

HEALTHCARE FINANCING IN MALAWI AND THE ACHIEVEMENT OF UNIVERSAL  
HEALTH COVERAGE: PARADOXICAL DIFFICULTIES IN ITS REALIZATION DUE TO  
VERTICAL PROGRAMMING AND OFF-BUDGETARY SUPPORT TO THE NGO SECTOR.

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## ABSTRACT

Stephen Alexander May: Healthcare financing in Malawi and the achievement of universal health coverage: paradoxical difficulties in its realization due to vertical programming and off-budgetary support to the NGO sector.

Malawi's public health sector is presently funded 54% by external financial contributions from donor partners, demonstrating an overreliance on such donor aid for effective service delivery. However, donor support is increasingly precarious as donor partners opt for non-budgetary support, which redirects funds towards international and local NGOs instead of governmental ministries. Priorities for NGOs and donors oftentimes are uncoordinated with governmental priorities, resulting in the duplication of service delivery and the wasting of donors' funds. Additionally, NGOs preferentially support vertical programs that focus on specific health concerns, notably HIV/AIDS, to the detriment of non-prioritized health conditions, such as maternal health and non-communicable diseases, effectively fragmenting and debilitating the overall healthcare system. The former perpetuates Malawi's continued dependence on foreign funds and inhibits the government's ability to achieve targets such as the implementation of universal health coverage. Even though vertical programs have undoubtedly contributed to marked improvements in health during the 21<sup>st</sup> century, such achievements are neither sustainable over the long-term nor reflective of gains expected due to such high levels of funding.

The present analysis, shaped by personal experiences and observations within a local Malawian NGO, examines the country's healthcare system and the NGO sector. On one hand, concerning the healthcare system, the expansion and success of vertical programming in improving life expectancies at the expense of broader healthcare gains is critically analyzed. While on the other, the NGO sector is critiqued for its overdependence on volunteers for operations and economic sustainability, the presence of entrenched small-scale corruption, and the system of per diems, which incentivize remunerated activities over salaried obligations. Finally, I argue that vertical programming financed by donor partners have inhibited the realization of universal health coverage in Malawi and that donor partners should increase direct budgetary support to the Malawian government to enable an alignment between the government's health priorities and the available financial resources.

**Key Words:** Malawi, donor aid, development, universal health coverage, NGO, HIV/AIDS, volunteerism, per diems, corruption

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## Part I – Introduction

In Low and Middle-Income Countries (LMICs), improvements in health indicators have been universally recognized as a key catalyst for the realization of a country’s economic development (1, 2, 3, 4). Healthy individuals lose fewer days of schooling and work to illness, thus increasing productivity and output metrics for national economies (1). Furthermore, as morbidity and mortality decrease in the population, the strain exerted on limited national health ministry budgets is lessened, enabling a more efficient and equitable use of resources (4). Significant attention has been concentrated on finding effective mechanisms to improve the health of individuals in LMICs, poignantly present in the infusion of external financing in under-resourced health ministries and to programs managed by non-governmental actors (5). The former is prescient in the case of Malawi, a country highly dependent on external financing to fund governmental operations. While external aid, through grants and bilateral or multilateral assistance, has undoubtedly improved health outcomes in Malawi, the need to improve upon its effectiveness is essential as the country moves toward achieving the Sustainable Development Goals (SDGs), notably the third goal through a push towards universal health coverage (UHC) to provide “quality, equitable, and affordable health care with the aim of improving health status, financial risk protection, and client satisfaction” (5, p. 27).

The overreliance on external funding required for the Malawian healthcare system to function is an area of concern as the country aims to achieve universal health coverage (UHC). In 2015, external financing accounted for 54% of the total health expenditure (THE) (6). While the government dedicated 9% of the country’s gross domestic product (GDP) to healthcare, the low GDP of the country only translates to an expenditure of \$9.80 per capita per year. Furthermore, Malawi has up to yet failed to meet the stipulations of the Abuja Declaration of 2001, in which African heads of state pledged to dedicate at least 15% of their annual budgets on health (7). Conversely, external contributions to the public health sector account for \$18.31 per capita (6). It merits clarification that the \$18.31 per capita represents direct budgetary support to the Ministry of Health (MoH). However, donor agencies such as United States Agency for International Development (USAID) preferentially provide off-budgetary support, which funds operations at non-governmental organizations (NGOs), therefore, the \$18.31 per capita does not adequately reflect the total per capita expenditure from external partners (8). In the case of providing UHC, it has been complicated as of late because of unreliable funding and fluctuations in aid budgets, notably, the slashing of USAID funding since the inauguration of Donald Trump as president of the United States and the period succeeding the 2008-2009 global economic crisis.

The present text focuses principally on the period of time posterior to 2000, in what has been denominated as the global health era, in which the perception of medical care transmuted from a privilege to a cornerstone of human rights and global development, with a emphasis on the delivery of care to meet the burden of disease<sup>1</sup> (8). The analysis will thus explore the most salient components of the current healthcare situation in the country, focusing on two of the three main service providers in the country: government run public facilities and an expansive network of

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<sup>1</sup> The burden of disease refers to the quantity of diseases and conditions and their impact on a given population (8). In the case of Malawi, estimates concerning the burden of disease are complicated by a weak healthcare system that has inadequate surveillance capabilities, notably in the case of diagnostics, tracking of patients, and integrating fatalities outside of the formal system.

<sup>2</sup> The World Bank defines low-income countries as those with a GNI per capita of less than \$995 (17).

international and local NGOs. While health metrics have improved since Malawi became democratic in 1994, I will argue that many of these advancements have come at the expense of wider health gains. Notably, vertical programs, which are favored by donor agencies, have fragmented service delivery and impeded the strengthening of the wider healthcare system. While some vertical programs have invariably had success, notably the expansion of antiretroviral therapy (ART), it is imperative to critically assess this success. For example, ART has been provided free of cost since 2004 in Malawi, and while the initial roll-out was complicated by issues pertaining to the healthcare infrastructure and human resource availability, it now has over 700 partner facilities integrated in the service provision (9). With that being said, there is still a significant gap in the provision of ART to the HIV positive population, where only 66% of the HIV positive population has access to treatment (10). Former ART guidelines concerning treatment decisions excluded large segments of Malawi's HIV positive population due to the dearth of laboratories capable of analyzing CD4 levels (9). However, the "test and treat" guidelines adopted in 2015 by the World Health Organization (WHO) have expanded treatment to all HIV positive individuals (11). The present gap in ART service provision demonstrates the inefficiencies in the Malawian healthcare system, where multiple barriers impede the population's ability to access healthcare services (9).

Concerning the provision of services from NGO providers, I will critically look at the manner in which these organizations have failed to live up to their aspirational mottos. I will draw on my experience at a large national healthcare NGO based in Lilongwe with operations covering 40% of the country, that will remain anonymous out of respect for their work. Furthermore, I include information gathered through informal conversations with local actors in the NGO sector to propose improvements for the distribution of donor funds. Principally this analysis will focus on the dependence on volunteer workers to expand catchment areas, the poor provision of financial resources that are oftentimes diverted from reaching communities, the absence of accountability to the national government and the community, and the perverse system of per diems that prioritizes remunerable tasks outside the purview of salaried obligations.

Finally, while my analysis will principally examine external financing's role on the Malawian healthcare system, there are invariably recommendations here within for donor agencies as they seek to improve the quality of their interventions. While Malawi is undoubtedly dependent on foreign assistance, gains have been limited due to donors' reticence. In 2005, the G8 nations agreed to dedicate at least 1% of their gross national incomes (GNI) for external aid (8). However, only five of Organization for Economic Co-Operation's (OECD) Development Assistance Committee (DAC) members have come close to giving 1%: Sweden, Norway, Luxembourg, Turkey, and the United Arab Emirates (12). Though these contributions are certainly laudable, the major economies of the G7 nations do not surpass 0.7%, and the United States gives only 0.182% of its total GNI (12). Achieving healthcare gains and reaching the SDGs in impoverished countries requires that DAC members fulfill their commitments and increase their official development assistance (ODA). In the absence of increased cooperation, more efficient utilization and distribution of external financing is required for impoverished countries like Malawi as they build and strengthen their healthcare systems.

## Part II – Poverty and aid in Malawi

### *Malawi's sociodemographic profile*

Malawi is a landlocked South-East African nation of 18.6 million inhabitants, 50.5% of which are female (13). The population has an annual growth rate of 2.9% and has increased 87.9% since 1998, when 9.9 million people were recorded in the country's census (5, 14). Moreover, the population skews very young, with 44.0% of the total population under the age of 15, 18% under the age of five, while only 3.0% is over the age of 65 (13, 5). Even though the fertility rate has decreased during the past 25 years, from 6.7 in 1992 to 4.4 in 2016, it still is double the replacement level, thus indicating the potential for rapid population growth as the cohort of youth reaches sexual maturity, compounded by increasing life expectancies, which have improved from 43 years in 2000 to 63.2 years in 2016 (15, 13). Fertility rates remain higher in rural areas at 4.7 compared to 3.0 in urban settings. Additionally, the fertility rate is tied inextricably to household wealth, where women in the lowest economic quintile have an average of 5.7 children, whereas women in the highest quintile have an average of 2.9 children (15). Patterns of age-specific fertility have remained consistent since 1992, with women aged 20-24 still representing the most births per 1000 women at 216, while there are 136 births per 1000 women aged 15-19, reflecting the group with the lowest reduction over this period of time (14).

Malawi's population is overwhelming rural, with 83.4% residing in rural areas (13). In terms of health, the former translates into poor utilization of services as only 76% of the population lives within 8 kilometers of a health facility (5). The rural nature of Malawi's demographics has resulted in an agriculturally based economy with limited manufacturing capacity. Furthermore, due to a high prevalence of informal labor, with approximately 89% of the labor force informally employed, Malawi possesses some of the lowest GDP and GNI levels in the world (16). In 2017, the GDP per capita was \$338.50, while the GNI<sup>2</sup> was \$320 per capita, translating to mean and median earnings of \$114 and \$37 respectively, with inflation for 2016 at 21.7% (13, 5). While GDP grew 4.0% in 2017, the GNI only grew 1.4%, rebounding from a period of negative growth rates (13). Therefore, the majority of economic growth in the country is localized in externally based companies or individuals who remove capital gains from the country. The economy's growth, which has averaged 4.98% from 2008 to 2017 has been unable to lift the country out of poverty or to significantly increase the GNP because of historical weaknesses (13). These weaknesses have limited the government's capacity to collect taxes and to adequately spend on infrastructure, education, and healthcare. Additionally, the country's low GNI has translated to a poverty gap at \$1.90 a day of 33.6% a poverty headcount ratio of 71.4%, 70.9% live below the poverty line, and 24.3% are in severe poverty (18, 14). Even though there are high levels of poverty, wealth is fairly equitably distributed in the country, with a Gini coefficient of 46.1 (19).

UNDP's multidimensional poverty metric, which takes into account the dimensions of education, health, and living standards is estimated to be felt by 56.1% of the population, while an additional 27.2% live near the threshold (18). The former demonstrates that a higher proportion of individuals have access to non-income resources than financial resources. Even though Malawi has an agriculturally based economy, the cycle of poverty is perpetuated in part due to high food prices. Notably, the cost of a simple meal occupies 45% of the average daily income

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<sup>2</sup> The World Bank defines low-income countries as those with a GNI per capita of less than \$995 (17).



