

Desk Review on Gender Issues Affecting Neglected Tropical Diseases

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Act to End NTDs | East Program Overview

The U.S. Agency for International Development Act to End Neglected Tropical Diseases (NTDs) | East Program supports national NTD programs in reaching World Health Organization goals for NTD control and elimination through proven, cost-effective public health interventions. The Act to End NTDs | East (Act | East) Program also provides critical support to countries on their journey to self-reliance, helping them create sustainable programming for NTD control within robust and resilient health systems. The Act | East Program is being implemented by RTI International with a consortium of partners, led by RTI International and including includes The Carter Center; Fred Hollows Foundation; IMA World Health; Light for the World; Results for Development (R4D); Save the Children; Sightsavers; and Women Influencing Health, Education, and Rule of Law (WI-HER).

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Abbreviations

CDCS	Country Development Cooperation Strategy
CDD	Community Drug Distributor
CEDAW	Convention on the Elimination of All Forms of Discrimination Against Women
DD	Drug Distributor
DFID	UK Department for International Development
DHS	Demographic and Health Survey
FGS	Female Genital Schistosomiasis
FMOH	Federal Ministry of Health (Ethiopia, Nigeria)
FY	Fiscal Year
GBV	Gender-based Violence
GDP	Gross Domestic Product
GII	Gender Inequality Index
GRB	Gender Responsive Budgeting
HDA	Health Development Army
HEW	Health Extension Worker
HSS	Health Systems Strengthening
JICA	Japan International Cooperation Agency
LF	Lymphatic Filariasis
LGBTI	Lesbian, Gay, Bisexual, Transgender, and Intersex
M&E	Monitoring and Evaluation
MDA	Mass Drug Administration
MOH	Ministry of Health
MOHCDGEC	Ministry of Health, Community Development, Gender, Elderly and Children (Tanzania)
MSPP	Ministry of Public Health and Population (Haiti)
NGO	Nongovernmental Organization
NTD	Neglected Tropical Disease
OV	Onchocerciasis volvulus
PC	Preventive chemotherapy
PEPFAR	US President's Emergency Plan for AIDS Relief
SCH	Schistosomiasis
SDG	Sustainable Development Goals
STH	Soil-transmitted Helminths
UN	United Nations
UNDP	United Nations Development Programme
UNICEF	United Nations Children's Fund
UN Women	United Nations Entity for Gender Equality and the Empowerment of Women
WASH	Water, Sanitation, and Hygiene
WHO	World Health Organization

Executive Summary

Neglected tropical diseases (NTDs) are a category of diverse communicable and treatable diseases that affect more than one billion of the world's poorest populations, primarily in sub-tropical settings in Africa, Asia, and the Americas. This report focuses on the five NTDs—onchocerciasis (OV), lymphatic filariasis (LF), soil-transmitted helminths (STH; comprising hookworm, roundworm, and whipworm), trachoma, and schistosomiasis (SCH)—that can all be targeted by distributing preventive chemotherapy (PC) to populations living in endemic areas. NTDs are both a result and a cause of poverty. They severely impact physical health, cognitive development, and nutritional status for individuals and can cause severe disfigurement, long-lasting or permanent disabilities, and social stigma, which in turn leads to economic hardship. Sustainable control and elimination of these five NTDs by country-led and country-financed NTD programs is the goal of the United States Agency for International Development's (USAID's) Act to End NTDs | East Program, led by RTI International.

NTDs disproportionately impact and disadvantage vulnerable groups—such as women (in some settings), ethnic or religious minorities, or transient populations—due to biological and sociocultural reasons that influence their exposure to NTD infection, disease risk, and access to care. Males and females have different reactions to and outcomes from NTDs due to biological susceptibility (related to their sex) as in the cases of female genital schistosomiasis (genital mucosal lesions) and hydrocele (enlarged scrotum caused by filarial worms).

Gender refers to the social norms, roles, relationships, and behaviors attributed to males and females (adults, youth, and adolescents) by society and can influence a person's exposure to NTD infection and subsequent risk of disease and his/her access to prevention and care. For example, women's responsibility for water collection, household sanitation, and caretaking of children in many communities makes them more vulnerable to NTD infections such as SCH and trachoma. More traditional male occupational roles such as participating in agriculture and fishing expose men more to the parasites that cause SCH and STH. When work keeps men away from the home, their access to PC treatment through mass drug administration (MDA) may be reduced. Women may lack access to treatment due to household dynamics, social norms, or financial and time constraints. Stigma related to NTDs and the resulting social and economic isolation can be severe for both men and women, impacting their employability and marriageability.

While consideration of the impact of gender on NTD infection and treatment efforts is growing, it remains a relatively unexamined or overlooked aspect in NTD elimination and control programs. Interventions, policies, or budgets that are developed and implemented without a gender lens (considering the unique needs, priorities, and contributions of women, men, girls, and boys) are less effective and run the risk of disadvantaging or harming certain groups. Since Act to End NTDs | East has a clear role in strengthening health systems to ensure sustainable NTD control and elimination, there is opportunity to address gender.

- **Service delivery.** To date, NTD service delivery efforts have focused on MDA and improved community knowledge of disease causation and treatments through social mobilization efforts. Women's lower literacy and education levels might affect their ability to understand health messaging, health campaigns and adherence to treatment. However, men are accessing MDA at lower rates than women. In 2016, median female coverage for USAID-supported MDA was 6.2 percentage points higher compared with male coverage (85.5 percent compared with 79.3 percent). The greatest difference was for LF—12.6 percentage points higher coverage for women and girls. MDA efforts have reached 65.5 percent of the global population requiring care, but more progress needs to be made, and a greater understanding is needed around how NTDs affect males

and females differently, and how individual positionality—one’s gender, poverty level, disability, occupation, power within the household, and geography—impacts access to and uptake of PC.

- **Human resources (workforce).** Community drug distributors (CDDs) are a source of local, contextualized knowledge of gender norms and roles and can provide insight into household and community power dynamics. However, it may be necessary to provide training to CDDs so they can properly recognize and address these factors. Given that only 43% of drug distributors and 38% of supervisors + trainers (from USAID-supported countries and districts) from 2012–2017 were female (with significant variance across countries), more research on the composition, selection, and compensation of the health workforce would provide useful insights on how to improve health policy to ensure that CDD recruitment practices are gender equitable and do not reinforce social and gender hierarchies.
- **Information (data).** Disaggregating data by sex and age reveals inequalities among girls, boys, women, and men, and these data are used to identify gaps and assess progress in achieving gender equality as well as to make programmatic and intervention-level decisions. Even though the sex-disaggregation of data is required for USAID-supported projects, it is not for other donors, resulting in limited to no sex- and age-disaggregated data on disease burden, risk and exposure to NTDs, access to treatment outside of MDA, and exposure to social mobilization campaigns.
- **Essential medicines.** There is a research gap regarding PC treatments for all NTDs that are safe for pregnant and breastfeeding women. On average, women in developing countries spend up to 25 percent of their reproductive years pregnant and 60 percent of those years breastfeeding, representing a significant treatment delivery gap for the PC treatments that are not safe for pregnant and breastfeeding women. Furthermore, not all PC drugs are accessible at health centers for women hoping to access them once they are eligible for treatment (post birth and lactation).
- **Financing.** Gender-responsive budgeting fosters policy dialogue within governments about gender inequalities and opens opportunities to undertake transformative interventions to address them. Gender should be meaningfully considered during planning, budgeting, and policy making to allow governments to optimally reach populations at risk and simultaneously address gender inequalities.
- **Governance (policy and leadership).** Policies that contain provisions on gender relations and norms and explicitly address gender-related barriers, gaps, and opportunities create legitimacy, ownership, and momentum for action. There is a need for more women in leadership and policy-making positions, as research has shown that women leaders implement policies that are more supportive of women and children and have a greater positive impact on women’s health, which benefits their families and communities.

This desk review first presents results of global research on the intersection of sex and gender with NTDs, interventions, health systems, and policies and then examines this intersection in six countries—Ethiopia, Haiti, Nepal, Nigeria, Tanzania, and Uganda—selected from the 13 target countries in USAID’s Act to End NTDs | East Program. Across these case studies, there is a common observation of lack of sex- and age-disaggregated data and gender-sensitive data to understand key barriers to achieving control and elimination goals. Initial evidence suggests that gender norms, roles, and behaviors are impacting exposure and susceptibility to NTDs, and that these dynamics impact access to and uptake of treatment.

Based on findings from this desk review and global gender-related principles and best practices, Act to End NTDs | East presents four primary recommendations for national NTD programs to facilitate more equitable, efficient, and effective NTD strategies and activities and promote greater gender equality.

Recommendations:

1. **Conduct in-depth, country-specific gender analyses.** Gender analyses will allow countries and implementing partners to identify country-specific gender-related gaps in NTD programming and to adjust policies, activities, and approaches to be more gender sensitive. The analyses will identify gender constraints and facilitators at both the service delivery level to see where gender does and does not impact access to and quality of care and at the systems or program level to understand where gender mainstreaming does or does not support an effective health system. Findings will allow for better insights into community, regional, and national level gender issues, which in turn will enable NTD programs to develop local solutions, thus increasing community buy-in, program effectiveness, and greater sustainability. The analyses should be conducted using both quantitative and qualitative measures and should look at both constraints and opportunities.
2. **Use sex- and age-disaggregated and gender-sensitive data to improve programming.** While progress has been made, national NTD programs, with support from implementing partners including the USAID Act to End NTDs | East Program, should continue to ensure and expand the collection of quality sex- and age-disaggregated data on disease burden, exposure to diseases, participation in and exposure to social mobilization efforts, participation in MDA, ability to access treatment outside of MDA, and composition of the health workforce. This will allow NTD programs to fully understand the extent to which groups are at risk of NTDs and are being reached by programming. Qualitative and quantitative data disaggregated by sex and age as well as gender-sensitive data, will inform the adaptation and implementation of strategies to ensure that women and men, and all population groups benefit equally from NTD health policies, programs, and services. National NTD programs should also build local capacity to ensure an increase in the collection, analysis, use and reporting of sex-disaggregated data.
3. **Build local capacity and enhance knowledge in gender and social inclusion through innovative approaches.** Gender and social inclusion trainings, coaching, and innovative adult learning approaches should be utilized to build and maintain capacity among the NTD workforce at all levels to collaborate across system levels to identify gender-related gaps and solutions for NTD programming. These approaches should also improve knowledge around gender issues in NTD exposure, diagnosis, and treatment access and should build local capacity to apply a gender lens to all NTD trainings for drug administration, social mobilization, and clinical care. Capacity in gender mainstreaming should also be built at the policy and management levels to ensure that strategies and plans for systems strengthening are gender responsive and will achieve program objectives and that systems will enable sustainable and resilient delivery of equitable health services.
4. **Conduct operational research.** To fill important gaps in knowledge, NTD programs, international organizations, research agencies, and donors should conduct additional operational research (in addition to baseline gender analyses) to better understand how NTDs and NTD programs are impacting men, women, boys, and girls. Illustrative research topics include: safe medications for pregnant and breastfeeding women, CDD selection process and compensation, men's uptake of MDA, gender impacts on social mobilization, coverage and treatment access, the connection between SCH and HIV, and NTD program impact on gender equality.^{2,5}

Across all recommendations, it will be important to consider evidence-based interventions in gender integration, social inclusion, and mainstreaming; build on NTD programs' successes and investments; engage multi-sectoral actors from both public and private arenas; and leverage existing country platforms and system mechanisms to maximize resources and strengthen country frameworks.

This desk review outlines findings, key gaps and challenges, as well as recommendations for addressing those gaps and accelerating achievement of NTD elimination and control goals. It is intended to complement the NTD and health system strengthening assessments being undertaken by the Act to End NTDs | East Program. Findings from both analyses will be used to inform a gender strategy and action plan for the Act to end NTDs | East Program. The strategy document will be based on these recommendations, as well as program objectives and activities, and informed by more in-depth discussions with the Act to End NTDs | East team and national counterparts. It will also be harmonized with broader USAID strategies and with the Act to End NTDs | East Gender Team's strategies and approaches.

Introduction

Neglected tropical diseases (NTDs) are among the world's most significant global health problems, affecting one in six people worldwide. NTDs are a category of diverse communicable and treatable parasitic, viral, and bacterial diseases that affect more than one billion of the world's poorest populations, primarily in sub-tropical settings in Africa, Asia, and the Americas.¹ Over 50 percent of the global NTD burden is concentrated in Africa, with 39 percent focused in the Democratic Republic of Congo, Ethiopia, and Nigeria.⁶ Unsafe water, poor nutrition, inadequate housing, living with or near animals, absent or poor sanitation, and limited access to health care increases risk for infection. NTDs are caused by and cause poverty, with devastating impacts including diminished physical and cognitive development, heightened illnesses, malnutrition, severe disfigurement, long-lasting or permanent disabilities, social stigma, and diminished economic participation and hardship.⁷ Preventive chemotherapy (PC) exists to prevent five of these diseases—lymphatic filariasis (LF), onchocerciasis (OV), schistosomiasis (SCH), soil-transmitted helminthiasis (STH), and trachoma—known as PC-NTDs. Yet, despite these treatments, the World Health Organization (WHO) estimates that NTDs are responsible for approximately 57 million years of lost life due to premature disability and death, as of 2017.⁸ Current global efforts aim to eliminate LF, trachoma, and, in certain settings, OV as public health problems, and to control STH and SCH. The United States Agency for International Development's (USAID's) Act to End NTDs | East Program (Act | East), led by RTI International, supports control and elimination of these five PC-NTDs.

