An Evaluation of Staffing Needs at the Health Clinic in Maunatlala, Botswana

by
Sonya Bedge

A THESIS

submitted to

Oregon State University

Honors College

in partial fulfillment of
the requirements for the
degree of

Honors Baccalaureate of Science in BioResource Research
(Honors Scholar)

Presented May 28, 2019
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Abstract approved:_____

Sunil Khanna

As part of the Botswana Global Learning Internship Program, a qualitative study was conducted regarding the current staffing conditions at the local village health clinic in Maunatlala, Botswana. This was a month-long project conducted over the summer of 2018. Students from Oregon State University lived in the village of Maunatlala and conducted interviews with community members and clinic staff. The purpose was to identify and recommend improvements to specific points of interest defined by the community themselves. This project aimed to address staffing deficiencies within the village clinic. The clinic in Maunatlala village is currently operating over capacity and as both the clinic, and as the population that it serves expand, staffing deficiencies will only continue to worsen. The report included recommendations for increasing staffing, creating more opportunities for nurses, and assisting staff workers with housing costs in order to remediate the current staffing issues, as well as to forecast and address future staffing needs. A final report of the recommendations was given to several Ministries within the Botswana government including the Ministry of Health and Wellness.

Key Words: Botswana, Maunatlala, Botswana Global Learning Internship Program, Needs Assessment

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I understand that my project will become part of the permanent collection of Oregon State University, Honors College. My signature below authorizes release of my project to any reader upon request.

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Sonya Bedge, Author

Introduction

Botswana is often praised to be one of Africa's great development successes. As a small, land-locked country with a population of 2.2 million people, the country has transformed itself over the last 5 decades to develop its economy, government, and populace (Wada & Togo, 2008). While the country has certainly faced significant challenges during this time, there has also been significant progress in its development. One of the largest areas of development has been in the health sector. This change has occurred as a result of both domestic and international efforts and has occurred concurrently with the country's recent success. As the country has expended its economy, it has been able to make bigger improvements to healthcare in the country, and as their healthcare has improved, they have been able to grow their economy more ("Overview," n.d.).

The British Protectorate of Bechuanaland gained independence in 1966 and became Botswana. While it was one of the poorest countries in the world when it gained independence, it eventually achieved economic growth from mineral mining within its borders (Wada & Togo, 2008). Botswana is the world's 2nd largest diamond producer (16% of diamonds in the world) and also mines Coal, Copper, Diamond, Gold, Nickel, Salt, Sodium Carbonate, and many other minerals which have greatly contributed to the country's success (Brown et al., n.d.).

The story of Botswana's development is largely intertwined with the country's health challenges. In 1985 the country experienced its first case of AIDS and since then, the country has been plagued by the disease, having the highest prevalence of HIV in the world. At its peak, the prevalence of HIV/AIDS was ~37% in 2003 (Hardon et al., 2006). In reaction to this high

prevalence, the government made a 3-phase plan to combat the epidemic. Phase 1 enacted from 1987-1989 involved focusing on increasing blood screening to eliminate transmission risk of HIV through blood transfusion- which was a common mode of transmission before that time period. Phase 2, from 1987- 1997, introduced the ICE program: Information, Communication, and Education. This program was all about communicating risk, symptoms, and treatment of HIV/AIDS to citizens in Botswana. Phase 3, from 1997-2002 was multifaceted and focused on education, prevention, comprehensive care, and provision of antiretroviral medications (ARVs- the medications used to treat HIV). As part of the 3rd phase of this intervention, the President of Botswana declared that ARVs would be provided free of charge to citizens of Botswana who qualify for treatment. In order to achieve this goal of providing free medications, the UNAIDS Accelerating Access Initiative was established at an international level to assist developing countries increase access to AIDS care.

This program was a partnership of the UN with 7 pharmaceutical companies (Abbott Laboratories, Boehringer Ingelheim, Bristol-Myers Squibb, GlaxoSmithKline, F. Hoffmann La-Roche, Gilead Sciences and Merck & Co., Inc.) The purpose of this initiative was to foster direct connections between governments and the pharmaceutical companies providing the medications. After UNAIDS conducted an initial evaluation of HIV treatment challenges, they found that the biggest barrier for clinics providing treatment, was the price of the drugs. Through the direct relationships formed between governments and pharmaceutical companies, countries were able to negotiate down the cost of drugs. This relationship was only facilitated by UNAIDS and other UN agencies; the UN was not directly involved in any of the preceding. The new negotiated

prices are the prices used in distribution in the public sector and in government-supported health facilities.