(20). Such high food prices have deleterious effects on the population, such as contributing to school drop-outs and the underutilization of healthcare services, which impede the ability to earn income. In the case of education, in 2015, females averaged 3.8 years, while males averaged 5.0 years of schooling, well below the 10.8 years of expected schooling (18). While schooling attainment has increased since 1992, from 0.4 years for females and 4.3 years for males, there is still a significant disparity in educational attainment between boys and girls in the country, evident in the literacy rate which is 69.8% for males and 55.2% for females (5,14). Additionally, only 43.5% of the population has access to basic sanitation services, 67.2% have access to basic drinking water sources (63.4% of the rural population), while 11% of the total population has access to electricity (4.0% for rural residents) (14, 13). Taken together, high poverty rates in conjunction with other factors have direct influences on the burden of disease in the country through social determinants of health<sup>3</sup> (5).

#### *Aid to Malawi through external financial assistance*

The healthcare system in Malawi has historically been unfunded due to two interrelated phenomena: structural adjustment programs (SAPs) and neoliberalism. Following the Bretton Woods Initiative, SAPs, which limit public expenditure in favor of private investments came to dominate World Bank loans and International Monetary Fund (IMF) fiscal control policies in impoverished countries (8). Limited public expenditures inhibited countries from funding public infrastructure projects, purchasing public goods, and staffing a sufficient civil servant workforce (8). In terms of health, SAPs severely impacted the capacity of the healthcare system to hire doctors, build hospitals, and pay for medicines. Taking into consideration the former, a prevalent discourse in global health revolves around the need for debt relief for impoverished countries to overcome the damage of SAP conditioned loans. In the case of Malawi, history has shown that debt relief is not the panacea that it is oftentimes presented to be. In 2006, Malawi was a part of the Heavily Indebted Poor Countries (HIPC) Initiative and Multilateral Debt Relief Initiative (MDRI) (22). From 2006 to 2015, more than \$1.5 billion in financial assistance was provided to Malawi to relieve its debts (22). However, the debt relief plan has been ineffective up to date and Malawi's debt has more than doubled from 2007 to 2016, increasing from 26.7% of GDP to 54.3% of GDP (23). The failed debt relief plan in Malawi demonstrates that without proper governance, potential benefits of debt relief can be easily squandered, as the external debt stocks in 2015 ballooned to 127% of the exportation of goods, services, and primary income (14).

The implementation of neoliberalism, most notably in the 1980's, further weakened impoverished nations healthcare systems. Public healthcare spending was considered deficient in sub-Saharan Africa; however, governments were limited in their ability to freely spend in the public sector due to the continuation of SAP requirements (8). In 1987, the Bamako Initiative, sponsored by the WHO and UNICEF, and agreed upon by the African health ministers in attendance, sought to radically alter healthcare financing by shifting responsibility from the government to the populace through the implementation of a fee system at the point of delivery (8, 24). The initiative outlined three main priorities that included: decentralizing community-

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<sup>3</sup> The WHO defines social determinants of health as “the unequal distribution of power, income, goods, and services, globally and nationally, the consequent unfairness in the immediate, visible circumstances of people’s lives – their access to healthcare, schools, and education, their conditions of work and leisure, their homes, communities, towns, or cities – and their chances of leading a flourishing life” (21).

based decision-making, implementing user financing of health services, and the limitation of programs to the delivery of the most essential drugs (24). Under this logic, cost shifting was widely adopted by African governments and international partners under the notion that poor Africans would recognize the importance of health and be willing to pay for services. However, user fees enacted a significant barrier for poor individuals, resulting in increasingly unequal access to care and limited uptake of services (8). Additionally, since fees constructed barriers to access, revenue never met projections and was thus insufficient to adequately cover staff salaries or to stock pharmacies (8).

The intersection of SAPs and the Bamako Initiative deprived Malawi of funding for the healthcare system and at the turn of the 21<sup>st</sup> century, health expenditure per capita was equivalent to only \$6.70 a year (14). To achieve the Millennium Development Goals (MDGs), it was recognized that such insufficient levels of funding in sub-Saharan Africa would imperil the success of accomplishing health-related goals (8). Therefore, international donors, either through bilateral or multilateral channels, partially stepped into the funding gap to assure the success of the MDGs. From 2000 to 2005, external health expenditures in Malawi increased from 33% to 62.5%, reaching a high of 70.8% in 2012 (14). Per capita expenditures from external sources thus increased from \$2.20 to \$10.60 from 2000 to 2005, increasing as high as \$26.30 in 2013 (14). As previously mentioned, in 2015, the government dedicated 9%<sup>4</sup> of GDP to health, translating to an expenditure of \$9.80 per capita, while external funding contributed \$18.31 per capita (14). In 2015, THE was \$34.20 per capita per year, well below the target of \$86 per capita needed to achieve UHC (25).

During the period of 2012 to 2015, development partners contributed an average of 61.6% of the THE, while the government accounted for 25.5%, and households funded 12.9% through out of pocket expenditures (5). As of 2015, 53.5% of the MoH budget was provided by international partners, reflecting a decrease in direct budgetary support. With that being said, only 49.5% of the funds provided by external partners are pooled under central and local government schemes, whereas 39.8% of the total funds, allocated to the NGO sector, are not pooled (5). In the case of the HIV/AIDS subsector, donors contribute 95% of the total financing, reflecting what has been denoted as the AIDS enterprise, a topic that will be discussed in further detail in subsequent sections (5, 26). While the MoH has considered domestically funding the health sector to align with governmental priorities, MOH believes that gains achieved will digress without continued international assistance (5). The present Health Sector Strategic Plan II (HSSP II), which runs from 2017-2022, thus seeks to strengthen governance of the health sector and improve efficiency as a means of maximizing existing financial resources (5). Even though HSSP II falls under the purview of the MoH, it was developed with assistance from large donor partners and NGOs, which have the ability to shape and dictate priorities due to contributions that may exceed the government's health budget (8).

In 2016, Malawi received \$1.24 billion in total ODA, 36.54% of which was allocated for categories of health and population, equally approximately \$454.3 million for the sector (27). At present, the largest overall contributor to the total ODA is the United States, with an overall contribution of \$299.5 million in 2017 (27). 41% of the United States ODA was allocated for

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<sup>4</sup> Even though the government's total health expenditure has increased from 2012 to 2015, the devaluation of the Malawi Kwacha has seen the value in USD decrease (5).

health, corresponding to \$124 million. HIV/AIDS is prioritized by the United States, with 58% of the total health ODA assigned for associated programs, equivalent to \$71.55 million, with a total of \$120 million planned for 2018 (28). United States HIV/AIDS contributions are principally redirected through PEPFAR, an off-budgetary mechanism, which has distributed a total of \$839.5 million in Malawi since 2004 (29). Other health concerns that are less prioritized include tuberculosis (\$2.2 million), nutrition (\$4.52 million), family planning (\$7.28 million), and maternal health (\$10.99 million) (28). In the case of family planning, the reimplementing of the Mexico City Policy, also known as the global gag rule, has seen budgetary support eliminated for NGOs providing these services unwilling to acquiesce to USAID demands (30).

Even though Malawi is a signatory to a number of international conventions that call for harmonization and alignment of aid, including the 2005 Abuja Declaration, the 2008 Ouagadougou Declaration on Primary Health Care, the 2005 Paris Declaration on Aid Effectiveness, the Accra Agenda for Action, and the Busan Partnership for Effective Development Cooperation, aid has continued to be disjointed and fragmented (5). Notably, in accordance with World Bank loan policies and a requisite for other foreign assistance, poverty reduction strategy papers (PRSP) are required. While PRSPs are designed to support the coordination of external assistance within the government's framework, include a national strategy of poverty reduction, and outline investments in health, employment, and education, donors continue to expand off-budgetary support to NGO operations in the country (8). As previously mentioned, the United States disproportionately prefers off-budgetary support to U.S. based NGOs. Reminiscent of Malawi's colonial past, the United Kingdom's Department for International Development (DfID) is the largest single direct budgetary supporter to the MOH, providing approximately 40% of all direct assistance (26, 31). Other major donors to Malawi, with contributions exceeding \$20 million in 2016, include the International Development Association (World Bank), the Global Fund, the European Union, Norway, Concessional Trust Funds (IMF), Germany, African Development Fund (African Development Bank), and Japan (27). Since 2003, the Global Fund to Fight AIDS, Tuberculosis and Malaria has distributed \$1.17 billion, the majority of which has been allocated for HIV/AIDS (\$676.9 million) (32). Money for TB/HIV (\$265.5 million) and malaria (\$179.3 million) represent significant expenditures, while tuberculosis as a standalone condition has received only \$8.5 million (32). The Global Fund proclaims that its investment has seen the expansion of ART to 680,000 individuals, the distribution of 7.7 million long-lasting insecticidal nets (LLINs), and the treatment of 3840 cases of pulmonary TB<sup>5</sup>.

### **Part III - Health situation in Malawi**

Recent gains in health can be attributed principally to vertical programs dealing with HIV/AIDS, under-five mortality, and malaria, to name a few. The former has resulted in a substantial increase in the life expectancy at birth of the population, which has increased from 43 years in 2000 to 63.2 years in 2016: 44 to 65.8 for women and 43 to 60.6 for men over this period (14). Nonetheless, the country still experiences high rates of morbidity and mortality associated with communicable diseases, with non-communicable diseases (NCDs) have increasingly affected the

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<sup>5</sup> The Global Fund claims credit for specific health results as a result of their funding, even when results may be an outcome of various interventions undertaken by the government and NGOs (33). In this case, it is highly improbable that the Global Fund would be responsible for providing all ART in the country.

population (34). Additionally, while HIV/AIDS and child health have been the focus of healthcare interventions in the country, donors have paid little attention to conditions such as maternal mortality, cardiovascular disease, cancer, and neglected tropical diseases (NTDs) (27, 8). Therefore, while the life expectancy of the population has increased during the 21<sup>st</sup> century, it has occurred due to the prioritization of certain health conditions over others, thus resulting in the inequitable provision of healthcare services.

As noted previously, the rise of NCDs coupled with moderate decreases in communicable disease prevalence, increases in life expectancy, and decreasing fertility since the late 20<sup>th</sup> century has been associated with an epidemiological transition (35). However, the patterns of disease do not cleanly align with the five stages originally proposed by Abdel Omran in 1971 that perceive the prevalence of diseases as occurring in a stepwise fashion, where communicable disease prevalence gives way to increases in NCDs (8). The epidemiological transition has been utilized by neoliberal policymakers in identifying the cheapest and simplest preventative measures when prioritizing interventions in impoverished countries (8). Malawi does not cleanly follow the steps prescribed for an epidemiological transition because the country's economy has had limited growth and development over this period of time, while outside factors, notably external aid have been largely responsible for the improvements in health metrics. External aid funded programs have disproportionately been focused on reducing communicable diseases while ignoring increasing rates of NCDs. Additionally, the prevalence of NCDs is widely unknown to health authorities, especially mental illness, cardiovascular disease, and diabetes, therefore presenting a challenge for a healthcare system that is presently not equipped to address such health concerns (5). Conversely, notions of the presence of an epidemiological transition may spur innovation and a proactive development of the healthcare system to adequately treat the population's shifting burden of disease.

The public provision of healthcare is enshrined in the Malawi constitution, which states that the State is compelled "to provide adequate health care, commensurate with the health needs of Malawian society and international standards of health care" (36). With that being said, health services in Malawi are provided by multiple actors including the public sector, the private for-profit sector (PFP), and the private not-for-profit sector (PNFP) (5). Within the public sector, the system is composed of four levels of increasing complexity: community, with services provided by health surveillance assistants (HSAs) with catchment areas of 1000; primary, for population up to 10,000; secondary, which includes district hospitals; and tertiary, which comprises regional hospitals that provide specialist services (5). Due to a lack of gatekeeping, approximately 70% of the services provided by tertiary facilities could be provided by either the primary or secondary levels (5). Conversely, the PNFP sector is comprised of religious institutions (the largest being the Christian Health Association of Malawi – CHAM), NGOs, statutory corporations, and companies (5). CHAM<sup>6</sup> is the largest non-profit in the country, providing services through a network of over 175 health facilities and 12 training hospitals (35). CHAM serves a catchment area of 30% of the entire population, providing 37% of all health services and notably, 75% of rural services (38).