In this paper, we discuss the impact of sex and gender on the exposure and vulnerability to NTD infection, and access to prevention and treatment for, and education about NTDs. Sex—or biological traits—can impact susceptibility to and impact of NTDs. Gender, on the other hand, is a social construct that describes the norms, roles, and interpersonal dynamics that are attributed to individuals. Evidence suggests that NTDs affect men, women, boys, and girls differently— they may be unequally exposed and have varied acceptance of PC during mass drug administration (MDA). Consideration of the impact of sex and gender on NTD elimination and control efforts is critical to their success, and while incorporation of a gender perspective to this work is growing, it remains an overlooked aspect in most NTD programs.⁷ Efforts to eliminate and reduce the global burden of NTDs demand an improved understanding of how gender intersects with other drivers of inequality and marginalization. This will identify increased risk, and opportunities for targeted interventions for those most at risk and with least access to care.⁸

Gender equality is achieved when men, women, boys, girls, and nonbinary individualsⁱ enjoy the same rights and opportunities and when the different behaviors, aspirations, and needs of individuals are equally valued. Social inclusion is defined as the process of improving the terms for individuals and groups to take part in society as well as the ability, opportunity, and dignity of those disadvantaged on the basis of their identity to take part in society.⁹ Prioritizing gender equality and social inclusion in public health planning and programming is essential to ensure all people have equal access to knowledge about NTDs, prevention, and treatment, which is essential to achieve NTD control and elimination goals, as it is those who are most marginalized and with the least access may remain at risk during the “last mile” of elimination.^{2,10}

Box 1: Why is gender critical to accelerate progress towards NTD control and elimination?

Significant gains have been made in terms of gender equity in NTD programs. Sex-disaggregated data collected used to monitor and report on MDA have shown that USAID-supported districts have achieved close to equal levels of MDA coverage among women and men. Yet, there remain gender-related barriers to achieving NTD control and elimination goals. First, as will be explained in further detail below, these data may not tell the full story and there may be biases in the data that we are collecting. Furthermore, while there may be near equity at the national level in terms of MDA access, there remain significant regional-level variations, highlighting that in order to reach the last mile and ensure that NTD elimination and control is achieved, a clear understanding of gender-related barriers is necessary. Second, improving service delivery for NTDs extends beyond MDA. Gender and social inclusion have implications for improving service delivery to reach entire populations with quality and equitable care through the way that it is delivered, received, utilized, and accessed. Gender is embedded in the social fabric of a society and impacts the roles, responsibilities, and expectations of individuals, which in turn impacts their health and well-being. Third, mainstreaming gender into the broader health system is necessary to strengthen the system and ensure that equitable care is institutionalized and sustainable. Gender mainstreaming is reflected in the way that policies, budgets, and programs are designed; the way that they are monitored; and the way that the NTD workforce is recruited, trained, and compensated. By mainstreaming gender, countries can achieve more accurate and actionable reporting and improve accountability. Mainstreaming and integrating gender considerations across the health system, and influencing other systems, will enhance a country’s ability to achieve its development goals—it will result in greater human rights protections, more rapid progress towards achieving the Sustainable Development Goals, and advancement of economic growth. The findings from this desk review reveal gaps in service delivery, systems, policies, and programs that are specifically related to gender and that obstruct progress toward NTD control and elimination.

This report examines how gender and social dynamics are linked with NTDs and health systems and how gender and social norms, roles, and behaviors, specifically those regarding sex (male and female) and age (particularly children, adolescents, and youth), affect NTD status, programming, and outcomes. This report examines NTDs and gender at the global level, focusing on LF, trachoma, OV, SCH, and STH. To ground these findings, we explore these issues in six USAID gender/NTD priority countries: Ethiopia, Haiti, Nepal, Nigeria, Tanzania, and Uganda.

ⁱ Broader categories of gender considerations include gender identity, gender fluidity, and sexual orientation. This report does not address non-binary individuals or sexual orientation, as these issues were not present in NTD literature. This is an area of research that should be pursued for improved NTD programming.

Methodology

Women Influencing Health, Education, and Rule of Law (WI-HER) LLC is the key partner responsible for gender integration within USAID's Act to End Neglected Tropical Diseases | East Program. WI-HER conducted this desk review to highlight gender and social inclusion issues in NTD programs at the global and country levels. First, the WI-HER team conducted a global-level desk review, then more-detailed country desk reviews for six priority countries identified by USAID: Ethiopia, Haiti, Nepal, Nigeria, Tanzania, and Uganda. The analysis examines gender and social inclusion at all levels of NTD programming, including those related to policies, guidelines, health worker recruitment and training, health system financing, community engagement and service delivery. The objective is to identify key challenges and opportunities to enhancing gender integration and social inclusion within NTD programming.

During the desk review, the team gathered available sex-disaggregated, qualitative, and quantitative data, and relevant background information. The search parameters were intentionally broad to account for the dearth of comparable country-level data on gender and NTDs. Materials reviewed include peer-reviewed publications, policy papers, gender analyses, case studies, literature reviews, publicly available data, project evaluations, government and international policies and documents, program reports, grey literature, and other materials released within the past 15 years (10 years for global/ not country-specific data). This report uses published and unpublished data (including RTI program data), the most recent approved work plans, and country-level semiannual reports (fiscal year 2018 [FY18]) from the USAID-funded, RTI-led ENVISION project (2011–2019).

This analysis was guided by USAID's gender policy¹¹ and USAID Automated Directives System Chapter 205.¹² The research team used USAID's five gender domains (laws, policies, regulations, and institutional practices; cultural norms and beliefs; gender roles, responsibilities, and time use; access to and control over assets and resources; and patterns of power and decision making) as a framework to identify key issues, informational gaps, challenges, and opportunities.

Findings

Global Landscape

Globally, governments have made commitments to achieving the Sustainable Development Goals (SDGs), which call explicitly for achieving gender equality and empowering all women and girls (SDG 5).¹³ Meeting Goal 5 will be essential for achieving Target 3.3: *By 2030, end the epidemics of AIDS, tuberculosis, malaria and neglected tropical diseases and combat hepatitis, water-borne diseases and other communicable diseases.*¹³ Biological and genetic susceptibility, as well as gender-related social norms, roles, behaviors, practices/participation, decision-making power, and control of resources/assets, combine to affect NTD risk, infection, and impact.

Biological susceptibility and impact

Even when males and females are exposed equally to a risk or disease, the health consequences may be different for each sex. For example, only males can have hydrocele (enlarged or swollen scrotum caused by filarial worms).¹⁴ Furthermore, although males in some settings bear the burden of SCH due to exposure, women are particularly affected by FGS.^{15,16} FGS affects close to 56 million females worldwide—an estimated three-quarters of women and girls with SCH infection have FGS—which, according to Hotez (2013) makes FGS sub-Saharan Africa's most common gynecologic condition.¹⁷ FGS causes devastating consequences including vaginal itching and discharge, post-coital bleeding, genitopelvic discomfort, social stigma, depression, and marital discord.^{18–20} Furthermore, FGS causes a tripling of women and girls' risk of contracting HIV,^{20–22} reproductive organ and urinary system damage

resulting in infertility, ectopic pregnancy, maternal death,^{18,19} and low birth weight babies.²³ FGS is often under-diagnosed or incorrectly diagnosed as a sexually transmitted infection, which results in ineffective treatment.²⁴ Women are also more likely than men to have asymptomatic infections—and to have more limited access to health care in some settings—which can result in delayed diagnosis and treatment.²³

Pregnancy and childbirth produce an array of health risks and they are exacerbated when coupled with NTD infections. Females have an increased susceptibility to iron deficiency anemia, particularly while menstruating, during pregnancy, and after delivery. During pregnancy, iron deficiency anemia can affect both fetal and maternal wellbeing and can, in some circumstances, result in maternal and/or fetal mortality. SCH further increases females risk for anemia, and STH can lead to severe helminth-related anemia in pregnant females.²⁵ Infection from hookworm, an STH affecting 576–740 million people in developing countries,²⁶ exacerbates iron loss and anemia. Although the burden of other maternal infections (including HIV, tuberculosis, and malaria) commonly linked with anemia during pregnancy in sub-Saharan Africa has been well documented, only a limited number of studies have estimated the prevalence and impact of helminth infestation on pregnancy and anemia-related outcomes.²⁷

Norms, roles, and behaviors that influence NTD infection

Gender norms, roles, and behaviors affect women, men, boys, and girls differently and influence their exposure to NTD infection; disease risk; and access to information, preventive treatment, and care; resulting in significant discrepancies in morbidity and mortality rates. For example, across the developing world, women and girls are responsible for two-thirds of water-based activities, including water collection and household sanitation (e.g., washing dishes and clothes), which increases their exposure to contaminated water, infectious disease vectors, and water-based illnesses such as SCH.²⁵ Water can act as a breeding ground for pathogens and a source of infection. Use of unclean water and poor sanitation practices play key roles in disease transmission of NTDs such as LF, SCH, STH, and trachoma. These diseases, in turn, contribute to poverty because they can impair intellectual development in children, reduce school enrollment and attendance, result in disability, and stymie economic productivity. Furthermore, women's exposure to trachoma and related blindness is overall higher than men's exposure²⁸ because women have more contact with children (who harbor the highest rate of infection).¹⁰ As a result, women are four times as likely to need eye surgery due to trichiasis (compared to men)²⁹, and account for 86% of trichiasis cases (the advanced stage of trachoma that leads to blindness).³⁰

Alternatively, in countries where men fish or work in agricultural production or in rice fields, they are at an increased risk for SCH.^{31(p),32} In Ghana, a recent study found that being male was positively associated with LF infection and negatively associated with participating in MDA the previous year. Minetti et al. found that men may be both more susceptible to LF and less likely to adhere to treatments.³³ Similarly, a 2013 study by Rilkoff et al. in eastern Uganda found that men experienced more difficulties accessing house-to-house MDA because they were away from home during the day for farming, trading, truck driving, and other similar occupations.⁵

Education levels are also connected to NTD risk, diagnosis, and treatment access.³⁴ Maternal education is positively correlated with lower birth and mortality rates, overall health, educational attainment, and contributes to countries' demographic transitions. Literacy increases access to information that is essential for health. Furthermore, if girls or boys are not in school at a young age, they may miss critical opportunities for deworming or receiving PC treatments. There are 31 million primary-school-age girls out of school, compared with 27 million boys. This discrepancy grows in secondary school, and globally, two-thirds of the illiterate population is female.³⁵ One reason that girls drop out of school is early, and forced, marriage which leads to lower educational attainment, lower employment levels, and lower earning potential; in addition, it puts girls at greater risk of violence, food insecurity, sexually

transmitted infections, pregnancy complications, and other negative health outcomes.³⁶ Similarly, women with more education tend to get married later. In sub-Saharan Africa and South and West Asia, one in eight girls are married by the age of 15.³⁵ These girls have little decision-making power within their home and often experience higher levels of isolation, both of which can impact their and the whole family's access to health services.³⁷

Table 1: NTDs and gender/sex snapshot

Disease	Cause	Symptoms	NTD intersection with gender and sex	
			With risk of infection	With impact of disease
LF	Parasitic worms transmitted by mosquitoes	Damage to the lymphatic system, resulting in swelling of arms, legs, or genitals	Preventive treatments are not safe for pregnant women. Men and boys are at greater risk in many countries.	Disfigurement and disability can impact employability and marriageability of men and women differently. Hydrocele in males. Men may not seek treatment due to perceptions of masculinity.
Trachoma	Bacteria spread by people and houseflies; exacerbated by poor hygiene	Eyelid turns inward; can lead to visual impairment or irreversible blindness	Child-care and caregiving increase female risk. Preventive treatment safe for pregnant females, but often not offered.	Women are four times as likely to need eye surgery. Women account for 86% of trichiasis cases.
OV	Filarial worm, transmitted by black fly bites	Visual impairment, i.e. permanent blindness; intense itching and skin disfigurement	2/3 of water-based domestic activities are completed by females, increasing risk. Preventive treatments not safe for pregnant females.	Disfigurement and disability can impact employability and marriageability of both men and women in different ways.
STH	Egg ingestion from contaminated soil, poor hygiene, or skin penetration by larvae in soil	Aggravate malnutrition, amplify rates of anemia, and lead to cognitive impairment	Men or women working in agriculture. Gendered cultural norms, such as open defecation. Out of school children may not access deworming campaigns.	Severe hookworm-related anemia in pregnant women. Low birth weight babies and/or premature birth. Infertility (caused by hookworm) for females.
SCH	Parasitic larva in water	Leads to chronic ill health (e.g., damage of the bladder and urinary tract)	2/3 water-based domestic activities completed by females. Exacerbates disease during pregnancy. Men's and boys' work can increase risk.	FGS causes reproductive organ damage, infertility, and increased risk of HIV. Increases female's risk for anemia.