After the creation of UNAIDS Accelerating Access Initiative, Botswana officially launched the ARV distribution program at the national level. In addition to this Initiative, the Bill and Melinda Gates Foundation and the Merck Company Foundation have each dedicated US$ 50 million over 2010- 2015, to the project. Additionally, Merck & Co., Inc. donated two ARVs for appropriate treatment programs developed by the Government for the duration of the initiative

Background on Health Systems in Botswana

The health system in Botswana is based on a primary healthcare model and consists of public, private, and traditional medicine practice, with the public sector dominating the system. Healthcare is delivered through a hierarchical network of facilities. At the top, there are referral hospitals, under those there are district hospitals, then primary hospitals, clinics, and health posts. All of these are operated by the Government of Botswana through the Ministry of Health and Wellness. Patient flow operates through a referral system, starting at the bottom levels and then moving upwards with referrals from their providers. In addition to these public services, there are also many nongovernmental organizations operating in Botswana- specifically as it relates to HIV/AIDS. Most of the services at these locations revolve around counseling and testing for patients with HIV/AIDS. The presence of these organizations began at the peak of the HIV

epidemic in Botswana and continue to persist today in the country ("African Health Observatory," n.d.).

Background on Provider Positions in Botswana

The HIV epidemic in Botswana highlighted some major shortcoming in Botswana's healthcare provider systems. The biggest of which was that Botswana had no way to increase the number of physicians in their country. Botswana opened its first Medical School in 2009 and graduated its first class in 2014 (5-year program). The University of Botswana Faculty of Medicine (UBFoM) was created in order to address the country's dependence on foreign physicians. Before this school, less than a quarter of the physician population were citizens in the country. This posed a threat to the healthcare system because when Botswana's current physicians retired or migrated to other countries, there was no clear way to recover or replace the physicians who left. The purpose of the medical school was to train general physicians for primary care, as well as recruit and train physicians to specialize. UBFoM has residencies in internal medicine, pediatrics, family medicine, emergency medicine, public health, pathology, and anesthesia. The most common subspecialty trainings are in surgery, pediatrics, internal medicine, and obstetrics and gynecology. A high proportion of students want to specialize abroad rather than in Botswana. This preference was based on the fact that students felt if abroad, they would receive better exposure/opportunities or had access to specialties not available in the country. Physicians with specialties other than the ones listed above exist in the country, they have simply been trained abroad. For the University, this adds pressure to their current training to expedite faculty training for specialty options that do not currently exist in Botswana. The lack of specialized training

programs is thought to contribute to the lack of retention of physicians (Rukewe, Abebe, Fatiregun, & Kgantshang, 2017).

This lack of providers also extended beyond just physicians. In Botswana, a majority of nurses are trained in-country- contrasted with physicians who were largely trained abroad. Over time, many healthcare workers who went abroad for training never returned back to Botswana, contributing to a local depletion of trained healthcare professionals. (Motlhatlhedi & Nkomazana, 2018)

Background on the Maunatlala clinic:

The health clinic in Maunatlala village serves ~9,000 individuals. On an average day, around 50 patients come to the clinic. However, this number is variable because of the different services the clinic provides on different days of the week. For example, on Tuesdays and Thursdays, the clinic holds their HIV clinic, which draws in another 40 patients. The clinic also holds diabetes, tuberculosis, and hypertension clinics. On days where these additional clinics are held, the clinic can be managing around 100 appointments per day.

After the mine closures in Selebi Phikwe (a neighboring town) many of the miners started returning back to their home villages to live with their families. It is because of this mine closure that the patient load at the clinic has been steadily increasing and will continue to increase in the

future. Even though the service area for the clinic has not changed, the number of patients in the area has increased and this change presents a significant challenge to the clinic as it exists today.