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<sup>6</sup> An in-depth analysis of the work of CHAM falls outside of the purview of this paper.

### *Healthcare Professionals: understaffed and undertrained*

Malawi's healthcare system is severely understaffed and reflects the human resources for health crisis (39). A 2007 study found that there were only 610 clinicians (1 per every 21,500 individuals), 44 pharmacists, and 7264 nurses in the whole country (40, 9). Following the 2004 ART roll-out in the country, the dearth of human resources in the public sector was recognized as a major impediment for the effective implementation of ART. Furthermore, based on the estimated 170,000 individuals eligible for ART, the strain on the workforce would exceed the capacity, requiring the complete dedication of 16% of all the nurses, 454.2% of all the pharmacists, and 55% of all the physicians solely on ART provision (40). To align with the WHO's 3 by 5 initiative, which sought to have three million HIV positive individuals receiving ART by 2005, Malawi with the assistance of development partners instituted the Emergency Human Resources Program (EHRP), an initiative that spanned from 2004-2009 and sought to save the "country's health human resources from 'near collapse'" (39). The EHRP was further considered necessary, as the number of health workers was well below the critical threshold of 228 per 100,000 prior to implementation (87 per 100,000) (39, 41). While Malawi was not able to achieve the critical threshold, human resource numbers did increase 65% over the six-year program. Notably, only 43 medical doctors were registered in 2004, however, by 2009, the number of medical doctors had increased to 241, reflecting an increase of 460% (39). While the number of nurses also increased 148%, community health workers<sup>7</sup> saw the largest growth in sheer numbers during the implementation of EHRP, increasing from 41 per 100,000 to 80 per 100,000 (42).

At the conclusion of EHRP, even though Malawi had increased the number of health workers to 144 per 100,000, 55% of these workers were community health workers who received limited training<sup>8</sup> (42). Finally, while EHRP invariably increased the number of healthcare professionals in Malawi, it should not be perceived as being entirely successful. For example, in 2016 only 55% of the positions in the public sector were filled (5). While health surveillance assistants (HSAs) are over staffed at 141% capacity, other professions are far from capacity, such as clinical psychologists and mental health counselors at 0%, pharmacy technicians at 21%, nurses at 34%, clinicians at 37%, and midwives at 40% (5). The former assists in elucidating the continued obstacles concerning human resources in health and even after the concerted effort of EHRP to improve the number of healthcare professionals, the quantity is still well under the WHO recommendations, which ascribe more importance to trained professionals. Paradoxically, in an attempt to improve health coverage, notably the access to ART, Malawi has sacrificed the training of skilled healthcare professionals in favor of the easier and less expensive method of training community health workers (41).

The major factors that have resulted in minimal human resources in health are due to both internal and external forces. In the first place, the limited health budget has historically caused an

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<sup>7</sup> Community health workers are lay workers who receive basic health training and are tasked with addressing health concerns at the community levels of care. Community health workers do not necessarily receive remuneration, or if they do, they are generally severely underpaid for their services (8).

<sup>8</sup> The WHO recommendations of 22.8 skilled health professionals per 10,000 individuals includes only those individuals who have been formally educated, for example, nurses, doctors, and pharmacists, while excluding community health workers.

underinvestment in healthcare training (9). Additionally, due to the implementation of SAPs, the government was unable to improve wages, which caused widespread discontent within the health sector. Such discontent has caused healthcare professionals to leave the public sector for economic reasons, migrating internally to the private/NGO sector or emigrating to more economically advanced countries (9). Emigration of healthcare professionals, which is often encouraged by wealth countries with promises of higher wages and better working conditions, causes a brain drain of the educated class of Malawi (8). The brain drain of governmentally trained doctors and nurses has been estimated to financially cost Malawi \$2.16 million in the loss of public funds invested in educational subsidies (43). While Uganda instituted a two-year rural service obligation for publicly trained doctors, I do not believe that at the present moment that this would be a feasible solution to reducing brain drain associated costs (8). As observed in Uganda, recent graduates would be sent to rural facilities with limited mentorship, increasing their chances of burnout (8). While such an initiative would allow for the government to reduce costs and more effectively staff run-down rural clinics, the potential deleterious consequences outweigh any such consideration for cost reduction. Finally, the HIV/AIDS epidemic served as an integral factor in the decline of healthcare professionals up until the provision of ART services. The epidemic affected all members of Malawian society, irrespective of educational level or wealth (9).

In conjunction with EHRP, Malawi instituted three strategies to mitigate the shortage of healthcare workers: simplified protocols, task shifting to non-physicians, and volunteerism (9). While uncontroversial, the implementation of simplified protocols has proven increasingly difficult to effectually put into action (9). Most notably, in many cases Malawi utilizes the guidelines and protocols that have been drafted by the WHO and UNICEF, guidelines that are not context specific and fail to take into account local realities (9). Moreover, the frequency that guidelines are updated causes confusion and the universality of their implementation has limitations nationally (9). Task shifting, instituted in Malawi following the ART roll-out, is “a process whereby specific tasks are moved where appropriate to health workers with shorter training and fewer qualifications” (42, p. 8). Through the reorganization of the workforce, task shifting, can more efficiently utilize available human resources to ease service delivery bottlenecks (44). In Malawi, task shifting has transferred treatment responsibilities from physicians to nurses, while shifting nurses’ responsibilities to counselors and community health workers (9). Notwithstanding, task shifting is a short-term solution that does not address the structural problems or the financial constraints that limit the number of well-trained professionals (9, 8). Volunteerism, also presented as a short-term solution has converted into a staple of the Malawian healthcare system. Volunteerism will be discussed in more detail in Part IV.

### *HIV/AIDS: the darling of the donors’ eye*

Prior to a discussion on the prevalence and patterns of HIV/AIDS<sup>9</sup>, it is integral to consider the AIDS enterprise as responsible for gains in the country since 2004. The AIDS enterprise can be perceived as a hierarchy of AIDS related organizations that run the gamut from bilateral and multilateral donors to local community organizations responsible for the projectification of the

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<sup>9</sup> The first case of AIDS was diagnosed in 1985 in Malawi, however, it is most likely that the epidemic preceded 1980. Prior to 1982, all discusses concerning family planning or social problems were prohibited and considered a challenge to Kamuzu Banda’s discourse of Malawi as his “land of milk and honey” (45).

African landscape (46). The enterprise therefore includes initiatives such as PEPFAR and the Global Fund, resulting in a huge financial commitment for HIV/AIDS that is unprecedented in comparison to other health concerns (24). Part of the same phenomena is HIV exceptionalism, which has led to the proliferation of vertical programs dealing with HIV/AIDS, oftentimes ignoring the presence of other health challenges and inefficiently integrating into public health systems (47). Additionally, as evidenced in Malawi, such high levels of donor allocation for HIV/AIDS have displaced governmental spending and have allowed the government to skirt its financial responsibilities (24). For example, 2013-2014 represented the largest public financial investment to HIV/AIDS, with 14.3% of the total investment allocated by the government (48). Rationally, in response to high levels of available funding, NGOs, including those with no previous experience with health issues, have gravitated towards concentrating on HIV/AIDS (24). Paradoxically, the immense focus on HIV/AIDS does not align with the populace's desires, which include issues such as unemployment, sanitation, food security, and transportation (49). The former exemplifies an existential disconnect between government, the NGO sector, and the citizenry, where easily funded interventions, and those of interest to donors, are prioritized instead of addressing the concerns of the population.

Within this environment of HIV exceptionalism, the country has made immense progress in the provision of ART and in reducing new infections. HIV prevalence in 2000 was estimated to be 15.2%, causing approximately 63,000 deaths (14). Prior to 2004, an HIV diagnosis was essentially a death sentence for the majority of the population, typically because of inadequate financial means to pay for treatment, but even for those financially able, medications were oftentimes unavailable (9). In response to the WHO's 3 by 5 initiative, Malawi constructed a set of national policies aimed at leveraging international interest in HIV/AIDS through funding opportunities to address the nation's AIDS crisis (9). Modeled on the 3 by 5 initiative, Malawi promised to provide ART free of cost in public facilities, while private facility prices would be capped and controlled as to limit out of pocket expenditures (9). Through the utilization of task shifting, the ART scale-up expanded from 60 facilities in 2004 to 689 by 2013, the majority of which staffed by nurses and clinical officers (9). While facilities providing ART have increased, funding has neglected other aspects of HIV/AIDS care, such as food assistance and medications for opportunistic infections (9). The former demonstrates the detachment between local realities and overseas policymakers that delimit the full provision of complementary services deemed essential for successful ART treatment.

The success of the ART scale-up has seen the prevalence of HIV decrease steadily to 9.2% of the population aged 15-49, and 8.8% of the total population in 2016, a decrease of 34.3% since 2003 (14, 15). Nevertheless, female prevalence remains considerably higher than male prevalence, at 11.2% compared to 7.1% (50). While the total number of children infected with HIV has remained more or less stable, fluctuating from a high of 150,000 as recently as 2010 to 110,000 in 2016, a reduction of 26.7%, new infection rates have decreased 74% in this population from 2009 to 2016, dropping from 16,500 new infections to 4200 (14, 51, 50). The reduction in childhood incidence can be attributed in part to the success of Malawi's Option+ program, which was introduced in 2011 to provide ART to pregnant and breastfeeding women. 84% of HIV positive pregnant women had access to ART in 2016, an increase from 21% who had access at the program's inauguration (51). Reflecting continued barriers to decreasing childhood

incidence, only 31% of infants receive a diagnostic test by two months of age and only 49% of HIV positive children have access to ART (50).

By 2020, UNAIDS has set an ambitious target of 90-90-90, where 90% of all people living with HIV know their status, 90% of those diagnosed will receive ART, and 90% of those on ART will have viral suppression (52). The achievement of 90-90-90 will result in a minimum threshold of 73% of the HIV positive population with a suppressed viral load, which modeling indicates will lead to the termination of the AIDS epidemic by 2030 (52). Progress towards 90-90-90 in Malawi is estimated in the general population at 73-89-91 (59% viral suppression in the HIV positive population) and 53-76-78 in the cohort of individuals aged 15-24 (53). Improving testing and ART adherence in adolescents and young adults is imperative for the realization of 90-90-90. Furthermore, treatment for key populations is crucial, as the HIV prevalence in female sex workers is 24.9% and 17.3% within the population of men who have sex with men (MSM) (50). Therefore, while Malawi has made strides in the achievement of 90-90-90, there is still immense work to be done to stem the national HIV epidemic.

Of the approximately one-million HIV positive individuals in the country, 680,000 are receiving ART (30). With all of the financial resources that have been invested in Malawi's ART program, one would expect that this number of individuals receiving ART services would be higher, especially considering that they are provided free of cost to the patient. Even so, there are costs for patients that fall outside of ART. For example, transportation costs, long distances to facilities, and lost wages can limit the ability of individuals to make frequent trips to health facilities to assure adherence (9). In other contexts, such as in Kenya, HIV patients have been given vouchers for transportation or minimal cash transfers to assist in defraying out of pocket expenditures (54). Cash transfer programs have improved adherence to ART, and the integration of such initiatives would represent a novel approach to providing ART services in Malawi (8, 54).