Illness perception, household decision making, and health care access and use

Gender also influences illness perception, care-seeking behavior, and treatment access. Men and women often have different perceptions of what constitutes being “ill” or “requiring medical treatment” based on cultural factors, knowledge, and attitudes; these perceptions can influence their response to illness, treatment seeking, and disease management. For example, LF in women is considered hereditary and often goes untreated.³⁸ In Uganda, reportedly some men feel that they have to maintain their image

of masculinity and therefore will not seek care when ill. Similarly, in Nepal and Nigeria, masculine personas are associated with toughness and physical strength. While not a direct link, these beliefs may result in men's being less inclined to seek and adhere to PC treatment for NTDs, similar to findings about men's lower of participation in HIV testing and treatment.^{39,40} These issues are discussed in more detail in the country desk reviews below.

NTD programs have scaled-up MDA dramatically and recent evidence shows that men and women are accessing PC treatments relatively equally.⁴¹ However, facility-based morbidity management does not always reach those most-at-risk or affected by NTDs.²⁷ Household decision-making authority, including about finances and healthcare spending, differs by setting and household, and tends to rest with men in places where status, power, and gender are linked. In some countries and communities, women lack access to transport to seek health care or the financial resources to pay for it.⁴² In some contexts, social norms dictate that women cannot travel without a man, and therefore cannot make healthcare decisions autonomously.^{33,43} Poor women and girls commonly have lower status and priority within households, with boys in some cultures receiving more and better healthcare access. In some places, women wait longer to seek treatment and are more likely to consult traditional healers, particularly for stigmatized diseases.⁴⁴ In households where polygamy is practiced, wives with disease or disability are commonly less favored and have less access to antenatal and maternal health care. This marginalization results in delays in care access and further illness progression prior to care, increasing negative consequences.⁴⁴ In addition, women's higher workloads around the world, which disproportionately include unpaid and undervalued work, often impede women's ability to access or remain in care, due to financial and time constraints.⁵⁸

Information, Education, and Communication

Education is fundamental to improving equity across all sectors because it forms the foundation for better economic opportunities, voice, and health service access. Women's lower literacy and education levels affect their ability to understand health messaging, social mobilization campaigns, and adherence to treatment. Improved consumer knowledge of disease causation is considered a prerequisite for disease control efforts,⁴⁵ and community engagement and social mobilization are key components of NTD programming. However, certain taboos and beliefs relating to gender and health—such as gendered hygiene practices—should be considered when designing education programs. For example, it is taboo for Maasai men to be seen defecating, so latrine programs must consider how these norms affect optimal latrine location, guidance, use, and messaging.⁴³ Understanding gender roles can also help identify effective messages for different audiences. For example, women who care for children have an increased risk of exposure to trachoma, so education and promotion around child hygiene can help mitigate this risk.⁴³ Messaging for social mobilization campaigns should respond to identified gender-related barriers in treatment access and uptake and target the most-vulnerable populations. Designing messaging that addresses gendered misconceptions or cultural beliefs — with a specific focus on pregnant women due to their unique needs and barriers—will increase message uptake and improve health outcomes. Similarly, targeted messages for men and boys that address harmful masculinity norms, especially in countries where men may believe they are too strong to be at risk of NTDs or where taking medicine is viewed as showing weakness, could lead to increased MDA uptake among men.

Building health provider capacity to understand and address gendered aspects of NTD risk, diagnosis, and treatment is critical for elimination and control. For example, females with LF infections in their breasts and vulva frequently are not diagnosed because, in some cultures, such as ones in Tanzania, physical examination of women by health personnel is restricted to the arms and legs.⁴⁶ In addition, many healthcare providers are not trained to recognize symptoms of NTDs, such as FGS, so women are

frequently misdiagnosed and treated for sexually transmitted infections.^{2,24} FGS is not included in most medical textbooks, which has contributed to the low awareness of the condition.⁴⁷

Stigma

Sociocultural norms and beliefs affect how people with NTDs are treated. The stigma and social and economic isolation resulting from NTDs such as OV, LF, hookworm, or SCH are severe in some cultures and have been shown to impact employability and marriageability of both women and men.² Women are more likely to face greater stigma from resulting disabilities.⁴⁸ For example, Ugandan women with disabilities have reported challenges accessing antenatal care due to health workers' bias against people with disabilities having children. Poor and uneducated women, who are often principally defined by their outward appearance and ability to have children, become, in certain settings, unable to marry or are rejected by their family or spouse if disabled or disfigured due to an NTD.³⁸ Some women perceive the signs of the disease as worse than the disease itself, especially if it affects their appearance, marriage prospects, or child-rearing ability.³⁸ Disfigurement from NTDs compounds one's ability to seek treatment for physical reasons and due to stigma. Furthermore, in Ethiopia, NTDs have been found to impact women's economic opportunities by limiting infected women's ability to work, causing further exclusion and stigma.⁴⁹

Men also experience NTD-related stigma. A study in Ghana and Uganda of unmarried men and women found that they both expressed concern about their marriageability and employability because of OV and skin lesions.⁵⁰ A man in Uganda noted, "I have no wealth to marry, and the skin condition has also contributed." In Ghana, unmarried men explained, "If people meet me and I scratch, it will be a disgrace to her, and she would not like to marry me;" "The girl's parents may not agree to the marriage;" and "...the girl might fear that she would be infected."⁵⁰ Other vulnerable populations, such as lesbian, gay, bisexual, transgender, and intersex (LGBTI) individuals in Haiti, are often stigmatized to the point of having difficulty in accessing basic services such as health care, which could lead to an extended NTD infection and more severe health consequences.⁵¹

Box 2: Issue Spotlight: Gender, disability, and violence

According to USAID's *Strategy to Prevent and Respond to Gender-based Violence Globally*, gender-based violence (GBV) "is rooted in structural inequalities between men and women and is characterized by the use and abuse physical, emotional, or financial power and control."⁵² Men and women experience GBV to varying degrees, but women are disproportionately affected, which reflects and reinforces deeply rooted inequalities and discriminatory norms and beliefs.⁵³ Violence is a social determinant of health and exacerbates poverty—poor women are more vulnerable to abuse, and this abuse increases individual and societal-level poverty and leads to poorer health outcomes for women and their families. For women, common risk factors for intimate partner violence, the most common form of GBV, include being married before age 18, having lower levels of education, having had childhood exposure to violence, having a husband who is frequently intoxicated and who has less education, and being disabled.⁵⁴ Intimate partner violence is highly correlated with higher maternal and infant mortality rates.⁵⁴ When women are subjected to violence, they may not be able, or allowed, to seek health care for themselves or their children, thereby increasing the likelihood of undiagnosed and untreated NTDs.⁵⁴ Women and girls with disabilities experience up to 10 times more gender-based violence⁵⁵ and twice the rate of intimate partner violence, compared to women and girls without disability. They can also face unique forms of violence such as isolation or withholding of mobility or vision aids.⁵⁶ Addressing GBV and intimate partner violence can help to overcome obstacles to NTD prevention and treatment and therefore, NTD control and elimination goals, and will expand women's access to health, education, and other forms of social support, promoting development generally and accelerating progress towards gender equality.

NTD programs are part of national health systems, including service delivery, human resources (workforce) information (data), essential medicines, financing, and governance (policy and leadership). Act to End NTDs| East has a clear role in strengthening health systems to support sustainable NTD control and elimination and therefore the opportunity to champion gender integration in achieving those goals. Health interventions, policies, or budgets that do not consider the differential needs and priorities of women, men, girls, and boys run the risk of disadvantaging, or even harming, certain groups.^{23,57} Integrating gender and social inclusion considerations into all levels of the health system will improve health and equity outcomes and will contribute to sustainability goals.⁵⁸

Service delivery: mass drug administration

The five PC-NTDs can be prevented and treated at a population level through MDA. Distributing multiple cycles of MDA to populations living in endemic areas contributes to the control or elimination of these diseases, treating those with active infections and providing chemoprophylaxis to those who are uninfected. To date, NTD programs have reached 65.5 percent of the global population requiring treatment for at least one NTD, treating more than a billion people a year.^{3,4} Although MDA efforts have been effective, more work is needed, particularly with regard to understanding how NTDs affect women, men, girls, and boys differently, who is missed by MDA campaigns and why, and how gender norms, roles, and behaviors impact access to and uptake of PC.

MDA programming must consider how gender influences MDA access and compliance, as well as other factors that intersect with gender to amplify vulnerability, such as poverty, disability, occupation, power dynamics, ethnicity, migration status, or geography. However, this sort of analysis is challenging because, historically, data collected about the population reached during MDA campaigns has not included high-quality sex- and age-disaggregated information.²

Under USAID's ENVISION NTD project, RTI, working with USAID and its partners, made a major contribution to this data gap by calculating the difference in NTD MDA coverage across 16 countries, focusing specifically on USAID-supported districts. They found that in 2016, median female coverage was 6.2 percentage points higher compared with male coverage (85.5 percent compared with 79.3 percent). The greatest difference was for LF—12.6 percentage points higher coverage for women and girls—while OV coverage was the closest to achieving parity, with 5.8 percentage points higher coverage for women and girls.⁵⁹ This gap in MDA coverage for men and boys, while not large, is noteworthy and warrants further investigation. What we know is that house-to-house MDA distribution is more likely to miss men when daily and/or seasonal work schedules are not considered, communities are not informed of the campaign in advance, and repeat “mop up” visits are not made at a time that considers men's and women's schedules.^{2,5,43}

Gender considerations for fixed-point MDA distribution are different from that for house-to-house distribution, as women commonly face time constraints in being able to come to a central location for MDA, whereas men tend to have greater access to transportation and spend more time outside of the home.⁴³ Additionally, guaranteeing access for people with disabilities, ideally by involving them in campaign design would integrate their needs into program planning, though more research on the best approaches would be valuable.¹⁰ Likewise, migrant or nomadic women and men face challenges accessing treatment offered through fixed-point distribution or house-to-house distribution when their needs and changing location are not taken considered.¹⁰ School-based deworming and other school-focused MDA campaigns have had success, but out of school children—most frequently rural populations, ethnic groups, people with disabilities, and girls—can be missed by MDA if there is not outreach specifically for these children and there is not strong coordination between the ministries of health and education. In Benin, improving this coordination between ministries and involving the health sector (as opposed to just teachers) in school-based MDA increased coverage for out of school youth.

Ensuring that MDA approaches consider the needs of all members of the target population will be essential to achieve elimination and control goals. Therefore, MDA planning would ideally consider a number of different distribution approaches including location, timing, and outreach campaigns for hard-to-reach groups. To be successful and gender equitable, NTD programs must have community support, women and men must have equal access to program interventions, and gender and age specific monitoring must be done to measure progress. Sex- and age-disaggregated MDA data should be collected and used to understand who is missed and to inform targeted, gender-sensitive “mop up” programs to treat to groups missed during initial MDA activities.^{2,5,43}

Health workforce

Gender has implications for the health workforce when considering who is hired, promoted, compensated (and how much), and what policies are in place to prevent workplace harassment. Training can be a critical factor for career advancement, but access is often influenced by gender, which impacts who has finances for travel, who is allowed to travel freely, who must be home to take care of the home and family, and when trainees are available. Even in cases where women have opportunities for professional development, gendered responsibilities, norms, and access often limit their ability to take advantage of these opportunities.

A forthcoming analysis of data from USAID-funded NTD programs across 16 countriesⁱ reveals that women are underrepresented in the NTD-related workforce. In FY17, 43% of persons trained (drug distributors and trainer/supervisors) were female. Across countries, the percentage of females trained as drug distributors varied from 86.6% in Indonesia to 13.4% in Burkina Faso. Out of the 16 countries, only 4 countries trained more females than males as drug distributors.⁶⁰

Drug distributors

Drug distributors (DDs) distribute PC during MDA activities and are arguably the backbone of NTD programs at the community level. They include teachers, midwives, nurses, community health volunteers, and community members, often selected by community leaders. The DDs are trained, usually through a cascade training system, and supervised by various levels of supervisors. The demographics of these DDs vary enormously by country. A forthcoming paper by Shoemaker et al. shows that in Nepal, 65 percent of DDs in USAID-supported districts are women, whereas in Haiti, Ethiopia, and Uganda, women represent about one-third of DDs.⁶⁰ This difference may be due to the composition of the drug distribution workforce, such as whether they are mostly teachers and nurses or volunteers and selected representatives, the selection process for volunteers, and the desirability of these positions.⁶¹ In most countries represented in the Shoemaker et al. study, the NTD front-line workforce is made up primarily of males and has remained unchanged since 2012.⁶⁰ While there are sometimes valid reasons for this distribution, there is a need to better understand gender dynamics within NTD programs, in different contexts, and to test various interventions and approaches to increase equity – in the workforce and of delivery to all persons at risk. It is difficult to determine on a global level if it is positive to have more women DDs or not—it depends highly on whether these positions are empowering or exploitative. Furthermore, while the evidence is limited on how DDs’ gender impacts equity in program reach, it has shown the importance of context and culture.