Methods

To address the goal of gaining more knowledge about staffing at the clinic, key staff members of the health clinic were interviewed to gain perspective about current staffing levels at the clinic as well as desired staffing levels for the future. These individuals were asked a standard set of questions to address 3 goals:

1) Determine current staffing levels
2) Determine if the amount of staffing should change at the clinic
3) Determine the barriers and challenges staff face when working at the clinic

The interview questions used are below:

- Describe the current staffing at the clinic
- Describe the typical patient load at the clinic each day
- What (if any) additional staffing would you like to see added to the clinic?
- How is the clinic patient population going to change in the coming years?
- As it relates to staffing, what are the challenges you face working in the clinic?
- Are there any other services you want the clinic to provide for its employees?

The interviews were semi-structured and started with the questions listed above. After these questions were answered, the interviewee was free to take the conversation in any direction of their choosing as it related to work at the clinic. Each participant gave consent to participate in the interviews and were told that their responses would be de-identified when conveyed in the final report. In total, 7 clinic staff members participated in the interviews. Their positions varied across all of the jobs in the clinic which interact with patients. Participants were interviewed in-person at the offices in the clinic at a time of their choosing.

After comparing and compiling comments from all of the interviews, a set of recommendations were created based on comments that were echoed across multiple interviewees. The recommendations included below convey the opinions expressed during individual interviews.

Results

The clinic in Maunatlala village is currently operating over capacity and as both the clinic, and the population that it serves expands, this issue will only continue to worsen. Below are a set of recommendations to remediate the current staffing issues, as well to forecast and address future staffing needs as the clinic continues to grow.

Recommendation 1: Increase staffing at the Maunatlala clinic.

Recommendation 2: Create more opportunities for nurses to obtain additional professional training.

Recommendation 3: Provide more housing for clinic staff.

Recommendation 4: Assist with housing costs for clinic workers who are in clinic housing.

Additional Note: Separation of Families

Recommendation 1: Increase staffing at the Maunatlala clinic.

The following table depicts the current staffing positions at the clinic, as well as the desired staffing needs in order for the providers at the clinic to produce the best health outcomes.

POSITION	CURRENT STAFFING	DESIRED STAFFING
Doctor	1	2
Nurses (includes Midwives and Nurse Prescribers)	10	12
– *Midwives*	4	6
– *Nurse Prescriber*	1	4
Pharmacist/ Pharmacist Technician	1	3
Social Worker	1	3
Ambulance Driver	2	3
Support Staff	1	3

IT Specialist/Medical Records Clerk	0	1

* Other staffing at the clinic include sanitation attendants and night security guards. These individuals are on independent contracts with the clinic.

Doctors:

Currently there is only one doctor at the clinic. This is an issue because when this doctor is not at the clinic, there is no physician to oversee operations or to stay on-call. This issue was clearly illustrated by the fact that over the course of the project in Maunatlala, the doctor was not present and had been out of the office for 2 months. This means that the entire village and catchment populations of ~9,000 were without a physician for at least 3 months.

Nurses:

The nurses at the clinic work not only as nurses, but also commonly as midwives and nurse prescribers- if they possess the certifications for these. Later in this section, the challenges to obtaining these certifications will be discussed. While the clinic could always use more nurses, the greater issue is obtaining or training nurses with the additional midwife and nurse prescriber qualifications in order to adequately keep up with the patient needs.

Pharmacists:

Currently, there is only one pharmacist. This presents an issue because this individual is the only one who possesses a complete knowledge of the dispensing process. When the pharmacist is gone this presents a challenge and creates opportunities for error because there is a lack of total understanding for the medication process. Because there is only one pharmacist, the emphasis has been placed on simply dispensing of drugs to the patients. With the help of an additional

dispensary technician, it would be possible to conduct basic health talks, provide back-up to the full-time Dispensary Technician for the receipt and filling of prescriptions and supply orders, storeroom stocking; and provide additional manpower for a dispensing queue for the dispensing of chronic second medications. The clinic would also be able to better manage and track their medication usage in order to better report and manage drug usage for the community. Additional help would also allow for prescriptions to be dispensed outside of the structured times (for example prescribing antiretrovirals (ARVs) outside of the Tuesday- Thursday schedule). This has the potential to improve adherence to medication schedules by allowing patients to come at their own convenience to pick up their medications.