Finally, HIV infections in Malawi occur along gendered lines. Notably the highest HIV prevalence of any age group is 25.1% for women between 40 and 44 years of age (55). However, in younger age cohorts, the disparity in prevalence is more pronounced. For example, among individuals aged 25 to 29, HIV prevalence in females is almost three times higher than males (14.1% versus 4.8%) (55). The former illustrates a power imbalance between men and women, notably concerning condom use for non-marital, non-cohabiting sexual partners, where usage among young women is considerably lower than young men (54% compared to 76%) (5). HIV also varies widely based on the geography of the country. Prevalence rates range from 5.3% in the Central East zone up to 18.2% in the city of Blantyre (55). Even though Malawi is not large geographically, the disparities due to regions is a reflection of multiple ethnic and cultural variabilities within the country. The former therefore, elucidates the need for geographic and gender specific programming, as indiscriminate initiatives can exclude segment of society due to a generalization of the context.

#### *Tuberculosis: improving metrics correlate with HIV/AIDS*

2014 prevalence of TB was estimated to be 373 per 100,000 by the WHO, however, results from the national TB prevalence survey, indicate that adult prevalence remains high at 451 per



100,000, considerably higher than the WHO target of 140 per 100,000 (56, 5). 2014 saw a total of 17,723 new TB infections, with successful treatment in 86% of cases, slightly above the WHO's 85% target (56, 57). Multidrug resistant TB (MDR-TB) has recently emerged as a serious health concern in the country, with prevalence of 4.8% in previously treated TB patients and 0.4% in newly infected individuals. Furthermore, of individuals diagnosed with TB, 52% have HIV coinfection (56). Since the 2004 ART scale-up, new infections have decreased from 28,234, a decline of 37%, implying a correlation with ART service provision (58). As previously mentioned, money is disproportionately allocated for TB treatment in association with HIV/AIDS. Access to treatment for TB patients who are HIV negative, therefore is limited in scope, reflecting disparities concerning HIV status (9).

### *Neglected Tropical Diseases and Malaria: finally receiving necessary attention*

Overall, NTDs and Malaria account for the fourth largest contributor to the loss of DALYs (4885.48 per 100,000) and the sixth largest contributor to mortality (58.47 deaths per 100,000) in the country (34). While NTDs have historically been excluded from programs and funding, at the 30<sup>th</sup> African Union summit, the African Leaders Malaria Alliance (ALMA) added the NTDs lymphatic filariasis, onchocerciasis, schistosomiasis, soil-transmitted helminths, and trachoma to its annual scorecard on disease progress (59). NTDs were therefore placed alongside malaria and maternal and child health as a top priority for the continent (59). NTDs were included principally due to the fact that since “Malaria and NTDs both lay their heaviest burden on the poor, rural and marginalized. They also share solutions, from vector control to community-based treatment [and giving the information] to end the cycle of poverty” (60). In 2016, Malawi was the second ranked out of the 47 ALMA member states, with 100% coverage for lymphatic filariasis, 83% for onchocerciasis, 96% for schistosomiasis, 88% for soil-transmitted helminths, and 79% for trachoma<sup>10</sup> (61). A total of 8.4 million people received treatment in the country in 2016, however, an additional 3 million are estimated to have been needed treatment (61). While the country has certainly made progress in administering preventative chemotherapy through mass drug administration (MDA), more can be done. For example, Lake Malawi continues to serve as a reservoir for schistosomiasis and while MDA is effective in eliminating the parasite, only one contaminated individual is needed to continue the cycle of infection. Therefore, it is imperative to increase not only MDA campaigns but also to eliminate NTD reservoirs within the country that endanger the success of eradication efforts. Additionally, a concerted focus is needed to eliminate NTDs that fall outside of the five recognized by ALMA. The United States FDA Amendments Act of 2007, which incentivizes drug companies to develop novel interventions for NTDs is seen as the best mechanism for the eradication of these other overlooked NTDs (8). If Malawi is able to control and eliminate the five NTDs highlighted by ALMA, it is estimated that the country will save \$415 million through 2030 (62).

Even though Malawi was awarded the 2014 ALMA Malaria Award for Excellence, bestowed to nations that maintained an average 95% year-round coverage through the implementation of long-lasting insecticidal nets (LLINs) and/or indoor residual spraying, the country still suffers

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<sup>10</sup> Malawi has stopped treatment for lymphatic filariasis and is in the process of being validated by the WHO concerning its elimination. Onchocerciasis is also awaiting independent confirmation of its elimination and the country is targeting the elimination of trachoma by 2019 (61).

from a high prevalence of malaria due to its endemicity, with an estimated 6 million annual cases (63, 5). Malaria accounts for 30% of all outpatient visits, is the leading cause of morbidity and mortality for pregnant women and children under the age of five and is the fourth greatest contribution to DALYs in the population (5, 34). While LLINs have been widely distributed to pregnant women and young children, with ownership increasing from 27% in 2004 to 57% in 2010, stagnation has resulted in ownership remaining steady at 57% (15). Furthermore, the utilization of LLINs has decreased in the population under five, from a high of 67.1% in 2014 to 42.7% in 2016 (14). While this is disconcerting, LLIN use has significantly increased since 2004 when only 14.8% of this population utilized a net for sleeping (14). Use for pregnant women has also increased, from 15% in 2004 to 44% in 2016 (15). Intermittent usage of preventative treatment during pregnancy, classified as two or more doses of SP/Fansidar, has increased to 63.4% in 2016 from 42.9% in 2004 (14). Also, the malaria case fatality rate has decreased from 46% in 2011 to 24% in 2014 (5). However, taking into consideration the low ownership levels of LLINs, their underutilization, and limited preventative treatment during pregnancy, it is paradoxical that Malawi was awarded the 2014 ALMA Award for Excellence. The continued prevalence of malaria is also indicative of the absolute shortfall in financial resources dedicated for malaria, with only \$13.4 million of the required \$30 million funded during the fiscal year of 2015-2016 (5).

#### *Maternal health: high mortality rates and the prevalence of abortion*

Goal five of the MDGs sought to improve maternal health through two targets: a reduction by three-quarters of the maternal mortality ratio (MMR) from 1990 to 2015 and to achieve universal access to reproductive health by 2015 (64). Even though Malawi experienced an improvement in maternal health through the MDGs, progress was insufficient to achieve either target of the fifth goal. Notably, while the MMR did decrease from 1120 per 100,000 live births in 2000 to 574 per 100,000 live births in 2014, it fell well short of reaching the target of 155 (65). Additional estimates place the country's MMR between 422 to 1080 per 100,000 live births, with an aggregate of 634 (66). Such estimates place Malawi within the upper quintile for MMR, accounting for 4200 annual deaths and representing 22.3% of all deaths of reproductive aged women (66, 5). Maternal mortality has decreased less than desired due to limited funding and the absence of health infrastructure, such as operating theaters and surgeons, that are required to save women's lives (9). 95% of women made at least one antenatal care visit during their pregnancies, however, only 51% made four or more visits (5). Also, only 42% of women and 60% of newborns receive a postnatal check within 48 hours, indicating an area of improvement to lower the MMR and infant mortality (5). With that being said, the country did come closer to reaching the target set for the proportion of births attended by skilled health professionals. In 2000, only 55.6% of births were attended by skilled professionals, whereas in 2014 87.4%, further climbing to 90% in 2016 (64, 5). While the former is encouraging, many births still occur in villages outside of the view of the healthcare system. The roll-out of a national registry and identification system should assist in elucidating if these figures are accurate and reflective of local realities (5).

Adolescent pregnancies account for 25% of all pregnancies annually and 29% of girls aged 15-19 have begun child bearing (5). The high prevalence of adolescent pregnancies translates into a birth rate of 143 per 1000 live births and motivated the government to raise the legal age of

marriage from 16 to 18 (5). Additionally, 20% of maternal deaths are due to adolescent pregnancies, attributed to complications during pregnancy and delivery and from complications due to abortions (5). Overall, unsafe abortions account for 17% of all maternal deaths (5). Abortion in Malawi is legal only to save the mother's life, however, it is highly restricted in such circumstances (67). For women who seek abortions that fall outside of the purview of legislation, punishment ranges from seven to fourteen years (67). In 2015, there were an estimated 141,044 induced abortions in the country, with 38% of the women requiring post-abortive care (PAC) at a healthcare facility (67). PAC strains financial resources, costing \$42 to treat each case in a public hospital, plus an additional \$8 borne by the patient through user fees and transportation costs, costs which overall exceed the per capita health expenditure in the country (68). It has been estimated that a legislative transition towards safe and legal abortion would result in a cost reduction of 20-30% in the price of PACs, thus not only lessening the financial burden, but also improving health outcomes for women seeking induced abortions (68). Approximately 53% of pregnancies in Malawi are unintended, thus resulting in the high rates of abortion: 38 abortions per 1000 women of reproductive age (67). While the contraceptive prevalence rate (CPR) for married women has increased from 42% in 2010 to 58% in 2016, similar gains have not been observed among sexually active unmarried women, where the CPR has decreased from 46% to 43% over the same time period (67). The former helps illustrate the manner, in conjunction with other factors, in which the low CPR for unmarried women has contributed to the high prevalence of induced abortions and associated complications that influence the country's MMR.

#### *Child Health: the predominance of under-five clinics*

The under-five clinics that cover the rural population in Malawi are considered one of the most historically successful health interventions in the country. Initiated in the 1960's, by 1972 the clinics covered approximately 50% of the under-five population in the country (70). The years following Alma Ata in 1978 were marked by discussions concerning the economic and practical feasibility of implementing the ambitious goals of health for all in impoverished settings (8). Therefore, a new model dubbed selective primary health care (SPHC), rooted in neoliberal economic theory, was introduced as a means to reduce the mortality and morbidity of selected health concerns with the limited available resources (8). SPHC was further encouraged as an economically viable and sustainable solution through the delivery of simplified interventions administered by lay and volunteer health workers (8). The principal initiative championed by SPHC proponents was GOBI: growth monitoring of children, distribution of oral rehydration solution (ORS), promotion of exclusive breastfeeding until six months and continuation through two years, and immunization of children (8). Even though under-five clinics in Malawi were introduced prior to the conception of SPHC, the GOBI model was quickly integrated within the clinics' framework (9). Present day clinics have not veered far from SPHC tenants, and while effectively reducing under-five mortality rates through a limited scope, they have inadequately incorporated nor addressed other health conditions. For example, vaccinating a whole village is more feasible than setting up a system that assures that all of a child's health needs are met (8).

Of the three health oriented MDGs, goal number four, a reduction by two-thirds, between 1990 and 2015 for the under-five mortality rate, was the one most successfully achieved by Malawi (70). The under-five mortality rate dropped from 234.4 per 1000 live births in 1990 to 59.1 per

1000 in 2015, a reduction of 74.8% over fifteen years<sup>11</sup> (13). The former has resisted increased reductions in part due to high morbidity and mortality attributed to acute respiratory infections (ARIs), which are associated with the high use (97%) of solid fuels<sup>12</sup> used for cooking in poorly ventilated spaces (5). Additionally, infant mortality decreased from 136.6 per 1000 live births in 1990 to 40.9 in 2015, a reduction of 70% (13). Conversely, in comparison to the under-five and infant mortality rates, the neonatal mortality rate (NMR) has decreased at a slower pace, due to the more advanced infrastructure needed to save neonatal lives, such as incubators. Nevertheless, the NMR has decreased from 50.6 per 1000 live births in 1990 to 23.9 in 2015, a reduction of 52.8% (14, 5). This reduction has been very gradual and while the country is in the process of implementing the Every Newborn Action Plan (ENAP), which aims to reduce neonatal mortality to 15 per 1000 births by 2035, the present infrastructure presents a significant challenge. Only 53% of hospitals and 5% of health centers are equipped to provide the full package of emergency and basic obstetric and neonatal care (EmONC and BEmONC) and only 32% of facilities are able to provide partial services (72, 5). That said, nearly 70% of health facilities offer basic child health interventions through the Integrated Management of Childhood Illnesses (IMCI) approach, while at the community level, illnesses are managed according to the Integrated Community Case Management (iCCM) approach (5).