Some evidence suggests that female DDs improve MDA by providing greater or equal coverage and have less patient attrition. But as explained above, the majority of DDs in many countries are men, with significant variance across countries.² A study in sub-Saharan Africa reported that during the distribution of Ivermectin, surveyed community members frequently said that women CDDs were more committed,

ⁱ Benin, Burkina Faso, Cameroon, Côte d’Ivoire, Ghana, Haiti, Indonesia, Mali, Nepal, Niger, Nigeria, Papua New Guinea, Sierra Leone, Tanzania, Togo.

persuasive, and patient compared with men. Some research has found that the underutilization of female DDs is one reason for more limited MDA impact.⁶¹ Similarly, findings from Uganda show that increasing the proportion of women drug distributors may strengthen MDA programs.⁶² According to a study in Tanzania, women drug distributors were more communicative with drug recipients than men in the same role, speaking in greater depth about trachoma prevention and facial cleanliness. This difference could be attributed to women's traditional role as caregivers. Finally, the ideal gender balance of DDs depends on culture and context. In societies where women cannot discuss health topics with men or let men into their homes, the presence of both men and women DDs is critical to campaign success. Conversely, in cultures where men are resistant to accepting PC, male DDs have been shown to be more effective in encouraging behavior change among their male peers.^{63,64} More research is needed to understand these dynamics and their influence on equity in NTD programs.

Despite evidence showing that female DDs may improve MDA outcomes, increasing their participation can be difficult. In some settings, gender norms affect the ability of women to participate as community volunteers due to cultural expectations and social hierarchies, affecting their occupational and social engagement opportunities. A more open and participatory CDD recruitment process *could* lead to more gender equitable outcomes and not reinforce social and gender hierarchies, if carefully implemented based on context.^{10,65}

New guidance from the WHO recommends that “recruitment and selection procedures that maximize women's participation and promote women's empowerment should be encouraged and that countries should strive for gender equity amongst volunteer health workers where culturally appropriate” (p.34).ⁱ This is because employing women as DDs or health workers can be empowering and offer a “critical opening for change towards achieving greater gender equity within communities.” (p.18)⁶⁴ However, encouraging greater representation from women among DDs is not always recommended in places where DDs are unpaid or where measures to prevent harassment against women have not been established. It is critical not to reinforce the gender stereotype that women must perform unpaid caretaking labor, which is the role of unpaid DDs. Programs must be empowering, do no harm, and not exploit vulnerable groups.^{2,10} Rather, NTD programs must ensure that women workers enjoy equal rights in recruitment, deployment, salary, and benefits.⁶⁶ A study in Tanzania found that although many volunteer community health workers, who may also act as DDs, believe in their work, they and their families struggle to fill the gaps left at home and in earned income, placing an unfair burden on volunteers and their families.⁶⁷

Empowerment training and professional development opportunities for women staff to strengthen their capacities and confidence, including participation in the health sector's decision making, could lead to positive outcomes.⁶⁶ DDs are a source of local, contextualized knowledge of gender norms and roles and have provided useful insight into household and community power dynamics.^{5,10} Gender and stigma training for health workers has shown to be effective in capitalizing or advancing this knowledge.⁶⁸

DDs may need different techniques to access and provide treatment to men-headed households vs. women-headed - techniques based on community norms and expectations.⁴³ A study in Nigeria found that people living with disabilities are commonly excluded from community-level interventions such as house-to-house distribution due to confusion among DDs regarding how to treat people living with disabilities, particularly when people are unable to stand or are perceived to be sick.¹⁰ Given the cultural barriers to discussing sensitive health issues between men and women, it is crucial for patients to receive care in a safe and non-judgmental environment, ideally with the option provided to speak with a

ⁱ Taking into account “affirmative action to preferentially select women to empower them and, where culturally relevant, to ensure acceptability of services by the population or target group” (p.14)

drug distributor of the same sex, in places where gender is found to be a barrier to MDA uptake.⁶⁸ Another MDA challenge that could be resolved through improved, gender-sensitive training is that some DDs do not know which drugs are approved for pregnant and breastfeeding women, which can result in women's missing safe treatments or taking medications that are potentially harmful.^{i 44} Methods to build DD capacity include improved training curricula and supervision structures that encourage feedback and establish a DD knowledge-sharing forum.¹⁰

Sex- and age-disaggregated data and gender-sensitive indicators

Gender-sensitive indicators and sex- and age-disaggregated dataⁱⁱ are collected to reflect differences and reveal inequalities in the situations of girls, boys, women, and men, and to track progress toward gender equality.^{69,70} These data can inform policies and programs that benefit all of society. They can also highlight the importance of transparency, accountability, and accuracy during data collection, analysis, and usage.^{71,72} Without fully understanding how gender affects health outcomes, it will be impossible to create effective policies and programs to combat these issues. If this evidence base is expanded, governments will be able to shape policies and effectively deploy resources to more effectively reach NTD elimination and control goals.

Despite the importance of gender-sensitive and sex- and age-disaggregated data, there continue to be gaps in the amount and quality of available data. There are massive gaps in what we know about women, men, girls, and boys, evidenced by insufficient indicator data for the United Nations (UN) Sustainable Development Goals (SDGs) related to gender. Currently, only 10 of 54 gender-related indicators have established methodologies and are monitored at the global level.

For NTD control and elimination, gender-sensitive and sex- and age-disaggregated data are essential to design interventions that are locally acceptable and effective. One of the simplest indicators to ensure that no one misses treatment is sex- and age-disaggregated data for MDA. With the enforcement of USAID policies, sex disaggregation of MDA coverage data has improved in the ENVISION, End in Africa, and End in Asia projects over the past few years. In 2012, only 32 percent of districts across 16 countries (which includes these 6 priority countries) reported sex-disaggregated data. In 2016, this number jumped to 90 percent. Of the 16 countries, 11 reported all MDA coverage data by sex.⁵⁰

While the USAID program data presented above show that it is possible to collect sex-disaggregated data during MDA, many non-USAID-supported districts are not doing so. Interestingly, many MOHs report sex-disaggregated data to USAID projects but do not do so for WHO, which has historically not mandated sex-disaggregated reporting. This variance shows that global requirements and accountability standards around sex-disaggregation impact how data are collected, and it is therefore worth considering adding age-disaggregation to this mandate. WHO recently created a database with information on MDA coverage rates by disease and country, but data are not disaggregated by sex, nor is information categorized by age groups, and little information, if any, exists on the participation of pregnant and breastfeeding women in treatment programs.^{73,74} Furthermore, there continues to be limited to no sex- and age-disaggregated data on disease burden, risk and exposure to NTDs, access to treatment outside of MDA, and exposure to social mobilization campaigns. Even where these data are collected at local program levels, they are often not aggregated to the national or international level or used for decision making. Sex- and age-disaggregated data about all aspects of NTDs will be increasingly important as countries get closer to elimination goals, to ensure that no-one is left behind.

ⁱ The harm of certain drugs for fetuses and young infants has not been fully studied (no conclusive evidence), and therefore drug companies recommend that they not be administered to pregnant and breastfeeding women.

ⁱⁱ The terms gender-sensitive data, gender-responsive data, and gender data are often used interchangeably.

Box 3: Moving from quantity to quality and usability

While successes in collecting sex-disaggregated data should be celebrated, it is important for researchers and practitioners to continue questioning the quality and functionality of their data. To achieve quality data, biases must be removed. Data is only effective and actionable if it is, above all, is of high quality, reliable, valid, representative, and free of gender biases. Biases can result from assumptions made about men or women, such as time-use surveys, which have historically been biased in their assumptions about women's time (ignoring the fact that they could have multiple roles in and outside the household), priorities (assuming employment equated empowerment), and preferences about quality and type of work. Removing biases can be done, for example, by ensuring that denominators are representative, that men and women as opposed to the 'head of household' are reached through surveys, or that questions regarding work capture the complexity of roles that men and women play. However, collecting this data is not useful if it is not put back into the hands of decision makers—from policy makers to district supervisors; collecting data is not enough—data must be analyzed to inform decision-making. Therefore, sex- and age-disaggregation of data must remain through the aggregation, analysis, reporting, and decision-making phases in order to impact outcomes. While this may require additional resources, these data will allow for more informed—and therefore more effective (and cost effective)—policies and programs through a clear understanding of who is affected by NTDs, who is accessing treatment, who is delivering treatment, and who is refusing or accepting treatment and utilizing services. For example, a national picture on the impact of more female or male CDDs on MDA coverage could have implications for national policies and strategies—both their effectiveness and efficiency or resource mobilization. However, the nuanced data on where there are challenges and with which groups these challenges lie, needs to be put back in the hands of those district-level staff to ensure that approaches are appropriately adjusted and tailored based on context.

Access to essential medicines

Access to essential medicines is a core component of a functioning health system. For NTDs, the majority of PC treatments are free through MDA. However, increasing access to affordable treatment outside of MDA will be critical to achieve elimination and control goals. This is especially relevant for women who may miss MDA schedules due to pregnancy and/or breastfeeding, but can seek treatment once they are eligible. Many cannot access this medicine until the next MDA cycle (which may be six months or a year later) because the drugs are unavailable or cost prohibitive outside of MDA.^{2,5}

The research gap regarding medications that are safe for pregnant and breastfeeding women has resulted in a delivery gap. Women in developing countries may spend up to 25 percent of their reproductive years pregnant and 60 percent of those years breastfeeding, leaving them ineligible for some NTD treatment for much of their lives.⁵ Although some NTD treatments are safe, Ivermectin, used to treat OV and LF, is not currently recommended for women in their first trimester or women breastfeeding newborns less than one month old. However, alternatives have not been researched.^{2,5,44} To ensure continued progress towards NTD elimination, it will be critical to address gaps in research and access to essential medicines. Furthermore, it is critical to ensure that drug distributors' have a clear understanding of which treatments are safe for pregnant women. For example, azithromycin—used to treat Trachoma—is safe for pregnant women but may not always be provided to these women due to concerns or misunderstandings around its safety.

Financing

Health system financing is strongly linked to equitable services access, including by providing financial protection for vulnerable groups, reimbursement for out-of-pocket expenditures, and financially prioritizing particular health programs. NTD sector financing has increased recently, but more work is

needed to increase domestic financing and to ensure gender-responsive budgeting (GRB). GRB provides space across sectors for policy dialogue with governments and civil society about gender inequalities and opportunities to undertake transformative interventions to address them. It uses fiscal policy and government administration to address gender inequality and improve health outcomes.

The 1995 Beijing Platform calls for GRB and for gender and social inclusion consideration during planning, budgeting, and policymaking, and sufficient financing for gender equality initiatives. Some countries, including Rwanda, South Africa, and Uganda, have made great strides by changing fiscal policies and budget-making procedures. In these three settings, it was critical to have the involvement of the Minister of Finance and consensus by high-ranking government officials that GRB would improve society as a whole and result in improved outcomes.⁷⁵ In Uganda, the government addresses gender issues through the planning and budgeting process, which has been linked to positive education, health, and rule of law outcomes.⁷⁵ Government ministries must present a Certificate of Gender Equity Compliance—which verifies that the budget or policy is gender and equity responsive and includes measures to further gender equality—before Parliament can approve their budget or policy.⁷⁶ Institutions of higher learning provide courses on GRB and there is ongoing capacity building for government officials around gender integration, and efforts have been made to include gender targets in performance reviews for government officials. Local governments are encouraged to use gender-aware budget statements and conduct sex-disaggregated beneficiary assessments. However, adherence to these guidelines is mixed and the impact of these efforts have yet to be fully measured and analyzed.⁷⁵ Nepal has also made notable progress; in 2005, the Ministry of Finance established a GRB committee, and it is mandatory for all government departments to adopt GRB practices. With the support of the committee, and training by the Ministry of Finance, GRB practices have increased across the national and local government and this type of budgeting is increasingly being viewed as a strategic tool for mainstreaming gender and achieving equality goals.⁷⁷

Governance: policy and leadership

The push for gender integration in policymaking and governance dates back to the 1995 Beijing Platform for Action, which states, “Governments and other actors should promote an active and visible policy of mainstreaming a gender perspective in all policies and programs so that, before decisions are taken, an analysis is made of the effects on women and men, respectively.” (p.27)⁷⁸ Since then, gender mainstreaming has been adopted by most governments, albeit to different degrees.