Social Worker:

Currently at the clinic there is only 1 social worker. This presents a tremendous challenge because this social worker is responsible for assisting the entire population of the village. The work that is done largely involves connecting individuals to relevant social services but is also very time consuming. The social worker focuses on sustainable solutions to the issues community members have, but sustainable solutions take time to create. By working with the social welfare offices, the Department of Community Development, and local governments, the social worker makes tangible changes to the lives of the community but is severely overworked. The community is in dire need of more social workers to assist the community in order to create more sustainable solutions for the issues the community faces.

Ambulance Driver:

As discussed earlier, with the expanding patient population and the potentially expanding catchment area, there is an extremely large need for more ambulances. The ambulances are used for patient transport between different health centers, as well as for transport of supplies between the clinic and the health posts. Because the clinic falls under the Palapye District Health Management Teams (DHMT), all of the supplies for the clinic come directly from Palapye, and in the case that the supplies have to be moved to the health posts, they have to come from Palapye, through the Maunatlala clinic, to the health posts. Currently, all of this transport occurs with the one ambulance owned by the clinic which is operated by two drivers. When the clinic acquires additional ambulances, they will also require more staffing to drive those ambulances.

Support Staff:

Currently, because of the lack of specialized health professionals, the nurses in the clinic work in many different roles at the clinic- some of which are outside the scope of working as a nurse. These activities mostly include counseling patients about their specific issues which are related to health but are better managed by a professional who directly deals with these issues. These issues include topics such as: alcohol abuse, gender-based violence, mental health, and health education in schools. As the system currently exists, these responsibilities can also fall upon the already overloaded social worker in the village. At the moment, the support staff consists of a health education assistant who also fulfills many roles and takes on a myriad of responsibilities from social work, to education, and counseling. While one might argue that the topics listed above all fall under this role, if the community had health professionals specifically dedicated to assisting with these specific issues (alcohol abuse, gender-based violence, mental health, and

health education at schools with a school nurse) then the workload would be spread more evenly across the clinic, and community members would have more access to better care in these areas.

IT Specialist/Medical Records Clerk

The clinic currently relies on limited IT support from Palapye and Gaborone. Additional assistance is needed with both entering data into the system and filing patient records, and with systems maintenance and training for clinic staff who handle medical records. It is for these reasons that an individual who can serve in both of these capacities simultaneously would be recommended for the clinic.

Recommendation 2: Create more opportunities for nurses to obtain additional professional training.

A lack of additional training opportunities affects two positions at the clinic: the midwives and the nurse prescribers for ARVs.

Midwives:

One of the issues that the clinic faces is that there are often not enough midwives to assist with all of the pregnant women and deliveries that occur at the clinic. It is common for midwives to be overworked simply because there are so few midwives that they have to frequently rotate through the midwife position. Because the midwives at the clinic are both nurses and midwives, they work as nurses most of the week, and then some days they work as the midwife on shift. This presents a number of operational difficulties because when the nurses work as midwives, they could be helping with deliveries at any time of the day or night and then expected to work

the next day if they are scheduled. If there were to be more midwives on the staff, they would be able to rotate through the position less frequently and as a result would be less overworked.

Another issue that arises from the lack of midwives is that during a woman's pregnancy, it is normal for her to see a different midwife during each visit. Because there is no continuity of care the mothers never become familiar with any one of the midwives. During delivery it is also common for the mothers to be treated by a midwife they do not know. This has the potential to lead to a feeling of discomfort for the mother which may prevent the mother from disclosing important health or pregnancy-related information to the midwife. If there were more midwives, then each midwife could be assigned to a different mother which would allow for mothers to build relationships with their healthcare providers to ultimately result in more comfortable deliveries for the mothers. This may also lead to less mistakes due to information falling through the cracks when a patient sees multiple health professionals.

The government already pays for the training for nurses to become a midwife, however, there are too few spots available for this certification. There are nurses at the clinic who wanted to get the certification but were restricted because they could not enroll in the courses to obtain this additional certification. If there were more spots available in these classes, all of the nurses who wanted to obtain this certification would be able to.

Adding more spots to the certification classes would also be extremely beneficial to the health posts. Last year in one of the catchment area villages, no antenatal care was performed due to the

lack of a midwife. If more nurses also had the midwife certification, then one of the nurses at the local health post could have stepped in to fill this need in the community.