Concerning the GOBI interventions, in the first place, malnutrition and undernutrition present significant obstacles for the population. Notably, 37.1% of children under the age of five are stunted (increasing to 43% in children born to uneducated mothers) and 11.7% are underweight (15, 5). The diet of many Malawians lacks a complete nutrition profile, and the feeding practices of children between 12-23 months of age is deficient, with only 8% meeting minimum dietary standards (15). Furthermore, 59.2% of children under the age of five have anemia (13). While the percentage of children suffering from stunting, being underweight, and possessing anemia have decreased since 1990, the prevalence is still high considering all of the resources allocated for under five clinics in the country and the professed success of their interventions. The former is due in part to the failure to consider and address root causes of malnutrition, such as limited access to foodstuffs, and instead assign blame to mothers for their “ignorant” food choices, therefore focusing on nutrition education instead of nutrition supplementation (8). The misallocation of responsibility for ill health to the person rather than the system has been called “immodest claims of causality” by Paul Farmer (73). These immodest claims of causality oftentimes ascribe poor health to bad individual behavior or ignorance, while ignoring issues such as poverty, racism, and sexism (8, 73).

Additionally, 64.7% of children under the age of five with diarrhea received ORS treatment in 2016, a slight decrease from 2010, when 69.0% received ORS treatment (13). Conversely,

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<sup>11</sup> Data that is produced in Malawi can vary widely depending on the source used, for example, in this case, the World Bank, 2015-2016 DHS, and the government’s MDG Endline Report all report different figures for under-five and infant mortality. Concerning under-five mortality, the World Bank estimates 59.1 deaths per 1000 live births, DHS estimates 63, and the Endline Report estimates 85. The former demonstrates the inherent complications in utilizing data for the country, which are based on small sample sized estimates opposed to real counts, leading to a lack of consistency between sources with different sampling methodologies. For the purposes of maintaining uniformity, the majority of figures in this analysis are from the World Bank.

<sup>12</sup> Although the use of charcoal has been prohibited by the government, the production and selling of illegal charcoal is ubiquitous throughout the country. The prohibition has therefore been ineffective and the utilization and production of these fuels disproportionately affect women and children (71).

exclusive breastfeeding for children during their first six months has decreased from a high of 70.8% in 2010 to 59.4% in 2016 (13). With the being said, 98% of children are breastfed at some point in their lifetimes (15). Finally, vaccination rates have decreased in recent years, from a high in 2010 of 81% coverage for all basic vaccinations for children aged 12-23 months to to 76% in 2016 (5, 15). Since 2001, the Global Alliance for Vaccines and Immunization (GAVI) has worked in Malawi, distributing \$220.2 million, 86% of which has been allocated for vaccine support (\$190.2 million) (74). The MoH in 2015-2016 estimated that \$5.1 million was required for full immunization coverage, however, funding exceeded \$18.4 million, thus demonstrating a gap in expected health outcomes (5). Taking into consideration the immense financial commitment, the decreasing immunization levels are concerning in a country absent conflict. Increased momentum is therefore required to assure full immunization coverage, especially poignant as rates for polio, measles, hepatitis b, hib b, and DPT have all dropped below 85% (13). Overall, while lauded for their success, under-five clinics have shown limited health gains outside of their scope of intervention. Furthermore, as mentioned in this section, in many cases, gains have either stagnated or are diminishing, demonstrating compliance concerning the clinics. Increased resources and dedication are thus needed to assure the health of Malawi's children, as well as an amplification of the scope of the under-five clinics to better meet the health needs of this population.

*Non-communicable Diseases: contributing to the disease burden but overwhelmingly neglected*

NCDs increasingly contribute to the disease burden in Malawi and are now responsible for six of the ten highest causes for mortality and morbidity as measured by DALYs (34). Opposed to high-income countries where type two diabetes, cardiovascular disease, cancer, and chronic lung diseases comprise over 48% of the NCD burden of disease, in Malawi, only 38% of the NCD burden is attributed to these four health conditions (75). There is therefore a high prevalence of other NCDs, such as rheumatic heart disease, mental illness, road traffic accidents, and type one diabetes, a diverse list with varying risk factors for development (75). Furthermore, the burden of NCDs and injuries disproportionately affects individuals under the age of 40, who bear 82% of the injury burden and 60% of the NCD burden, significantly more than high-income countries where this population group only experiences 40% and 18% of the burdens respectively (75).

Concerning mortality, NCDs are the second leading cause of death in adults after HIV/AIDS, accounting for approximately 16% of all deaths. NCD morbidity has increased in recent years due to increases in unhealthy lifestyles, notably tobacco usage, which has a prevalence of 24.7% within the male population, adoption of high-fat diets, poor health seeking behavior, and inadequate human and financial resources dedicated to NCD treatment (5, 13). For example, hypertension has been estimated to be prevalent in 32.9% of the population, cervical cancer has an estimated prevalence of 75.9 per 100,000, and mental health disorders, which are often misdiagnosed as physical ailments, are estimated to occur in 10-20% of the population (5). Furthermore, there are limited mental health treatment options, and even those who are diagnosed are often unable to get access to psychiatric care (5). The prevalence of NCDs will invariably continue to increase as the government has inadequate resources allocated for NCD conditions. For example, in the fiscal year 2015-2016, only \$223 were allocated for NCDs, of the estimated \$3.7 million needed (5). Additionally, no money was allocated for oral health during this time, even though \$10.5 million is believed necessary (5). The former is poignant

considering that 50% of children between 6-9 years of age and 78% between 12-17 have tooth decay (5).

### *Medications: stock-outs and pilferage*

Drugs are often rationed in Malawi, as the government has an insufficient health budget to cover the full cost that is required in accordance with the country's burden of disease (77). The former results in curable patients becoming increasingly more ill, while transmission of communicable diseases can continue unabated (8). Additionally, pharmacy stock-outs may be due to leakage or theft, the selling of drugs to the black market to supplement low salaries, inadequate distribution channels, weak supply chain management, the use of paper recording, the manner in which forecasting is carried out, and unreliable electricity (5, 8, 9). Notably, only 24% of health facilities have enough stock to cover from one to three months, significantly lower than the country's target of 60% (5). Pilferage results in a loss of \$7 million annually, approximately 30% of the national drug budget, often with the help of healthcare professionals (76, 77). Furthermore, drugs are able to effectively pass to the illegal market from every cog in the healthcare system, moving freely due to a lack of control measures (78). Due to the depletion of the drug budget due to pilferage and pervasive stockouts, Malawi receives a large proportion of its medications as donations from donor partners. However, these medications are only assumed to be safe, as the country is incapable of assuring quality of medications, potentially resulting in the introduction of expired or ineffective medications into the supply chain (5).

In Malawi, the most common method of forecasting is based on the consumption method, done by both the public sector and NGOs, which projects future use based on the demand signal (8). However, this method has serious flaws in a country with pervasive stock-outs. For example, if a pharmacy exhausts its supply of doxycycline after two patients, the projection is done based on the consumption of these two individuals, irrespective of the other eight individuals who were prescribed doxycycline but were unable to receive it because the pharmacy had none left in stock (8). Therefore, the pharmacy based on the previous months consumption will order solely two rounds of doxycycline treatment, perpetuating a cycle that progressively diminishes drug stock-outs as the underutilization of services increases (8). The former results in lower levels of drugs being dispensed than what is required for the population, since the demand signal will invariably be less than the disease burden. Conversely, forecasting can be done based on the morbidity method, which attempts to predict the disease burden (8). The disease burden could roughly be calculated through an extrapolation of DHS data to the catchment area of the healthcare facility. Nonetheless, Malawi would most likely be unable to procure sufficient drug stocks to meet the disease burden of the population.

Numerous donors, bilateral, as well as multilateral, procure medications for the NGO sector. This procurement mechanism is convoluted and difficult to track, but generally speaking, NGOs have a central warehouse where drug stocks are kept prior to distribution to the field. Since drug shipments may arrive and depart from the warehouse without advance notice, drug stocks are difficult to keep track of. For example, stock numbers at the start of the quarter rarely correspond with the documented entrance and exit of medications from the warehouse, oftentimes demonstrating severe deficits with expected stock amounts. The former demonstrates the poor accountability mechanisms that are required by donors, even when data reporting for programs is

highly demanding. Limited accountability of drug stocks allows for pilferage and resale onto the black market (79).

### *Essential Health Package – movement toward Universal Health Coverage*

UHC, defined by the WHO as a state in which “all people and communities can use the promotive, preventive, curative, rehabilitative, and palliative health services they need of sufficient quality to be effective, while also ensuring that the use of these services does not expose the user to financial hardship” (80). Furthermore, UHC, per WHO guidelines, should include a three part strategy: the categorization of services into priority classes; initial expansion of high-priority service coverage to everyone; and the assurance that disadvantaged groups are able to access services (81). As a means to achieving UHC, Malawi has implemented an essential health package (EHP) since 2004, with diseases clustered by reproductive, neonatal, and child health (RMNCH), communicable diseases, and NCDs (5). Be that as it may, the EHP has historically been ineffective, as the included interventions surpassed THE. For example, in 2015, EHP cost per capita was around \$60, while THE per capita was around \$36 (5). One major issue with the EHP has been the cost-effectiveness threshold set by the WHO, which stipulates that for each DALY averted, acceptable levels of financing are equal to three times the GDP per capita of the country (82). Therefore, in the case of Malawi, interventions below \$1000 would be considered cost-effective. Having said that, subsequent analyses have indicated that the upper threshold for cost-effectiveness in the country is at most \$116 per DALY avoided (83). Interventions were therefore incorporated into the EHP according to the WHO guidelines, leading to a draining of financial resources (3). Furthermore, the cost-effectiveness discrepancy further demonstrates the inapplicability of WHO guidelines as blanket figures that can be applied to every context irrespective of local conditions (8). Additionally, it merits mention that solely using cost-effectiveness calculations can be flawed because they do not properly address the burden of disease nor out of pocket expenditures. Models that are used for medium to long-term planning also make flawed assumptions that costs will remain constant over time (8). The former demonstrates the need to align the UHC priorities with the burden of disease opposed to cost-effectiveness, as this methodology obfuscates the true needs of the population (8).

For the budget year of 2015-2016, \$162 million of the approximately \$500 million total health budget was allocated for the provision of the EHP (5). However, to reach the full population and avert an estimated 41.5 million DALYs, the MoH estimates that \$247 million is needed, reflecting insufficient financial allocation since only 65.6% of the total funds have been apportioned (5). Additionally, certain health conditions within the EHP are prioritized, such as HIV/AIDS, which received \$81.7 million, even though the estimated required financial resources for implementation of ART for the year were \$46.2 million (5). Conversely other health conditions are deprioritized, such as RMNCH, which received only \$14.6 million of \$62.4 million; malaria at \$13.4 million opposed to \$30 million; and the aforementioned NCDs, which received \$223 in comparison to \$3.7 million and oral health, which received no money opposed to the \$10.5 million estimated to be required (5). Moreover, the EHP was updated to be more cost-effective than the previous package (\$5.97/DALY versus \$7.91/DALY)<sup>13</sup> (5). However, the new EHP has prioritized prevention and promotion to reduce costs, cutting the percentage of

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<sup>13</sup> This figure is significantly lower than the costs estimated by the Lancet Commission on Essential Medicines, which calculated that \$13-25 per capita per year were required to provide essential medicines to the population (84).

curative interventions from 57% to 41% (5). The former demonstrates the discourse of *Disease Control Priorities in Developing Countries*, published in 1993 (8). While the book incorporated the burden of disease, it promoted disease control and prevention instead of treatment, notably highlighting that treatment for chronic diseases was too costly for impoverished country's budgets (8). Even with adequate resources, the EHP faces numerous obstacles for its full implementation, including a lack of awareness among stakeholders, only 33% of health center managers were aware of the existence of the EHP; a lack of policy enforcement; and inequalities in EHP utilization, notably in rural regions where healthcare services are underutilized (5).