Any effort to strengthen health systems must include gender-responsive and -equitable policy and transformative leadership. To achieve efficient, equitable, and sustainable health development, it is necessary to integrate gender into policies. Provisions on gender relations and norms, and explicitly addressing gender-related barriers, gaps, and opportunities creates legitimacy, ownership, and momentum for action. However, even with evidence-based and gender-responsive policies and strategic plans, implementation remains a challenge. This is partly because of inequitable systems and structures, deeply entrenched biases and inequalities, and insufficient political will and financial support to push forward those changes.⁷⁹

To be gender transformative, men and women must have the opportunity to share their perspectives during policy creation. Comrie-Thomson et al. found that a lack of men’s involvement in planning or implementing maternal and child interventions is a major barrier to achieving improved health outcomes. Although women must participate in the development of maternal health policies, men are often gatekeepers and decision makers, and therefore their perspectives must also be considered.⁸⁰

In the NTD sector, women and men must be involved in creating policies and action plans, such as NTD Master Plans, which are the national strategic plans for NTD control and elimination. The role of and commitments to women and girls should be explicit. These guiding documents are shaped around a

master template developed by the WHO. The template includes several suggestions for including gender, such as “to develop integrated multiyear strategic plans and gender-sensitive annual operational plans for the control, elimination and eradication of targeted NTDs.” (p.20) It also calls for an analysis of “health system equity in terms of access, coverage, quality of health services, distribution and utilization of resources, and impact on health indicators.” (p.11)⁸¹ However, there is opportunity for improvement; the template could call for more nuanced information around gender issues in NTD risk and gender-related barriers to care and plans to address them. Additionally, the WHO could request commitments to gender equity in data collection, the NTD workforce, and program planning and implementation and mandate sex- and age-disaggregated data reporting.

Policies, strategies, and financial resources

Several international human rights treaties, regional agreements and national constitutions and laws, include NTD elimination as connected to one’s right to health. Specific commitments and strategies on health, NTDs, and gender equality are outlined in Box 3. While these frameworks serve as a basis for actions, policymakers continue to struggle to finance and operationalize these commitments. To date, actionable connections between gender, human rights, and NTDs have been limited.

Complementing these global agreements and strategies are bilateral and national efforts to integrate NTD activities into health system strengthening and universal coverage programs. For example, the US Government has leveraged US\$15.7 billion in donated medicines, delivering 2 billion treatments to approximately 936 million people through its global integrated health programs. As of 2017, USAID’s NTD programming for the previous 10 years totaled more than US\$786 million and strongly supported methods and activities set out in WHO’s vision for NTD control and elimination.^{82,83}

Box 3: Global NTD and gender commitments and strategies

1. SDGs: SDG 3.3 calls for the end to the “epidemics of AIDS, tuberculosis, malaria and NTDs” by 2030; SDG 5 calls for the achievement gender equality and empowering all women and girls.
2. Convention on the Elimination of All Forms of Discrimination against Women (1979)
3. Global Strategy for Women’s, Children’s and Adolescent Health 2016–2030. Includes nine areas for action and implementation of national health programs.
4. WHO 2012 Roadmap for Implementation
5. The London Declaration: commitment to control, eliminate, or eradicate 10 NTDs by 2020

Despite these global declarations and financial commitments, NTD financing gaps remain. It is estimated that only 10 percent of global research funding is designated for diseases that affect 90 percent of the world’s population.⁸⁴ In part, the lack of attention is because those most affected are poor and politically powerless. From an industry perspective, the investment to create new, better treatments would not be a sufficient return on investment. Moreover, countries with high NTD prevalence have historically been unable or unwilling to fund their own NTD elimination campaigns, leaving those most vulnerable without champions. Recognition of the underinvestment in NTDs, relative to their health, economic, and social impacts, has increased global attention and commitment to their control and elimination. Furthermore, strengthening the capacity of governments to develop budgeting strategies so they will be able to sustain NTD prevention and treatment will not only advance them toward the shared goals of control and elimination but also will move them forward on the journey to self-reliance.

Summary of key findings

It is crucial to identify opportunities for improved coverage and more equitable program planning, delivery, and monitoring to ensure successful trachoma, OV, and LF elimination and sustainable STH and SCH control. Below is a summary of key findings from the global desk review presented above, including opportunities for improvement and challenges that must be overcome to effectively reach program goals.

- Global organizations influence the quality reporting. While sex- and age-disaggregated NTD data are essential, but tend to not be collected if not required. By requiring sex- and age-disaggregated data and gender-sensitive indicators, global organizations can encourage better reporting and more informative data collection, ultimately enhancing understanding and informing more effective NTD approaches. Furthermore, opportunities are missed when these data are not analyzed and applied to strategic planning and policy decisions. The integration of gender and social equity in the NTD Master Plan template would also improve national planning to ensure services effectively reach women, men, boys, and girls.
- Gender equity and integration alone are insufficient to address inequality in current NTD strategies. While NTD programs have scaled up dramatically, not all who are at-risk are able to access or utilize treatment. It is essential to consider broader inequalities—ethnicity, poverty, occupational status, age, sexuality, disability, and religion— that compound NTD risk, morbidity, disability, poverty, and access to care. If programs and policies include a gender analysis as part of their framework for designing effective NTD strategies, the implementation approaches will be more responsive to community needs, the cultures and traditions of local populations.
- Men and women face different NTD risks and barriers to prevention and care. In some circumstances, women and children experience greater risk for exposure and have less access to care due to biological susceptibility, and societal norms and family roles. Alternatively, men and boys may have lower treatment access and uptake and a predisposition to infection for certain pathogens, such as LF and SCH, due to occupational and behavioral differences. Designing targeted strategies for those most at risk and with least access will be essential to reach elimination.
- Underinvestment in NTDs relative to their health, economic, and social consequences has been recognized and global commitments to control and eliminate NTDs have increased. Increased funding can be more effective when it supports national GRB processes, which provide opportunities to fill gender-related gaps in services. Even with evidence-based and gender-responsive policies and strategic plans, the greater challenge tends to lie with implementation due to inequitable systems and structures, gender-related biases and inequalities, and limited political will or funding.
- MDA campaigns curb NTDs and can target the most at-risk groups. A better understanding how NTDs affect women, men, girls, and boys differently, and how gender norms, roles, and behaviors influence access to and uptake of MDA could increase efficacy, such by as combining different distribution methods—house to house, fixed point, alternative hours, school based, and others—to overcome gender-related obstacles to capture populations frequently missed. More research is needed on how the sex of drug distributors impacts program outcomes and how governments can create greater equity in their NTD workforce.

These findings suggest the need for a holistic, inclusive, context-sensitive approach to NTD programming and efforts to make health systems more gender responsive, ensure existing vulnerabilities are not compounded, and to accelerate progress towards NTD control and elimination.

Recommendations

Based on findings from this desk review and global gender-related principles and best practices, the Act | East Program has four primary recommendations to strengthen NTD programming and gender integration. These recommendations are intended for all NTD stakeholders to allow for more equitable, efficient, and effective NTD strategies and activities, with the ultimate goal of ensuring sustainable NTD elimination and control and achieving greater gender equality. The recommendations and findings from this desk review, as well as future in-country analyses, will be used to inform a Gender Strategy and Action Plan for the Act | East Program. The strategy document will be based on Program objectives and activities and will be informed by more in-depth discussions with the Act | East team and national counterparts. It will address how to integrate gender into service delivery for improved NTD services and how to mainstream gender into national policies and programs to reach Act | East Program goals and national objectives.

Recommendation 1: Conduct in-depth, country-specific gender analyses

While there is an increasing recognition of the importance of gender and equity in both NTD and HSS programming, the evidence base around these issues is limited. In-depth, country-specific gender analyses should be conducted by national NTD programs, with support of international partners such as Act | East. These analyses will identify country-specific gender-related gaps in NTD programs and identify where more gender sensitive strategies are needed (e.g., updating social mobilization messaging to address gender-related barriers). Findings will allow for better insights into community, regional, and national level gender issues, which in turn will enable NTD programs to develop local solutions, thus increasing community acceptability, buy-in, program effectiveness, and greater sustainability. It will also enable countries to understand where systems or policy level changes are needed. By analyzing gender constraints and facilitators at both the service delivery level to see where gender does and does not impact quality of care and at the systems or program level to understand where gender mainstreaming does or does not support an effective health system, countries will be able to further promote human rights and resiliency at all levels of the health system. For example, a gender analysis would identify gaps in national-level policies regarding CDDs, but without a complementary analysis of how norms and customs may affect the success of a new policy, the policy may not be successful and meaningful change may not result.

The analyses should be conducted at the onset of new programs or before updating policies and should be followed up with routine monitoring and evaluation and ongoing data analysis. They should be conducted using both quantitative and qualitative methods—examining sex- and age-disaggregated data and conducting focus group discussion and key informant interviews with key stakeholders and community members, leaders, the NTD workforce, and decision makers—in order to identify constraints and opportunities. Analyses should cover USAID’s five gender analysis domains: (1) Laws, Policies, Regulations and Institutional Practices; (2) Access to and Control over Assets and Resources (including income, employment, and assets such as land); (3) Gender Roles, Responsibilities and Time Use; (4) Cultural Norms and Beliefs; and (5) Patterns of Power and Decision-making.¹² Results will provide a better understanding of how women and men’s different roles and status affect national NTD program and strategy outcomes. Analyses will provide insights into how NTDs affect women, men, boys, and girls (children and adolescents), ethnic minorities, or other marginalized groups differently, including exposure, health access, and treatment. Recognizing and understanding how women, girls, men, and

boys spend their time and their roles and responsibilities at home and in society will enable the NTD service design to integrate more appropriate, equitable, and effective technologies and interventions.

Recommendation 2: Use sex- and age-disaggregated and gender-sensitive data to improve programming

There has been mixed success in the collection of qualitative and quantitative NTD data disaggregated by sex, age, and other sociodemographic variables. Ninety percent of USAID-supported districts are collecting sex-disaggregated data for MDA because the Agency mandates this practice, but far fewer districts without USAID support are doing so. To date, WHO reporting forms for MDA include space to report sex-disaggregated data, but doing so has been optional. In February 2019, at the WHO M&E working group meeting, a recommendation was passed to require sex-disaggregated MDA reporting. This is an important step, however there is much more work to do. Just because these data are collected does not mean that they are analyzed and used for decision making or that they are aggregated and used for reporting purposes. Therefore, NTD programs need quality and policy-relevant data on women, girls, men and women. Without it, they cannot make informed decisions, and cannot track if those decisions are improving people's health and well-being. These data will allow for effective design of policy solutions and will allow programs to monitor progress. These are important steps in closing the data feedback loop and ensuring that data are not only collected, but also used to improve NTD interventions.

In addition, there is a need for sex- and age-disaggregated data on disease burden, exposure, social mobilization efforts, treatment access outside of MDA, and the health workforce. The NTD community will not be able to fully understand variable NTD risk and programmatic reach and adapt equitable and effective strategies without such data.⁶⁶ Therefore, as outlined below in recommendation 3, national NTD programs should build local capacity to increase collection, analysis, use, and reporting of sex-disaggregated data, with support from implementing partners, including the Act | East Program.

The NTD Equity Working Group, WHO, and other partners are developing indicators, including gender-sensitive indicators, that will focus on NTDs and gender and align with the SDGs. Engaging in this conversation would be strategic for national NTD programs, donors, and partners, and adopting agreed-upon indicators will be essential to ensure quality in data collection and coordination across NTD efforts.

Recommendation 3: Build local capacity and enhance knowledge in gender and social inclusion through innovative approaches

National NTD programs have an incredible platform to build capacity and knowledge around gender issues in NTD exposure, diagnosis, and treatment access. NTD programs should sensitize all levels of the NTD workforce on gender integration and social inclusion approaches and the relationship between gender and NTDs. These processes should leverage the local knowledge of participants to identify gender-related gaps and solutions for NTD programming. Gender sensitization is key to address personal, collective, and hidden gender-related biases and fosters increased gender awareness and buy-in. Sensitizing and training the NTD workforce, including specifically policy makers, program managers, health professionals, CDDs, supervisors, trainers, and M&E professionals, will allow them to be aware of gender issues when they design, implement, and monitor policies and programs or interact with patients and beneficiaries. Gender and social inclusion training, coaching, and innovative adult learning approaches will help build and maintain capacity among the NTD workforce.

At the national level, gender training and capacity building will help mainstream gender and social equity into health policies, budgets, programs, and monitoring and evaluation practices. This will help ensure that the health system is inclusive, resilient, and sustainable; that strategies and plans for

systems strengthening and programming will achieve their objectives; and that systems enable sustainable and resilient delivery of equitable health services. Gender analysis and mainstreaming capacities should be built among government officials involved in policymaking and planning to ensure gender responsive budgets and strategies. As mentioned above, through training on monitoring and evaluation and data for decision making, policy makers and program managers will be able to more effectively collect, analyze and use quality disaggregated data. They should be trained on how to apply evidence gained to make decisions that will improve service delivery, strengthen the systems that support and sustain quality care, and design policies and strategies that rectify systemic gender gaps and advance gender equality, human rights, and open democracy. Furthermore, this desk-review identified a need for improved clinical training, increased awareness in secondary schools and women's health clinics, and proved diagnostic and training protocols.¹⁸

National NTD programs should work to incorporate gender and equity components or put a gender lens on all NTD-related trainings, especially for CDDs. Findings highlight the need to improve community-level training in drug distribution, which should include gender-specific issues and guidelines for treating pregnant and breastfeeding women, for example. With proper sensitization, knowledge, and tools, CDDs can be powerful forces of change, including effectively sharing information with community members to increase knowledge about NTD disease vectors, control, treatment, and stigma.

