there was little room for middle figures who both worked for the government health care system and were also community advocates. Nurses had a similar role in maternity care in the Belgian Congo as described by Nancy Rose Hunt in _A Colonial Lexicon: Of Birth Ritual, Medicalization, and Mobility in the Congo_. (Durham, N.C.: Duke University Press, 1999).
program succeeded. In international narratives, people with expertise on the social, the bureaucratic and the particular became invisible, while those with expertise concerning the universal and the medical move to the foreground. This foregrounding is not simply a matter of rhetoric; it reflects a hierarchy that is at the heart of international assistance programs. The planning hierarchy is further reinforced by professional medical hierarchies that favor universal scientific knowledge, seen as the domain of doctors, over social knowledge, though to be held by nurses and social workers.

As discussed in the introduction, biomedicine and international development do not give full weight to local bureaucratic and clinical practices. However, excluding social and political factors do not make them go away. If the ultimate goal of health development is social change, how is change possible if we do not engage with the social? Change, by definition, involves an engagement with the existing health care system. International health actors need to acknowledge that their accustomed emphasis on transferring skills and knowledge is a simplified representation of a much more complex participation in institutional and bureaucratic change. We all would benefit from looking hard at how our social positions determine what we can do in the world, what we know about the world, and how others may know the same situation very differently. Engaging with alternative ways of knowing the world is difficult, but potentially productive. When it comes to the delivery of health care using international money and expertise, this engagement allows for indispensable insights.
Appendix

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