Even though ART has been provided free of cost in public facilities, coupled with the expansion of EHP, utilization of services remains low. While prevailing logic assigns blame to low service uptake on a multitude of factors, such as the lack of health-seeking behavior, cultural or religious beliefs, or ignorance to the benefits of modern medicine, rarely are out of pocket expenditures taken into consideration (8). In the absence of implicit user fees, there are still explicit costs that the patient is required to undertake to receive medical attention. The burden of these costs is often borne by patients due to insufficient health financing and include transportation costs, lost wages, or a lack of productivity, thus presenting significant financial barriers to accessing care (8). Additionally, due to pervasive stock-outs in public facilities, patients may have to purchase medications that are included within the EHP from private pharmacies, thus limiting the provision of free services (8). In Malawi, 24% of the population lives more than eight kilometers from a health facility, implying that public transportation or walking is required (13). For individuals who walk, visits to health facilities result in the loss of an entire day of work. With respect to public transportation, the costs may exceed the daily salary of rural residents, presenting a significant financial barrier. For the full realization of the EHP, and ultimately UHC in the country, implicit and explicit costs need to be eliminated to increase equity within the system and improve health outcomes (8). Constant travel therefore presents a financial drain for patients, thus resulting in the poor utilization of health services and representing an area that needs to be incorporated for the full realization of UHC. The barriers to providing care and effectively expanding the EHP can be elucidated through the UHC service coverage index, which demonstrates how close to UHC a country has achieved, with 100 as the target goal. The index is calculated using data from RMNCH, communicable diseases, NCDs, and service capacity and access. Malawi has an index score of 44, which falls within the lowest quintile worldwide (85). While the EHP is certainly a movement in the right direction, in its present incarnation, it is severely underfunded and includes a very limited scope of interventions, which have been selected for their cost-effectiveness opposed to the population's burden of disease. Therefore, for the achievement of UHC, Malawi needs to better incorporate all health concerns within the EHP and integrate mechanisms to lessen financial burdens for patients to meet the lofty expectations of the country's constitution (36).

#### **Part IV – Observations on the NGO sector in Malawi**

While Part III focused on an assessment of the healthcare system in Malawi, predominantly concentrating on the public government run system, this third section has been shaped by my experiences in the NGO sector in the country. While some of the topics are applicable for the public sector, the focus is decidedly on the NGO sector's functionality. It merits mention that not all of the topics have been identified in the scientific literature. In such cases, the analysis is a



personal reflection on trends that I observed. Furthermore, the topics discussed in this section are what I found to be the most detrimental for the functionality of NGO run health programs, however, it should not be perceived as an exhaustive list of the ills that imperil the NGO sector in the Malawi.

*Per diems: a perverse system to supplement salaries*

Per diems have been shown to serve as supplementary incomes to workers in the both the public and NGO healthcare systems in Malawi (86, 87). At the end of 2017, per diems were 25,000 Malawi Kwachas (MWK) (approximately \$35), a sum that was agreed upon between donor partners, the government, and the NGO sector (88). Since salaries for NGO personnel oftentimes do not exceed 200,000 MWK a month (\$275), per diems represent an incentive for increasing take-home income (86, 89). Furthermore, the prevalence of per diems have become ubiquitous for attending meetings and for travel. Individuals, therefore prioritize attendance at meetings that provide a per diem, oftentimes attending consecutive meetings daily (33). Also, since meetings that do not give per diems are usually poorly attended, organizers are oftentimes forced into providing them, creating a perverse cycle that perpetuates the system by providing payment for actors' physical presence. The former has resulted in the commodification of participation, where increased payments are correlated with increased participation (33). It has further produced a culture where actors commit to various meetings, even when times overlap, and decide at the last minute which to attend. By double or triple stacking obligations, meeting organizers are generally ill-informed concerning absenteeism, limiting the meetings' effectiveness and collaboration between actors (33). Moreover, it was common at the NGO where I worked to have lower positioned members fill in for upper management at obligatory meetings. I was sent numerous times to fill in for my superiors, which irreparably damaged the reputation of the organization within the NGO sector.

In the case of travel, per diems at NGOs are oftentimes universal irrespective of the destination, thus, an individual who travels from Lilongwe to Dedza, approximately 90 kilometers, and returns the same day will receive the standard 25,000 MWK. If this individual makes a salary of 200,000 MWK, they are able to double their salary by making eight site visits in the month, therefore incentivizing what may be unnecessary travel for the financial benefits (89). The prioritization of per diems deleteriously affects the quality of salaried tasks since workers deprioritize work such as report writing and administrative tasks that do not have an additional financial component (87, 90). The importance of per diems were made abundantly clear to me when I proposed reducing the pay-outs for day trips. The proposal was an attempt to reduce administrative costs and eliminate part of the incentivizing system, however, it was killed immediately through the logic that the per diems had been agreed upon by donor partners and government. The major way to reduce per diem expenditure is through the raising of staff salaries, which would offset the need to implement per diems for these individuals and should in theory, incentivize them to reprioritize their tasks (33).

Additionally, the widespread utilization of per diems has created an artificial market that benefits actors who work with specific health conditions. Notably, individuals responsible for HIV/AIDS interventions have the benefit of attending more meetings and increasing their salaries more so than individuals who work with lower prioritized issues (33). The AIDS enterprise not only

benefits HIV/AIDS patients at the expense of other ill individuals, but also infers material benefits on individuals associated with its programming. The former promotes a culture where individuals strive to work on HIV/AIDS programming, shunning lesser financed health concerns. Furthermore, certain donors, such as USAID, give significant portions of their funding for per diems for lecture-based training (9). While promoted as building local capacity, such training programs pull health workers away from their posts in the search for increased compensation, while providing little practical value for participants beyond the included per diem (8).

*Volunteers: the exploitation of an underclass of workers for financial sustainability*

As discussed briefly in Part II, volunteerism was conceived as a short-term solution to lessen the health systems burden due to a shortage of healthcare professionals. Even so, donors and the government have recognized the power of volunteerism, shifting it from a social obligation to a formal mechanism of labor (9). Volunteers fit neatly within the confines of global health programming as a cost reduction strategy, integrating a free class of laborers to expand service delivery in the most rural outreaches of the country (9). It merits mention that the reliance on volunteers for global health programs is not exclusive to Malawi. A survey conducted by UN Volunteers found that in 36 countries, 20.8 million volunteers composed approximately 44% of the workforce of civil society organizations, economically contributing \$400 billion annually (91, 20).

Volunteerism has proliferated in impoverished countries because as Swidler (92) argues, the conception and motivations of volunteerism differ between donor agencies and local volunteers. Notably, volunteerism in developed nations is perceived as a means to give back to the community without financial remuneration, where satisfaction serves as sufficient payment (92). However, in Malawi, limited job opportunities incentivize individuals to volunteer because it enables a preliminary relationship with a potential future employer (9). While NGOs do little to discourage this belief, volunteers are usually educationally ill qualified for full employment (9). The executive director of the NGO made it abundantly clear that volunteers would receive no advantage during the application process, and that volunteering should be guided by a commitment to the community, not to a potential job. The former conflicted with the information that volunteers received, constantly told that employment was all but assured for high quality volunteers. In my time in the organization, out of the hundreds of volunteers who applied for positions, not a single one was hired. Such practices guarantee the perpetuation of a large volunteer workforce that infers a modicum of financial sustainability for NGO operations.

NGOs are attracted to volunteers because they represent a cost-effective means of expanding operations geographically with limited budgets (9). Even though salaries in Malawi are low, the financial investment to expand into rural areas requires the addition of significant human resources, well outside of the purview of many NGOs financial capacity. In the NGO where I worked, almost the entire rural workforce was composed of volunteers, managed by one or two salaried employees. Volunteers while cost-effective from the perspective of budgets, are not necessarily cost-efficient in the delivery of interventions. Few tangible incentives exist for volunteers to perform well for NGOs as they only sporadically receive occasional per diems or physical gifts such as a backpack or a shirt, further resulting in high rates of attrition (8). Even when gifts are well intentioned, they often do not reach volunteers. For example, the NGO had

procured 50 bicycles to reward the best performing volunteers, all of which were rusting after sitting in the parking lot for over one year. Conversely, even though poorly motivated and insufficiently remunerated, volunteers are tasked with providing health education in topics ranging from family planning to child healthcare to HIV prevention and treatment. In light of this, volunteers receive minimal education themselves, and the successful transmission of knowledge to the target populace should be seriously questioned. Volunteers are efficient in giving the appearance of increasing catchment areas, contributing to a cycle that financially benefits the NGO at the expense of their labor, however, their integration can put the intended benefits of programs in jeopardy through a lack of interest and poor educational attainment.

As previously mentioned, volunteers in developed nations are lauded for their selfless commitments to the community. However, the socioeconomic context for these individuals has transmuted the notion of volunteerism to a leisure activity for the in general economically well-off sector of society (9). Through this lens, when volunteers in Malawi make demands for compensation, it is perceived as a form of corruption by donor partners (9). Donors' unwillingness to acquiesce to such demands perpetuates a system built on unjust labor practices and exploitation, that benefit donors' objectives to the detriment of the local actors they rely on. The former perpetuates the presence of an underclass of healthcare providers who often go hungry and are unable to break the cycle of poverty (8, 9). The continuation of such an exploitive system has limited long-term sustainability and it is imperative that all workers are treated with dignity and respect, including the integration of such volunteers as payed employees. These labor practices would be abhorred by the public if they occurred in Germany, Canada, or the United States, yet these countries' donor agencies willfully propagate the continued reliance on volunteers to save trivial amounts of money. Donors therefore need to reconceive of volunteerism in Malawi as a product of a unique socioeconomic situation that forces poor rural residents to work for free in the hope of receiving future financial benefits (9). A just and moral system would convert volunteers to salaried staff, which would further make them accountable within the health system and provide them sufficient education to more effectively and successfully deliver health interventions.

### *Vehicles and the infatuation with Donors' Logos*

Driving around Lilongwe and Malawi's countryside, it is difficult not to be taken aback by the sheer number of vehicles stamped with donors' logos. These vehicles run the gamut from basic sedans to luxurious SUVs and are ubiquitous on the road. When there is a handover of vehicles from either international NGOs or the government, it is a festive occasion, celebrated as a great milestone (93, 94). While vehicles are no doubt integral for service delivery in rural areas, the acquisitions for larger NGOs are at times superfluous. For example, I observed many vehicles that required investments of over \$100,000 parked stationary in the corner of parking lots, moving less than once a month. Such usage to put it bluntly, is a waste of financial resources that would be better allocated for health interventions, especially when the procurement of the vehicle may take upwards of 10% of the grants' total amount. A perverse system in Malawi rewards recipients of large grants with vehicles, irrespective if the vehicle is needed or not, and donor agencies infrequently question the purchasing of vehicles for NGOs. Donor logos are not consigned exclusively to the sides of vehicles, but find themselves on tables, chairs, and stationary, in addition to almost anything that can be stamped to demonstrate their involvement

and commitment to Malawi. The desire for donors to be known, in conjunction with Malawian society that assigns social status to luxurious vehicles and offices in “desired” parts of the city, results in an enormous waste of funding. Donors should allow flexibility in the use of vehicles and a simple solution, such as a magnet with the donors’ logo could be a cost-effective mechanism for reducing vehicle expenditures. The best utilization of funding should take precedent over something so innocuous as to who the original buyer of the vehicle was and collaboration between donors would dramatically increase funding allocated to communities in need.