The sociocultural understandings of affected community groups are pivotal for achieving sustainability, local participation, and ownership. Community-based education and mobilization can educate community decision makers, which can have positive implications for those most at risk but with less power. Programs can use audience segmentation for community mobilization and awareness to ensure the right messages reach the target audiences. For example, if only men perform physical labor, messages about latrine construction should target them using a form of media they access. Furthermore, because women are principally responsible for collecting water and sanitation issues, teaching women and girls (along with men and boys) about the importance of water, sanitation, and hygiene for NTD control is critical. Community-level hygiene programs must ensure equal access to services, which requires awareness of divisions of labor, gender roles, and barriers to access for different groups. Obtaining diverse community input during the conceptualization and design stages from can help improve buy-in and universal access. Village committees can support community buy-in and provide opportunities for women and other members of minority groups to hold leadership positions.⁴³ How these activities are designed, conducted, and whom they reach depends on national and community contexts. National NTD and donor-funded programs, including Act | East, should develop programs based on in-depth, country-specific gender analyses, and build capacity among national actors to carry out targeted analyses when service or outcome gaps are detected.

Recommendation 4: Conduct operational research

This desk review synthesizes information from existing research around gender and NTDs, and it also highlights important gaps in knowledge. NTD programs, international organizations, research agencies, and donors should consider conducting additional operational research to better understand the impact of NTDs and NTD programs on men, women, boys, and girls. This is essential to reach NTD elimination and control, to ensure national ownership of the process, and that ongoing NTD management efforts are sustainable. Below is a list of recommended research topics based on this desk review.

Safe medications for pregnant and breastfeeding women. Not enough is known about medication safety for pregnant and breastfeeding women. As mentioned, Ivermectin is not currently recommended for pregnant or breastfeeding women, and alternatives have not been researched.^{2,5,44}

CDD selection and compensation. More evidence on the CDD selection process would inform gender-sensitive policies. Some NTD programs and development partners, such as RTI, have rich data sets of the gender ratio of CDDs, supervisors, and other trained NTD personnel. But additional data on CDD selection, who is given opportunities, pay and incentives, and whether CDD programs are empowering or exploitative would provide powerful insights for policymaking and programming.^{2,10}

Men's MDA uptake. As countries get closer to elimination, last-mile efforts will be increasingly important. Understanding the gendered reasons for lower MDA coverage among men in many countries, the norms around discussing health with opposite-sex CDDs, and the knowledge and motivations of health professionals will be essential in ensuring that hard-to-reach populations are prioritized. Using these data, projects should ensure gender is mainstreamed in MDA planning as well as national-level planning, implementation, and M&E of all NTD programs.

Gender impacts on social mobilization. Although MDA and social mobilization strategies have been successful in treating affected populations, there is currently very little information on how gender may influence knowledge and perceptions of NTDs and NTD programs. This knowledge will be critical for reaching the last mile for NTD control and elimination.

Gender interaction with NTDs. What research there is on NTDs and gender has to date focused on gender issues associated with SCH and OV, while ignoring other NTDs such as helminthiasis.⁷⁴ Furthermore, few studies have estimated the prevalence and impact of helminth infestation on pregnancy outcomes.²⁷

NTD program impact on gender equality. As more attention is paid to addressing gender in NTD efforts, there is a need to document how NTD programs contribute to overall gender transformation at the country level, including how closing gender-related gaps in an NTD program contributes to improved gender equality and a more responsive health system.

FGS and HIV. According to Hotez et al. (2019), Praziquantel MDA could be the most cost-effective means of preventing HIV/AIDS in Africa.⁴⁷ More research is needed to understand the connection between FGS and HIV and how MDA and HIV/AIDS programming could be integrated for a more holistic approach to women's health, which would prevent FGS and reduce HIV transmission.

Other evidence gaps that are listed below

- How school-based approaches impact access
- How survey results may or may not be generalizable
- How treatment might affect the burden of multiple NTDs among vulnerable groups
- If programs are missing sub-populations of vulnerable groups
- How the gender of MDA program leaders affects program outcomes²
- How to ensure that national NTD programs use their disaggregated data
- How to ensure that the proper medicines and services are provided to pregnant women, breastfeeding women, babies, and infants
- How age and gender shape mortality and morbidity care needs
- The importance (or effectiveness) of gender parity at different levels of the NTD workforce.

Throughout these recommendations, there are opportunities to connect and collaborate with partners in other sectors, both public and private, to leverage their gender work and resources developed (e.g., WASH, maternal, child health, HIV/AIDS, and other infectious diseases in elimination with gender components, like malaria). A stakeholder mapping exercise in each country could provide insight into opportunities for collaboration, bringing sectors, donors, and projects together for more coordinated and effective programming. These partnerships can help address the recommendations above.

Further, many existing recommendations, training platforms, social mobilization campaigns, and community engagement efforts can be leveraged, expanded, and improved, incorporating gender to enhance access and participation. Effective programs operate on multiple levels and work with all relevant stakeholders. Therefore, NTD programs should engage both women and men in NTD programming to ensure their voices are heard and to more effectively reach all community members.

Country desk reviews

Summary of Country Findings

Country-level desk reviews of Ethiopia, Haiti, Nepal, Nigeria, Tanzania, and Uganda are presented below and analyze the relationship between gender and NTDs and HSS. These country-level analyses allow for a more nuanced understanding of gender-related norms, beliefs, and behaviors, successes and challenges in policymaking, program implementation, service delivery, and monitoring and evaluation. Each section includes a country overview, NTD and health status, gender considerations for NTDs, a brief overview of the health system as it relates to gender, relevant policies and strategies, and implications for national NTD programming. Each section concludes with a brief discussion of findings.

For a comparison of key indicators, see Table 2. All countries are endemic for LF, STH, and SCH; four for trachoma (Nepal has eliminated and is in the post-validation surveillance stage); and Uganda and Tanzania are likely to stop MDA for OV by 2025. Green cells represent the top performer for a specific indicator, and red cells the bottom. Several patterns emerge. First, Nepal is the top performer for eight indicators, but men are disadvantaged in MDA access and training for NTD-related positions. Uganda is the bottom performer on six indicators, including intimate partner violence and HIV prevalence among women. While Uganda is closer to gender parity for MDA coverage, it has the lowest percentage of districts reporting sex-disaggregated data, which could mean that results are biased or not fully representative. Finally, Nigeria is the top performer for three indicators and the lowest for five, presenting a mixed context for NTD programming.

Table 2 also presents the Gender Inequality Index (GII) scores for each country. This index captures inequality in achievement between women and men in terms of reproductive health, empowerment, and the labor market, and it has been found to have significant associations with health outcomes. Using 2010 GII scores and health outcomes from 138 countries, Brinda et al. found a positive association between gender inequality and neonatal, infant, and under-five mortality rates.⁸⁵ To date, no rigorous studies have examined the correlation between indices or other metrics of gender equality and NTD outcomes. However, as these correlations for mortality rates do exist, where higher gender equality has correlated with improvements in health outcomes, it is likely that higher gender equality will result in improved NTD outcomes. More research on this topic will be valuable.

Table 2: Key indicators for gender and NTDs, by country

Key Indicators	Ethiopia	Haiti	Nepal	Nigeria	Tanzania	Uganda
Economic and equality indicators						
GDP per capita (current US\$) ^{Ω86}	768	766	849	1968	936	606
Poverty ratio ^λ	26.7	23.5	15	53.5	49.1	41.6
Gini coefficient ^σ	39.1	41.1	32.8	43	37.8	42.8

Key Indicators	Ethiopia	Haiti	Nepal	Nigeria	Tanzania	Uganda
GII score ⁸⁷	121	144	118	N/A	130	126
NTD indicators						
Endemic for LF, STH, and SCH ⁸⁸	X	X	X	X	X	X
Endemic for trachoma ⁸⁸	X		PVS	X	X	X
Endemic for OV	X			X	X	X
Likely to stop OV MDA by 2025 ⁸⁸		N/A	N/A		X	X
% USAID-supported districts reporting sex-disaggregated MDA data (FY16) ⁵⁰	100%	74%	100%	100%	99%	66%
Difference in MDA coverage, female minus male (%) (FY16) ⁴¹	2.7%	-1.4%	4.2%	12.5%	7.1%	3.0%
Percent of female NTD-related training participants (DDs) (FY12–17) ⁶⁰	N/A	52%	64.9%	36.9%	49.8%	N/A
Health and education indicators						
IPV last 12 months (%) ⁸⁹	19.8	14.9	11.2	11	29.6	29.9
Prevalence of HIV, women (% ages 15–24) ⁸⁶	0.4	0.9	0.1	1.7	2.1	2.9
Prevalence of HIV, men (% ages 15–24) ⁸⁶	0.3	0.3	0.1	1.2	1.1	1
Fertility rate, total (births per woman) ⁸⁶	4.2	2.9	2.1	5.2	5.0	5.6
Maternal mortality ratio ⁸⁶	353	359	258	814	398	343
School enrollment, primary (gross), gender parity index (GPI)*	0.91		1.06	0.94	1.02	1.03
Literacy rate, adult female (% of females ages 15 and above) +	28.9%*	44.6%*	48.8%	41.4%*	73.1%	62.0%
Literacy rate, adult male (% of males ages 15 and above) +	49.1%*	53.4%*	71.7%	61.3%*	83.2%	79.1%

⁸¹ World Bank national accounts and Organisation for Economic Co-operation and Development (OECD) National Accounts data.

^λ Poverty headcount ratio at \$1.90 a day (2011 PPP) (% of population). World Bank, Development Research Group. Data based on primary household survey data from government statistical agencies and World Bank country departments. Most recent data.

^σ Gini index measures the extent to which distribution of income (or, in some cases, consumption expenditure) among individuals or households within an economy deviates from a perfectly equal distribution. Thus, a Gini index of 0 represents perfect equality, while an index of 100 implies perfect inequality. Source: World Bank, Development Research Group. Most recent data available.

[^] Post-validation surveillance

*Includes drug distributors, supervisors, M&E staff, and trainers

[†] Gender parity index for gross enrollment ratio in primary education is the ratio of girls to boys enrolled at primary level in public and private schools. UNESCO Institute for Statistics (<http://uis.unesco.org/>). Latest data available.

⁺ UNESCO Institute for Statistics (<http://uis.unesco.org/>). Latest data available. All data starred is from before 2010

Table 2 highlights measures of country capacity—the strength and equity of the economy and health and education sectors and ability to meet citizens’ needs. All six countries have also adopted the SDGs and made commitments to both gender equality and NTD control and elimination. They are signatories to the Convention on the Elimination of all Forms of Discrimination Against Women (CEDAW) and are parties to the London Declaration, and have created NTD Master Plans or other NTD national guidance documents. To achieve SDGs 3 and 5, uphold commitments made under CEDAW, and achieve goals under the London Declaration, efforts around gender/equity and NTDs must be aligned.

While the economic strength, health outcomes, political and governance stability, health system structures, gender equality, and successes and challenges with NTD programming vary among these countries, they have several commonalities. The importance of intersectionality, or overlapping disadvantage, is universal in NTD exposure, susceptibility, and treatment access. In each country, gender intersects with poverty, disability, occupation, and geography in unique ways. In Nepal, caste and ethnicity play a major role. In Nigeria, women in the rural north are more disadvantaged, have fewer opportunities, and have poorer health outcomes; additionally, implementing agencies’ ability to work there is more limited. Pastoralists in Ethiopia and refugees in Uganda are more often missed during MDA or not have access to treatment and care. Better understanding these co-existing vulnerabilities will support the development of better interventions and more rapid progress towards NTD control and elimination.

Ethiopia

Findings

Country situation

The Federal Democratic Republic of Ethiopia is located in the Horn of Africa and has a total surface area of 1.1 million square kilometers.⁹⁰ Ethiopia has a population of 102,403,200 and a population growth rate of 2.45, with nearly half under the age of 15 (47 percent). The country has an even distribution of males and females,^{91,92} and much of the population lives in extremely rural areas (82 percent).⁹³

Ethiopia has one of the fastest growing economies in the world,⁹⁴ leading to a reduction of the population estimated to be living in povertyⁱ from 33.6 percent in 2010 to 26.7 percent in 2015. In 2018, the annual GDP was US\$80.56 billion, with a US\$1,730 per capita GDP.³ According to the 2016 Demographic and Health Survey (DHS), 48 percent of currently married women aged 15–49 were employed in the 12 months before the survey, compared with 99 percent of currently married men. More than half of the men (53 percent) and just under half of the women (49 percent) were not paid for their work.⁹² In Ethiopia, as in many countries, women tend to be concentrated in the lower-status health occupations, and to be underrepresented among more highly trained professional and mid-level categories.⁶⁶ More men than women are involved in agriculture (72 percent of men and 59.5 percent of women),⁹⁵ potentially putting them at increased risk for STH or SCH or at a higher probability of being absent for MDA.³²

Ethiopia ranks 173 out of 189 on the Human Development Index (HDI). The country’s score was negatively impacted by low mean years of schooling.⁸⁷ Approximately 42 percent of women and 69 percent of men aged 15–49 are literate.⁹² Overall, 51 percent of females and 65 percent of males over the age of 6 have ever attended school. For the majority of Ethiopians, primary school is the highest level of schooling attended or completed: 40 percent of women and 50 percent of men have attended, but only 2 percent of women and 3 percent of men complete primary education. Only 4 percent of women and 5 percent of men have completed or gone beyond secondary school.⁹² Despite rapid growth in enrollment, especially in basic primary education, tests show declining quality and learning outcomes.