Nurse Prescribers:

Among all of the nurses on staff, only one of them is certified to distribute ARVs. This presents a significant challenge because of the number of patients that this nurse prescriber is responsible for.

On Tuesdays and Thursdays when the clinic prescribes and distributes ARVs, the clinic is filled with patients awaiting their appointments. On these days, the nurse prescriber can see up to 40 patients in the day. This is 4 times the recommended patient load of 10 patients per day when a nurse is prescribing ARV medications. Because of this large patient load nurses (especially the nurse prescriber) are not able to give sufficient time to their patients. As a result, patients do not feel connected to their healthcare providers and they omit health information when talking with their doctor and nurse which overall decreases the quality of care that each patient is able to receive.

While the government also pays for nurses to obtain this training, there are still barriers to obtaining the certification. In the past, many of these training courses were privately funded through donors- especially through Harvard, the CDC, and PEPFAR. One of the primary issues with this is that these programs provided a limited number of trainings, with a limited number of slots for the Palapye DHMT. With these program withdrawing from the country, one of the primary educational methods for the nurse prescribers is disappearing.

If there were more training opportunities for both of these positions (midwives and nurse prescribers) nurses would be able to fulfill additional staffing roles within the clinic. This would be beneficial to the clinic and the health posts because it allows for adaptability to deal with issues and absences as they arise. With the current staffing system, this is not a luxury that the clinic can afford.

Recommendation 3: Provide more clinic specific housing with preference given to staff who needs to be on-call.

Currently, there are 4 staff houses for the clinic, which is insufficient housing for the nurses that currently work at the clinic. By increasing the amount of staff housing at the clinic, more of the staff would have easy access to the clinic and could therefore improve the quality of care that patients are receiving by decreasing the wait time for patients in emergency situations.

There are two benefits to living in the on-site housing: rent is less expensive, and proximity to the clinic allows for staff to reach work quickly (especially for staff that is on call). Currently there is no priority system for staff housing at the clinic. This means that clinic staff such as the sanitation workers could be living in the clinic housing while nurses and midwives (who need to be close to the clinic for nights when they are on call) live far away from the clinic- far beyond walking distance. This affects health outcomes because in the case of emergencies, nurses must drive to the clinic increasing the time until treatment for the patient. As part of this

recommendation, there should be a priority system in which staff that is needed for on-call shifts receives priority for the clinic housing.

Recommendation 4: Assist with housing costs for clinic workers who are not in clinic housing.

One of the benefits to living in the on-site housing, is that rent is cheaper compared to elsewhere in the village. Currently there are 3 common options that the staff utilizes for housing: living in the clinic housing, renting space from the Village Development Committee (VDC), and renting space elsewhere in the village. The first two options (clinic housing and renting from the VDC) are similar in price and present cheaper options for living- around 300 Pulas/ month. However, to rent from elsewhere in the village is extremely expensive- around 5x as much costing, ~1,500 Pulas/month. When renting elsewhere in the village, one must also factor in the additional cost of transportation to and from the clinic for the staff member. One clinic worker reported that to live in the village and pay for all of the additional associated costs, they had to take from their savings even with the salary from the clinic. If the government were to assist with the cost of housing for the individuals who had to live in the village, working at the clinic would allow individuals to save money and would incentivize individuals to stay in the village, bring their spouses and families. This would help to incentivize village work and would help to retain clinic workers, especially at this location.

Additional Note: Separation of Families

Additionally, while this issue is not unique to the health clinic workers, it is worth noting that many of the government workers encountered during the project were separated from their spouses and their families.

The two biggest groups of government workers that were consulted were professionals associated with the health clinic and those associated with the schools, however, other government workers were also consulted. Upon talking with these individuals, it was revealed that they experienced many difficulties in regards to the government placement process. While one individual expressed that there were exceptions made for married couples, most of the other individuals consulted, shared that they were hours away from their spouses and families, and even though they were married, they still were assigned to positions far apart from one another.

This presents issues with government workers feeling a sense of estrangement to the community they are serving. This also puts an additional financial burden on government workers who then have to spend significant parts of their earnings on transportation to see their families on weekends and holidays. If the government were to develop the system in which families and couples could be placed together, much of this burden would be lifted, and it would lead to a happier and more socially connected government workforce.

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