*Entrenched corruption: pervasiveness in the government and the NGO sector*

A common trope concerning the ineffectiveness of global health programs in Africa pertains to the high prevalence of endemic corruption within the government and NGOs. While I do not perceive corruption as the sole factor contributing to unsuccessful health initiatives, I am also not able to ignore its presence completely. Donor contributions have been shaped by corruption scandals in Malawi, whether Cashgate or the misappropriation of money from the Global Fund, to name a few (95, 96). Therefore, it is essential to include a brief analysis concerning corruption in the country. While those corruption scandals occurred within the government, corruption with NGOs is equally if not more dangerous, as these organizations are not necessarily accountable to Malawi’s population, but rather the donor agencies that provide them with resources (8). Furthermore, succeeding the governmental scandals, off-budget financing has increased under the justification that the government cannot be trusted to responsibly administer funds. NGOs are therefore perceived as more reputable and accountable sources than the government (8).

NGOs are accountable principally to their financial benefactors; however, this accountability can be further distorted through subcontracting. In Malawi, subcontracting is quite common as donors such as USAID prefer off-budget financing to large United States based NGOs (8). These international NGOs may have limited capabilities on the ground and therefore decide to subcontract their grant to a local NGO with a grasp of the terrain and with key positioned individuals (8). What can complicate matters, and allow for pervasive corruption, is that not all large nationally-based NGOs have a universal presence within the country, thus necessitating a second subcontractual arrangement. The NGO that is responsible for implementation is thus three times removed from USAID, limiting the donors’ potential to oversee operations. Furthermore, at each step in the process of subcontracting work, the grant amount can be financially reduced. The large United States based NGO and the large national NGO each take a proportion of the grant to cover administrative costs and to monitor and evaluate the interventions progress, leaving the local NGO with insufficient funds to meet the set targets, which can be further reduced through the pilferage of financial resources. Additionally, the process of subcontracting, while expanding the geographical reach of a project, can reduce the quality of interventions, as small local NGOs may have less capacity to carry out complicated interventions (8).

Corruption within NGOs is extremely nuanced and while amounts may seem insignificant, they quickly add up and divert precious financial resources away from intended targets. It is also important to preface this discussion by reiterating that workers in the NGO sector at times turn to corrupt practices to supplement income due to poor wages and unstable labor contracts (33). The

most common form of corruption that I observed pertains to the use of donor vehicles, which were on one hand used outside of official capacities to serve as de facto private vehicles and on the other, used within official capacities to siphon gasoline money. To illustrate the former, it assists to give a specific example of the corrupt activity that takes place when the vehicle is used officially for NGO business. I would commonly see receipts for a field visit that required an approximate journey of 100 km roundtrip. The specifications for a Toyota Land Cruiser indicate that average fuel consumption should be around 11.9 liters per 100 km driver (97). Taking into consideration the rural terrain of Malawi and the poor quality of fuel, one may expect a slight variation from this average. However, fuel receipts would indicate a fuel consumption of 50 liters for the trip, a quantity far outside of a realistic range, with some even claiming the usage of 1 liter of fuel for each kilometer driven. While it is impossible to say with certainty where the extra fuel went, it is commonly discussed that it lands on the black market, with proceeds going to the responsible parties. While this example may seem fairly mundane, it is imperative to take into consideration that trips leave almost every day of the week, allowing for a huge quantity of donor funds to be diverted to purchasing fuel for resale to the black market. Such fuel expenditures can end up occupying large proportions of program budgets, giving the impression that activities are being constantly undertaken and that donors' funds are being properly utilized.

Invoicing such high fuel usage results in administrative costs rising above acceptable levels. United States or European based NGOs for example that dedicate over 15% of their budgets to administrative costs are considered wasteful (98). However, when donors from these countries fund Malawian NGOs they are willing to tolerate administrative costs of up to 40%. With that being said, the NGO where I worked consistently had administrative expenditures exceeding 60% of their total budget. Moreover, specific projects had higher administrative costs, with one as high as 90%, essentially only paying for salaries, fuel costs, and liberally dispensing per diems. Such high administrative costs should be perceived in itself as a form of corruption, resulting in the indefinite suspension of program activities while staff continue to receive salaried remuneration (98). Such structures divert donor funds from their intended target and serve to prop up a middle class of NGO workers, making it increasingly hard to cut off funds as Malawi's economy has become dependent on them to enrich NGO workers. Additionally, based on my observations, donors are reticent to question and challenge such high administrative expenditures, even though NGOs increasingly depend on a free volunteer workforce with the express intent of minimizing divestment from project activities.

Corruption within the government is pervasive, which came to fore in 2013 following the "Cashgate" scandal. The scandal, which took place during the presidency of Joyce Banda, saw the pilferage of over \$32 million (later updated to \$50 million) over a six-month period (95, 96). A subsequent audit carried out by PricewaterhouseCoopers found that the scandal traced back to 2009 during the administration of Bingu wa Mutharika. All told, between 2009 and 2014, approximately \$577 billion MWK (\$1.4 billion) of governmental resources were unaccounted for, pilfered through fraudulent cash book transactions (99). To contextualize the money lost over this five-year period, the entire civil service wage bill from 2017 to 2019 is equivalent to \$591 billion MWK (100). As a result of Cashgate, many donor partners ceased direct budgetary support for the country, transferring their aid to the NGO sector. Additionally, with respect to the HIV/AIDS sector, there has been reported corruption within the National AIDS Commission (NAC). The scandal in 2014, denominated NAC-gate has jeopardized NAC's role as a

subcontractor of major HIV/AIDS grants in the country (45). NAC was accused of funneling pooled Global Fund resources to political associates; not distributing funds to intended NGOs; using funds to purchase unapproved vehicles; and directing funds to non-existent NGOs for pilferage (45). This corruption scandal saw the redirection in 2015 of \$574 million away from NAC and redistributed to the MoH, World Vision, and ActionAid (45).

*Infrastructure: a needed investment for the realization of UHC*

A major impediment to the implementation of programs is the lack of basic infrastructure in the country (13). During the dry season, electricity is inconsistent at best and blackouts can last over 24 hours, resulting in the widespread utilization of back-up generators. Using diesel powered generators daily is an enormous financial expenditure that is borne by donors. Notwithstanding, NGOs and public-sector facilities have little choice but to use generators for refrigeration, lab diagnostics, and any task requiring a computer, whether it be data collection or report writing (9). The problem can be easily solved though through the integration of solar panels on health infrastructure (101). Malawi has an abundance of sun, and the costs of solar panels have reduced drastically in recent years, now inferior to the long-term costs of diesel powered generators (101). The procurement and installation of solar panels would not only be more cost-effective, but it would serve the greater good of the community by removing a strain on the national infrastructure. While large-scale infrastructure improvements should also be considered, the feasibility of such interventions is limited in comparison to solar panels, which require limited maintenance and significantly less costs than increasing the capacity for electricity generation (101).

A 2014 survey of health system infrastructure found that only 59% of facilities had regular electricity, 94% had an improved water source, 37% had a bathroom for patients, 76% had communication equipment, 35% had a computer with internet, and 77% had emergency transport<sup>14</sup> (102). Irrespective of the managing authority, community health posts scored the lowest in all metrics, with only 30% having regular electricity. Furthermore, NGO managed facilities scored poorer than public or CHAM run facilities, with only 49% with regular electricity but 84% possessing computers (102). The former points to donor priorities that do not necessarily align with local realities, as a computer without reliable electricity has extreme limitations. Additionally, equipment in health facilities is generally of poor quality and inadequate, and approximately 20-25% is out of service (5). Notably at the NGOs rural clinics, the parts to fix autoclaves were not available in the country. Unable to fix the machines, the NGO waited for donors who would be willing to gift a new autoclave, preferring to continue operations without the ability to sterilize. Such a dependence on donors puts patients in danger of contracting infections due to unsanitary practices and further demonstrates how the provision of goods, while well intentioned, may not fit the local context, such as providing equipment that cannot be repaired in the country.

Donors' demand for data has increased through global health interventions, so data can then be used to shape policymaking for public health interventions. Data can manifest itself in two forms: raw or cooked. The cooking of data implies that the data has either been processed,

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<sup>14</sup> While facilities in Malawi may have transportation once at the facility, the country does not have a dedicated emergency response phone number nor standardized paramedic services (5).

organized, and analyzed through standard practices or that it has become deformed or dirtied through bad practices (45). Notably, raw data that is collected in the field may be edited to remove assumptions and ambiguities, allowing the compiler to present the data in a more beneficial light (45). Malawi is still heavily reliant on paper-based medical records and data reporting for donor partners. Paper records are highly disorganized and limit the ability of the government to assess health outcomes of the population (8). In the case of NGOs, paper registrars are easily falsified by actors to demonstrate improved performance. Furthermore, due to the number of indicators requested by donors, monthly tabulation of patient registrars can be a laborious time-consuming task. The former limits the provision of high-quality of care, as human resources are diverted for data tabulation and clinics may be closed to meet data reporting demands (8). Care is further compromised because healthcare professionals oftentimes are required to fill in numerous registrars, for the government and for each vertical program under their supervision (8). In Malawi, the distribution of health passport booklets has been perceived as a manner to avoid issues pertaining to paper records, permitting patients to essentially carry their medical records with them when accessing health services. However, these booklets are susceptible to water damage and may be lost (8). Additionally, data collected through passport booklets and vertical programs does not contribute to the aggregation of health surveillance data, resulting in the government's continued dependence on estimates concerning the burden of disease (8).

As previously mentioned, NGO sector health facilities have high rates of computer ownership, yet low rates of electricity, 84% and 49% respectively (102). The former illustrates the manner in which donors push for data collection through electronic means and away from paper-based methods. However, inconsistent electricity impedes the collection and processing of data electronically and has impeded the uptake of electronic medical records (EMR) (9). Additionally, there are multiple EMRs presently in the country, and at times within a single health facility with multiple vertical programs, thus limiting the uptake of any particular one (5). The impetus to use EMR further demonstrates a disconnect between donor priorities and local realities. Notably, while it may improve data collection, it is impractical to expect that local actors will embrace such technologies when the country lacks basic telecommunication infrastructure. Furthermore, donors train a limited number of individuals in the use of these new technologies, which can debilitate an organizations functionality if that individual decides to leave. Overall, donor partners' reticence to invest in infrastructure has had deleterious effects on the healthcare system. While donors may feel that infrastructure is the responsibility of governments, their funds that support health programs are severely endangered by the country's limited infrastructure. Furthermore, investments in infrastructure have long-term benefits that allow for impoverished countries to achieve self-reliance, thus limiting the need for donor involvement (103, 104).

#### *Performance Based Financing: unlikely to radically reform Malawi's healthcare system*

Performance based financing (PBF) came to the forefront of discussions posterior to the MDGs. As external financing increased exponentially in the years following the implementation of the MDGs, there was a realization that health systems were too weak to achieve the health-related goals (105). While health system reforms were proposed, there was universal disagreement as to whether African states or donor agencies were responsible for their articulation (33). It merits mention that this time period is posterior to World Bank reforms in the 1980's and 1990's, which

were widely criticized through the lens of the MDGs for inadequately engaging the local population, undercutting public expenditures, prioritizing privatization, and ultimately undermining African states' sovereignty (33). Therefore, the reconceptualization of reforms to align with the MDGs occasioned the introduction of PBF schemes. PBF is seen as an attractive option for implementation in Malawi due to present input-based payment system. This system provides limited incentives to improve health outcomes or increase patient satisfaction and is concerned principally with quantity of services delivered, irrespective of quality (5).