ⁱ Poverty headcount ratio at \$1.90 a day (2011 PPP) (% of population).

Millions of young people have dropped out, with significant gender and regional gaps in enrollment, especially in the rural areas, where students travel long distances and girls are threatened by violence during the journey.⁹³ In 2017, the GII, a composite measure of inequality between the sexes, ranked Ethiopia 121 out of 160. Ethiopia performed worse than its low human development peers in measures of adolescent fertility and education achievement. While this index does not provide a complete picture of the situation of women and girls, it offers a snapshot comparison that shows Ethiopia is lagging behind its economic/ development and geographic peers in terms of gender equality.⁸⁷

Rural areas in Ethiopia are vulnerable to environmental changes, and recurrent droughts have caused crop failure, poor livestock conditions, migration, disruption of education and other basic services, and some disease outbreaks. Climate change is exacerbating the environmental challenges that rural households face, making youth and women in rural areas particularly vulnerable.⁹⁶

Health and NTD status

In 2016, the life expectancy at birth for men was 63.7 and for women was 67.3. Communicable diseases, maternal, childhood, and nutritional conditions, NTDs, non-communicable diseases, and injuries remain common.⁹⁴ The under-5 mortality rate is 67 deaths per 1,000 live births, and the infant mortality rate is 48 deaths per 1,000 live.⁹² The HIV incidence rate is 2.9 percent,⁹⁰ with prevalence higher in urban areas and among women.⁹⁷

The total fertility rate is 4.6 children per woman (2.3 in urban areas and 5.2 in rural areas). The median age of first birth for women aged 25–49 is 19.2 (18.8 for women with no education).⁹⁸ Young motherhood is considered one of the main causes for Ethiopia’s high levels of maternal mortality, with an adolescent birth rate of 80 per 1,000 women aged 15–19⁹⁰. In 2015, the country recorded 353 maternal deaths for every 100,000 live births, representing 25 percent of all deaths of women aged 15–49.⁴⁹ A total of 16 percent of births were attended by skilled health personnel.⁹⁰ Among currently married women, 22 percent have an unmet need for family planning.⁹²

Ethiopia is one of the world’s most NTD-endemic countries, with about 80 million people at risk, some of them preventable with adequate access to improved WASH. In rural areas, 57 percent of households have access to an improved source of drinking water, and 7 percent of households were observed using soap and water for handwashing.⁹² Most districts are endemic for three or more NTDs.⁹⁹ Although the research team could not find comprehensive sex- and age-disaggregated data on NTDs, the data that do exist suggest disproportionate NTD impacts on women.^{49,100}

An estimated 5.6 million people are at risk of LF infection, one of the most debilitating and disfiguring diseases in Ethiopia. Less than 1 percent (0.8 percent) of the population experience hydrocele (in men), and 3.6 percent experience limb lymphoedema.¹⁰¹ Almost 75 million people are at risk of trachoma infection. Approximately 25.4 percent of the population aged 15 years and over have active trachoma infections, ranging geographically from 0.2 percent to 73.4 percent, and 4 percent have blinding trachoma, ranging from 0.2 percent to 12 percent across the country.¹⁰¹ In 2016, 3 million Ethiopians were infected with OV, 7.3 millionⁱ are at risk of infection and almost everyone in an endemic village will harbor the disease.¹⁰² An estimated 81 million people live in STH-endemic areas, which comprises 9.1 million preschool-age children, 25.3 million school-age children, and 44.6 million adults.¹⁰¹ An estimated 38.3 million people live in SCH-endemic areas, with preschool-age children at the greatest risk.¹⁰¹ NTD-related consequences further exacerbate women and children’s health issues. In Ethiopia, 57 percent of children aged 6–59 months and 24 percent of women aged 15–49 are anemic.⁹² NTDs have been found

ⁱ The *Second Edition of National Neglected Tropical Diseases Master Plan: 2015/6-2019/20 (2008–2012 EFY)* stated that 17 million are at risk for OV.¹⁰¹

to impact women’s economic opportunities by limiting infected women’s ability to work, causing exclusion and stigma.⁴⁹

Gender considerations in NTD infection

Women in Ethiopia are especially vulnerable to NTD infections due to gendered roles and responsibilities that expose them to infection.⁴⁹ The risk of blinding trachoma is greater in women than in men due to their role as caregivers, which increases risk of exposure. Trachoma infection impedes daily activities, even when the infected person does not have significant visual impairment or blindness.⁹⁹ Health literacy about some NTDs (e.g., podoconiosis) within endemic communities is low, with the average disease knowledge among women only half that of men. This is alarming because women’s beliefs are typically more determinative of children’s beliefs and behaviors.¹⁰³

Socioeconomic status and gender impacts vulnerability to and rates of NTD infections. One study in Ethiopia found STH infections were 2.6 times more likely in government school students (53.5 percent) compared with private school students (20.9 percent). This variation may be due socioeconomic status, shoe-wearing habits, safe water supply, and type of toilet at home and school, personal hygiene, environmental sanitation of the school, and school waste disposal. Male students were 0.6 times less likely to have STH compared with females; this finding has shown more variability in other countries.

Violence against women—physical, sexual, emotional, and financial violence—is pervasive and widely accepted in Ethiopia.⁹⁷ In Ethiopia, 28 percent of women report experiencing physical and/or sexual intimate partner violence, with 20 percent experiencing such violence in the last year.⁸⁹ Sixteen percent have experienced at least three types of marital control behaviors by their husbands or partners.⁹² Furthermore, 40 percent of women aged 20–24 years were first married or in union before age 18.⁸⁹ Women and girls also face violence when they travel to collect water or attend school.⁹⁶

Research in Ethiopia found that women living with podoconiosis, a non PC-NTD, said intimate partner violence negatively impact their health.¹⁰⁴ Poverty, scarce social support services, social acceptance of intimate partner violence, childcare responsibilities, and decreased ability to work due to the debilitating effects of podoconiosis and make it difficult for women to leave abusive relationships. Intimate partner violence can worsen disease outcomes and contribute to persistence in the region, since women’s ability to manage the disease is impeded and the poverty conditions that increase risk persist.¹⁰⁴ These aspects may be true for other NTDs, but more research is needed.

According to Ethiopia’s Revised Family Code of 2000, Articles 49 and 50, spouses jointly share responsibility for financially maintaining the family.¹⁰⁵ However, although 2/3 of women reported involvement in household decision making, 21 percent said their husbands usually make decisions about major household purchases and 18 percent said the husband decides about the woman’s health care.⁹²

Women in Ethiopia often give priority to their husbands and children, allowing them to eat first,ⁱ increasing susceptibility to malnutrition and other health problems. However, boys are also at risk. One study found that adolescent boys (13–15 years) in northern Ethiopia were 2.53 times more likely to be stunted and thin than girls the same age and that boys whose fathers were farmers had twice the odds of being stunted than boys whose fathers were not farmers.⁹⁶

Beliefs about the urgency and necessity of treatment influence care access. Research in Ethiopia suggests that although NTDs were reported as common (e.g. worm infections, trachoma, LF), individuals tended to conceptualize them as “acute disease” and reported that NTD-related chronic disabilities are

ⁱ Men and children under the age of three eat first, followed by boys and girls, and the women eat last.

seen as a low priority. Believing that there was no treatment for chronic diseases, people tended to seek care late or not at all. Direct and indirect costs associated with treatment were major barriers.⁶⁸

In Ethiopia, there are cultural barriers to discussing sensitive health issues, especially between genders, such as problems affecting “hidden” body parts. Since many NTD-related symptoms affect the urogenital area (e.g., hydrocele) and since Health Development Army (HDA) members and health extension workers (HEWs) are exclusively female, this is problematic for men. Furthermore, women, including HDA members, are sometimes thought of as vulgar or ill-mannered for discussing sensitive issues. Thus, women are less likely than men to seek or receive care for sensitive health issues.⁶⁸ In addition, rural women reported being discriminated against by health care providers.⁹³

Health system, financing, and women’s participation

The Ethiopian government spends US\$6.52 per capita on health, just over 1% of GDP, which is extremely low.⁸⁶ Ethiopia has enacted NTD service delivery strategies at the national, regional, district, and service delivery levels. The country’s health policy foci include decentralization, health promotion, disease prevention, and basic curative services. Two components of Ethiopia’s primary health care system relevant to NTD prevention and treatment are the Health Extension Program and the HDA.⁶⁸ Under the Health Sector Development Program, the Health Extension Program aims to improve equitable access to essential health services through 16 health intervention packages.⁶⁶ The 40,000 HEW workforce makes up 47 percent of the total health workforce in Ethiopia, is salaried, provides preventive and basic curative care and is 99 percent women.⁶⁶ The Federal Ministry of Health (FMOH) is working to improve the skills and competency of HEWs through refresher in-service training and the upgrading of HEWs to level 4 (diploma equivalent).¹⁰¹ One population of note is pastoralist communities, which face major challenges because of their nomadic lifestyle, including seasonal mobility; dispersed communities; food insecurity and malnutrition; poor water and sanitation; and high prevalence of harmful traditional practices, which discourage the use of available health services. HEWs who work in pastoralist communities are typically men.⁹⁶

The HDA is vital for community mobilization and serves as a resource for community-based interventions.¹⁰¹ HDA Health Development Teams, composed of up to 30 households in a community, support Health Extension Program activities and are supervised by HEWs. HDA leaders are unpaid women volunteers.⁶⁸ Additionally, although having an almost exclusively female HEW workforce has value, it sometimes exacerbates existing inequalities in society.ⁱ HEWs report challenges such as excessive workload at work and at home, no overtime pay, medical supply shortages, and lack of transport.⁶⁶

Policies, strategies, and resources

Since the official launch of the *National Master Plan for NTDs (2013–2015)* in June 2013, there has been a tremendous scale-up of NTD activities in the country.¹⁰⁶ The FMOH has led nationally funded, multisectoral efforts through the Ministries of Health, Education, and Environmental Improvement and a consortium of international donors.⁹⁹ However, there is uncertainty about government budgets and plans after current grants expire.¹⁰¹

The foreword to the *Second Edition of National NTD Master Plan (2016–2020)* clearly states that women and children are “most highly affected by NTDs.”¹⁰⁶ Yet it does not mention gender or social inclusion issues or activities.¹⁰¹ Ethiopia released a *National Action Plan for Gender Equality 2006–2010*, which set several priorities, including eliminating traditional practices harmful to women’s health.⁸⁹ There are protections for women in the 2001 Family Code, including a clause on nondiscrimination in the

ⁱ While this goes beyond the scope of this report, the Jackson et al. (2015) report on gender and the role of HEWs in rural Ethiopia is an informative resource.

constitution that mentions sex or gender and a clause on equality.¹⁰⁵ In the Health Sector Development Program III (2005–2010), gender was a crosscutting issue, with the aim to “mainstream gender at all levels.” Strategies included improving the institutionalization of gender in the health sector, promoting gender mainstreaming guidelines, and building the capacity of gender units and focal points. While the “gender desegregation of data” is promoted, sex-disaggregated data remain limited.⁶⁶

Despite economic growth and improved health and education, Ethiopia violates some commitments to human rights charters and adequate standards. For example, not all citizens have access to soap, water, health literacy, and accessible medical care, which are important for preventing and treating NTDs.¹⁰⁷

Implications for NTD programming

In 2016, 74 million Ethiopians needed NTD interventions, 47 million received treatment.^{90,108} Activities to control NTDs in Ethiopia focus on providing MDA to affected communities and conducting vast social behavior change communication campaigns.⁹³

- LF - 45 percent coverage in 2016, and LF coverage and treatment data are now included in the nation’s health management information system.^{108,101} Integrated guidelines for LF management and disability prevention are complete.
- Trachoma - 64 percent treatment coverage in 2016.¹⁰⁸ Ethiopia is implementing the WHO-recommended SAFEⁱ strategy, and the annual number of trachomatous trichiasis surgeries performed is steadily increasing.⁴⁹
- OV - 80 percent treatment coverage in 2016. Progress is due in large part to HDA activities¹⁰⁸ including advocacy, social mobilization, and community sensitization.¹⁰¹ Several studies have found that the majority of CDDs had poor knowledge, attitudes, and practices surrounding OV; this may be due to insufficient or improper training of CDDs, additionally the health extension package does not include OV. However, community participation in and perceptions about the program were high.¹⁰⁰
- STH and SCH - 41 percent STH treatment coverage and 36 percent SCH treatment coverage in 2016.¹⁰⁸ In 2016, program efforts scaled up coverage for school-age children for SCH (13.1 million) and STH (23.3 million), in addition to treating priority populations (e.g., women of child-bearing age, workers in high-risk occupations), preschool-age children, and region-specific approaches for reaching non-enrolled children.^{99,101}

Ethiopia has had varied success collecting sex-disaggregated data for MDA. In 2013, 100 percent of USAID-supported districts collected sex-disaggregated data, but by 2015, only 66 percent were doing so. Although this number increased — currently all 234 of USAID-supported districts comply—it shows the need to continue advocating for sex-disaggregated data collection. Data from 2016 show that the MDA coverage rate for women and girls is higher by 2.7 percent than or men and boys.⁴¹ The gap highlights the need to ensure MDA is available and acceptable to men and boys.