PBF, simply put, is a transfer of resources based on the achievement of conditions or performance targets with the goal of incentivizing improvements to increase the performance of the healthcare system (33). PBF schemes are furthermore perceived to promote accountability and bottom-up reforms and have been widely adopted by the World Bank and Global Fund (33). PBF can be accomplished through two mechanisms: type I is a pay-for-performance (P4P) funding program that rewards health professionals or health facilities when certain outputs or outcomes are met; and type II, which aligns with models of aid conditionality, where aid continues so long as broader objectives, indicators, or targets are met (33). In the case of type II funding, NGOs generally have to demonstrate results with their own funds prior to receiving external financing, thus theoretically increasing financial accountability of the organization and reducing corruption (33). In the case of the former, I was tasked with completing a PBF readiness assessment to evaluate whether the organization was able to have a type II funding relationship with KFW, who wanted to increase accountability and improve upon poorly reached targets. For example, KFW was tired of continuing payments when 10,000 of the 25,000 targeted services were delivered. However, the organization, similar to most local NGOs, is not in a financial position to assume out of pocket programming costs as local revenue streams are insufficient to cover high programming expenditures.

PBF is believed to serve three major functions: to limit corruption by increasing recipient accountability; enable the adjustments of health interventions to be more effective; and to increase value for money and limit wasteful spending (33). On the ground however, PBF is simplified to a mechanism of demonstrating and checking results and receiving funds when targets are met (33). Moreover, while PBF supporters proclaim that targets will be met because of agents' perceived self-interest and their motivation for financial gain, such an assumption rests on a fallacy that agents will be honest in their quest for financial gain (33). Notably, agents are able to game the system, falsify results<sup>15</sup>, and cherry pick patients to meet targets, therefore emphasizing and prioritizing quantity in service delivery. The former can be illustrated through the targeting of easier to reach areas at the expense of areas with higher need but that are harder to access, as well as the provision of interventions that are tied to PBF funding, such as only providing maternity care while turning away everyone else who visits the health facility (33). Additionally, targets may be reached while missing the point of the intervention, bringing trade-offs in implementation (33, 105). Furthermore, I observed numerous instances of falsification of data to meet targets in programs that were not tied to PBF. Therefore, I find it incongruous that donors would believe that the implementation of PBF will radically improve accountability

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<sup>15</sup> Data collection is not a neutral activity but can be manipulated in accordance with the whims of the data collector and processor. In the case of data that is tied to PBF schemes, there is an economical incentive to present data in a way that guarantees continued funding (45).



mechanisms as activities such as falsifying data undermines the express purpose of implementing PBF in the first place.

A country's ability to shape the terms of a PBF scheme and exert agency are dependent on how reliant the country is on external aid, where increased reliance is correlated with decreased agency, contradicting the Paris Declaration on Aid Effectiveness, which called for mutual accountability in aid and proposed mechanisms for improving upon aid effectiveness (26, 33). Furthermore, in the case of Malawi, agency is further limited through the utilization of brokers, whether being international accounting firms, UN agencies, or international NGOs, who abdicate responsibility, but still retain a controlling stake in determining which performance gets rewarded (33). The former is notable in the distribution of Global Fund grants, which have been directed away from the government following Cashgate. While PBF schemes have been lauded for their transformative capacities, there is a general inflexibility pertaining to targets and limited evidence pointing to their success (105). For example, when external circumstances, such as currency fluctuations occur, donors are reticent to readjust targets even though financial resources have been reduced (33). Moreover, donors are able to amend indicators that favor their objectives, such as increasing targets from 20,000 to 25,000, further limiting truthfully reached targets while fomenting falsification (33). Finally, PBF mechanisms are supposed to reduce bureaucracy in a health system, however, cumbersome reporting requirement and conditionalities that theoretically eliminate corruption and fraud increase bureaucracy for NGO actors (33). Therefore, while PBF schemes have been perceived by donor agencies as a solution to improving health outcomes and reducing corruption, their imposition has thus far yielded limited data demonstrating effectiveness (105). While donors can certainly integrate PBF schemes into programming, they should not be integrated as stand-alone mechanisms to reform the healthcare system in Malawi.

## **Part V – Conclusion**

Even though health outcomes have improved in Malawi since the end of the 20<sup>th</sup> century, especially concerning HIV/AIDS, external financial assistance has largely failed to develop Malawi's overall healthcare system. Donor partners, in an effort to avoid governmental corruption have largely shifted to giving off-budgetary support to the NGO sector. While common perception holds that NGOs are more accountable than weak government agencies, NGOs cannot be held accountable through the same mechanisms as a democratic government (8). NGOs are accountable principally to donor partners, who are able to dictate terms through large financial grants in accordance with the donors' aim (24). NGOs therefore can fall the risk of representing the goals and ideologies of their donor partners opposed to local communities (24). Moreover, aid that finances both NGO and governmental activities is prone to being mismanaged, pilfered, diverted, and erroneously prioritized, magnifying weaknesses within an already stressed healthcare system (9). Notably, when money enters a weak system, it is prone to leak out prior to being translated into goods and services (9). Conversely, the infusion of money to the NGO sector has resulted in the proliferation of vertical programs that focus on specific health conditions (8). The former can notably be observed in the case of HIV/AIDS financing, which occurs peripheral to the healthcare system, effectively creating health silos, which are well funded but poorly integrated programs within the overall health system (33). Such peripheral vertical programs may lessen the burden of disease of specific health concerns while largely

ignoring others, such as NCDs, maternal health, and oral health (8). Therefore, not only are benefits inferred on NGOs focusing on donor partner priorities, but individuals with such health concerns also reap the benefits of improved quality of care and the availability of medications, thus fragmenting the system along the lines of illness (9). Fragmentation imperils the achievement of UHC in the country, restricting the full integration of health services into a simplified package, such as an EHP, that adequately reflects the burden of disease opposed to the availability of financial resources (8).

Within Malawi, there is poor coordination between MoH and donor partners, as well as between donor partners in the coordination of their activities, limiting aid effectiveness and negating the stipulations of the Paris Declaration on Aid Effectiveness, which sought to harmonize aid interventions (106). The former has further contributed to increased administrative costs and an overlap in services rendered (107). The Paris Declaration therefore needs to be accepted by all donor partners, who need to put aside their organizational objectives for the betterment of impoverished nations such as Malawi. Furthermore, continued fragmentation of services has thus far contributed to wasteful spending and a duplication of services at the expense of interventions that are largely excluded from donor planning (107). Coordination is further limited due to the decentralized nature of Malawi's healthcare system<sup>16</sup>, adopted in accordance with neoliberal policy recommendations, which enables donor partners to initiate contact with either the MoH or district health offices (5). Passing through district offices limits accountability mechanisms as there is limited communication in the decentralized system (5). The former demonstrates the necessity to re-centralize the healthcare system forcing donor partners to communicate directly through a centralized source that is able to coordinate activities and assure that national policies are respected and incorporated into planning, while increasing funding mechanisms that more aptly reflect districts' needs.

The ability of donor partners to effectuate change and improve health metrics that can be sustained without continued involvement in the country requires a reconceiving of the manner in which programs are funded and supported. Notably, the continued dependence on volunteer labor to expand service provision and reduce costs must be minimized significantly. Volunteers in Malawi are a vulnerable class of individuals stuck in a cycle of poverty who are being exploited because their integration in programs confers financial sustainability and cost-effectiveness (9, 92). Continued exploitation further endangers the success of health interventions and it is imperative that these "volunteers" are sufficiently remunerated for their work (108). Furthermore, concerning remuneration for healthcare professionals in the public and NGO sectors whose salaries are provided by donor partners, salaries need to be increased to respectable levels. Proper remuneration will limit the brain drain of trained professionals, as well as provide cost savings for donors through a decrease in supplemental income searching behavior, such as the attendance of training sessions, unnecessary field visits, and stacked meetings for per diem payments (8, 9). Additionally, it is time to seriously consider reductions in the procurement of vehicles for Malawian NGOs. Vehicle ownership in some NGOs is higher

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<sup>16</sup> While decentralization has been promoted for impoverished healthcare systems, funding may be insufficient to cover costs associated with day-to-day operations of health clinics and the procurement of drugs (8). In the district of Neno, in the Southern region of Malawi, the central government sends only \$2 per capita per year, insufficient to cover the hospital's electricity bill and further promoting dependence on donor partners (8).

than the needs of the organization, resulting in their infrequent use for official business, while unofficial uses proliferate, effectively assuming the role of personal vehicles.

Without adequate investment in infrastructure, health programs will continue to underperform and the realization of UHC will be seriously jeopardized. Donor partners are reticent to improve Malawi's infrastructure in part because saving a child is considered more gratifying than building a road. Nonetheless, insufficient investments in infrastructure assure the continued reliance on donor funds, inhibiting the ability of the government to sustainably assume the responsibility of providing care to the citizenry (8). Reticence to fund infrastructure projects can be mitigated through the expansion of direct budgetary support (8). The perpetuation of off-budgetary support further threatens the attainment of UHC and even though the government has invariably wasted funds, so has the NGO sector. Since NGOs and donors may have different agenda priorities than the government, direct budgetary support would further permit an alignment of national priorities with financial resources and limit fragmentation within the healthcare system (8). Finally, a ubiquitous trend for NGOs, parastate actors, and donor partners, is to utilize funds for meetings and retreats at luxurious places in Malawi, such as Lake Malawi or game reserves. Coordination of operations can occur without wastefully spending precious financial resources that would be better spent on health programming. As evidenced by the WHO's trend of spending more on travel costs than the combination of HIV/AIDS, hepatitis, TB, and malaria, global health actors have assumed positions of power and entitlement, prioritizing their own comfort over the needs of impoverished populations (109).

Due to Malawi's overreliance on external financing to fund its public health system, long-term sustainability depends on the whims of donor partners. Notably, as the reimplementation of the Mexico City Policy demonstrates, donors' financial commitments can be easily withdrawn, leaving impoverished countries with budget shortfalls and further limiting the adequate provision of healthcare services (8). Such fluctuations in financial aid can affect the ability of the government to effectively govern where foreign governments are able to dictate terms for aid based on national priorities, in this case the acquiescence to Evangelical Christians. The imposition of ideals by foreign governments endangers the government's ability to set national priorities in accordance with locally held values. In the case of the Mexico City Policy, there will be a limited effect in reducing abortions, as they were already illegal in almost all cases, and it will only endanger the lives of individuals reliant on USAID funded healthcare services (30, 67). Even though donor funding has historically been unreliable, at present, Malawi is unable to domestically fund the public health system (5). Therefore, it is imperative that OECD nations meet their obligations to give at least 1% of their countries' GNIs for external aid (8). The realization of these targets, coupled with the Abuja Declaration, which stipulates that African nations' healthcare spending should be at least 15% of GDP, will see marked improvement towards realizing UHC and achieving the targets stipulated in the third goal of the SDGs (7). Furthermore, aid can no longer continue unabated as a political weapon to serve the wishes of segments of donor partners' populaces nor utilized as collateral for support of donor partners in international venues (110). While I have discussed the Malawi government and local actors in an overall passive sense, it does merit mention that the country is able to exert agency (26, 111). Such agency however, goes hand-in-hand with the overreliance on external aid for the functionality of the government's budget, thus reflecting what has been denoted as dependent agency (26, 111). It is therefore time for Malawi's government to capitalize on its dependent

agency to see the fulfillment of the country's healthcare goals and targets, notably achieving UHC and fulfilling the country's constitutional obligations.

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