According to the FY19 ENVISIONⁱⁱ work plan, several woredas (districts) and a refugee camp had low MDA coverage due to “community mistrust” and misconceptions. ENVISION supported community-level advocacy meetings and house visits in these woredas, social mobilization campaign adaptations, and priority group targeting, including women’s groups, pastoralists, migrant workers, and other hard-to-

ⁱ Surgery–Antibiotics–Facial cleanliness–Environmental improvements

ⁱⁱ The ENVISION project is a USAID-funded NTD project led by RTI. The project is now ending with the start of Act to End NTDs | East.

reach communities. Such meetings and campaigns are opportunities to address gender-related barriers to MDA and misconceptions around the PC drugs.

Ethiopia has taken a technical lead among its African peers in NTD prevention and treatment efforts by producing locally relevant NTD guidelines, including OV elimination guidelines and LF patient care instruction manuals, which have been adopted by other countries.⁹⁹ Partnerships have also supported NTDs and gender interventions, such as Care Ethiopia's 2015 "Testing of Integrated Water, Sanitation and Hygiene Implementation Models for Neglected Tropical Disease Prevention (I-WASHNTD)" program in South Gondar, Amhara, which called for women and girls to be at the center of planning and implementation for WASH and NTD prevention efforts in the country.⁹⁸

Despite these efforts, women are underrepresented in the NTD workforce in Ethiopia. Sex-disaggregated data from 2012–2017 show that 33 percent of drug distributors, 12 percent of supervisors/trainers, and 10 percent of M&E staff trained by USAID-funded NTD programs were women. Exact professions of trainees are unknown, but they are likely MOH staff, volunteers, teachers, and/or health professionals.¹⁰⁹ This inequity is a potential concern for Ethiopia NTD programming.

Discussion

Ethiopia is a model for rapid economic growth but continues to struggle with human rights and equality. With a growing economy and committed policies, Ethiopia has seen great progress in economic, education, and health outcomes. However, communicable diseases; maternal, childhood, and nutritional conditions; NTDs; non-communicable diseases; and injuries remain common. In the realm of NTDs, Ethiopia has exhibited national leadership and multisectoral cooperation, and has garnered encouraging donor and partner support. Ethiopia remains one of the world's most NTD-endemic countries, with approximately 80 million people at risk of NTD infection, most of them preventable. Women in Ethiopia are particularly vulnerable to NTD infection due to gendered roles and responsibilities, such as caregiving, that leave them more consistently exposed, and health literacy is low among many women. They face barriers to health services, education, and employment, and harmful practices continue to be viewed as acceptable. In addition, rural, especially pastoralist, communities face increased risks due to lifestyle, cultural norms and practices, and access to resources.

When considering NTD prevention and treatment in Ethiopia, it is clear that gender and social inclusion have been overlooked, despite policies to the contrary. There are limited data disaggregated by sex and other sociodemographic variables, and there are limited to no efforts toward developing or applying gender-sensitive data in the rapidly developing health information systems. This lack of data makes it challenging to clearly understand which groups need NTD support and which receive sufficient care. It is clear that HEWs and HDA members are the chief drivers for many health initiatives, but because they are mainly women, their access to information is somewhat limited, and they are not being leveraged as a resource for information. Although the government and development programs rely on them to deliver key messages and services, gaps remain in their support and compensation, and challenges hinder optimal service delivery. Women suffer disproportionately from NTDs in Ethiopia and they must play a key role as change agents and champions for NTD elimination and control efforts.

Haiti

Findings

Country situation

The Republic of Haiti covers one-third of the Caribbean island of Hispaniola.¹¹⁰ There are 11.2 million residents, and the country has an annual growth rate of 1.2 percent.¹¹¹ There are slightly more women and girls than men and boys, and 53 percent of the population is under the age of 25.¹¹¹ Around half of the population lives in rural settings, and approximately one-quarter lives in the metropolitan area

surrounding Port-au-Prince, the nation's capital.^{110,112} Haiti has long suffered political and economic instability, which is compounded by the nation's vulnerability to natural disasters. Over 96 percent of the population is at risk of two or more hazards.¹¹³ Natural disasters, including earthquakes, floods, hurricanes, and drought, have had substantial impacts on the economy and the lives of residents.¹¹³

After several years of decline, Haiti's GDP per capita grew from US\$505 in 2006 to US\$766 in 2017,⁸⁶ and slow annual growth is expected to continue at around 2 percent through 2020.¹¹⁴ Fifty-nine percent of Haitians live below the national poverty line, with 24 percent in extreme poverty.¹¹⁵ In the 2016–2017 DHS, 26 percent of men and 44 percent of women reported not working in the last 12 months.¹¹⁵ Of the working population, 49.8 percent are in the agricultural sector. More men than women are involved in agriculture: 63.2 percent of men and 34.1 percent of women.⁹⁵ Women are more likely to be employed informally or in lower paying sectors, and women make 32 percent less hourly than men.^{51,116}

Haiti's HDI score is one of the lowest globally and in the Latin America and Caribbean region.¹¹⁷ Many residents live with limited access to safe drinking water, adequate housing, health facilities, or economic opportunities. Haiti has seen great gains in literacy in recent generations, and 83 percent of men and 78 percent of women are literate. The net primary school attendance rate is 84 percent; at the secondary level it is 51 percent. Urban students having higher rates of school attendance at all levels.¹¹⁵

Health and NTD status

Life expectancy at birth is 62 years for men and 66 years for women.¹¹⁸ Noncommunicable diseases, HIV, diarrhea, malnutrition, neonatal health issues (such as encephalitis, sepsis, congenital abnormality, and preterm birth), and lower respiratory tract infections contribute significantly to mortality and the disease burden.¹¹⁰ The under-5 mortality rate has decreased to 71.7 per 1,000 live births (from 83.49 in 2009), and the infant mortality rate is 54 per 1,000 live births.¹¹⁹ HIV prevalence for people aged 15–49 is 1.9 percent, with women having a slightly higher prevalence (2.3 percent).¹²⁰ HIV disproportionately affects women, female sex workers, men who have sex with men, and LGBTI populations.

Haiti's total fertility rate is 2.8 births per woman.¹¹⁸ Although Haiti has made progress in maternal and reproductive health, there are still challenges in service coverage and uptake. About two-thirds of women attend four or more antenatal care visits, but only half of all births are attended by a skilled health professional.^{110,118} The maternal mortality ratio in 2015 was 359 deaths per 100,000 live births; pregnant women in Haiti have a 1 in 80 chance of dying during pregnancy or childbirth.^{118,121} The adolescent birth rate between 2006 and 2017 was 55 per 1,000 women aged 15–19, and young people face a high rate of unmet need for family planning.^{110,118} Only half of the demand for contraception is satisfied, and the contraceptive prevalence rate is 36 percent.¹¹⁸ More than two-thirds of children aged 6–59 months are anemic, which has distinct implications for health concerns related to NTDs.^{51,116} Half of women aged 15–49 suffer from anemia; 42 percent of women and 25 percent of men aged 35–64 are anemic.¹¹⁵ In 2016, 50.4 percent of pregnant women were anemic.⁸⁶

The 2016–2017 DHS found 73.4 percent of the population accessed an improved source of water for drinking, cooking, and hand washing.¹¹⁵ Additionally, 33.2 percent of the population accessed improved sanitation facilities that included hand washing facilities with soap and water. Great disparities in access to improved water and sanitation services exist between urban and rural areas. Less than half of residents have electricity in their homes. One-fifth of sick or injured residents do not access health care, most commonly due to the high cost of services.¹¹⁵

Although some age-disaggregated data about the burden of NTDs exist, the research team was unable to locate comprehensive age- and sex-disaggregated data on NTDs in Haiti. Three STH are endemic to

ⁱ Extreme poverty at poverty headcount ratio at \$1.90 a day (2011 PPP) (% of population)

the nation (*Ascaris*, *Trichuris*, and hookworm).¹²² Mapping conducted with ENVISION support indicated prevalence of more than 20 percent in some areas, and more than 50 percent in others.¹²² Haiti is one of four Western Hemisphere countries with endemic LF, and Haiti residents represent 78 percent of the at-risk population in the region and 84 percent of the country is at risk. LF prevalence is estimated to be around 10 percent nationally, with much higher prevalence among children aged 6–11.^{122,123}

Gender considerations in NTD infection

Haitian gender dynamics are complex and shaped by a long history of patriarchy, discrimination against women, and GBV. Women in Haiti continue to be significantly disadvantaged in terms of their health, social, education, and economic opportunities, and their involvement in political life is extremely limited. Women face greater exclusion from lucrative production systems—they have less schooling than adult men, are more likely to be illiterate; earn lower wages; have difficulty securing access to productive land, recruiting financing, and accessing skills training; and experience issues in terms of adequate mobility and time to access work opportunities. Some of these gender dynamics are reflected in Haiti's relatively low score on the GII--Haiti ranked 144 out of 160 on the 2018 GII, performing especially poorly on the indicator measuring share of parliamentary seats held by women.⁸⁷

Over 43 percent of the population lives in a woman headed household.^{51,116} Traditional gender roles prevail - women provide more of the care for the sick, elderly, and children. Women spend more than twice as much time on household tasks than men. Domestic responsibilities often prevent women from working in the formal economy, which affects income generation and social status. Only 30 percent of women are employed in the formal sector, and 75 percent of women report informal employment or work. When women are employed, it is often in lower paying sectors; for example, women make up 70 percent of the trade sector, but they are less represented in the health and education sectors.^{51,116} Despite this, women play a key role in the market system, such as *les Mesdames Sara* (female Haitian marketeers), who facilitate the trade of goods nationally. Yet, *les Mesdames Sara* face distinct challenges when traveling between rural and urban areas to trade, and often experience robbery, violence, and corruption. Additionally, many women lack financial literacy or access to financial institutions, which limits their ability to establish economic independence.^{51,116} While 22 percent of men possess a bank account, only 15 percent of women have a bank account in their names.¹¹⁵

Women are more likely than men to experience all forms of domestic violence or GBV.¹²⁴ Women most commonly report experiences of physical violence, the prevalence of which appears to be increasing.¹¹⁵ During 2016 DHS data collection, 29 percent of women aged 15–49 said that they experienced physical violence since the age of 15, and 11 percent reported experiencing physical violence in the past 12 months. The prevalence of sexual violence since age 15 was 12 percent, with 5 percent of women experiencing sexual violence in the last 12 months. Of the women who experienced violence, 34 percent said that they experienced a form of violence other than physical or sexual violence. Notably, 6 percent of women who were pregnant or who had ever been pregnant experienced physical violence during their pregnancy, with women who were pregnant at younger ages experiencing higher levels of violence.¹¹⁵ Of women who experience violence, very few seek help; 65 percent of women who experienced physical or sexual violence did not seek help, and 43 percent did not tell a friend, family member, or health/law professional about their experience.¹²⁵

Despite these challenges, women do carry some decision-making power in society. Although fewer women are engaged in economic activities, they hold much of the household-level purchasing power.^{51,116} Three-quarters of women make decisions about their health, and 56 percent make decisions about their sexual and reproductive health and rights.^{115,118} More than 8 in 10 women make decisions about household shopping, and 89 percent of women make decisions about visiting family or friends.¹¹⁵ Women in urban areas and employed women tend to carry more decision-making power.¹¹⁵ However,

women tend to have less control over sexual decision-making, particularly in relationships.¹²⁴ During the post-earthquake crisis, women in Haiti were exposed to more precarious situations, even more so for women living in camps and temporary shelters, with higher risks on their health and more incidences of violence, including sexual violence and GBV.⁵¹ Other vulnerable populations, such as LGBTI individuals, are often stigmatized and have difficulty in accessing basic services including health care.⁵¹

Health care is not universally accessible due to relatively high costs and insufficient health care facilities. Access to essential health and nutrition services reaches slightly more than half of the population; 45 percent of children aged 12–23 months are fully vaccinated.¹²⁶ One-third of women receive postnatal care within two days after giving birth.^{115,124} Although 38 percent of newborns received examinations within 48 hours of birth, this represents a sharp increase from 19 percent in 2012.¹¹⁵ A qualitative study exploring priority health needs for women uncovered health service accessibility as a main barrier to improved health status, with women reporting an average time of 84 minutes to access health care.¹²⁷

Health system, financing, and women's participation

Health expenditure in Haiti has decreased sharply in recent years, and high costs of health care have a pronounced effect on impoverished populations.¹¹⁰ In 2016, 4 percent of the government's budget was spent on health, which is a total of US\$15 per person, well below international recommendations.¹²⁸ The government covers just 15 percent of Haiti's health expenditure—the rest is covered out of pocket or by external assistance.¹²⁸ Recent natural disasters have destroyed key health facilities and infrastructure, worsening an already frail system.¹²⁹ Additionally, there are as few as four health professionals per 10,000 residents, and less than half of health care professionals are women.¹¹⁵ There are limited policies and plans to address human resources in health. There are no clear policies around GRB. However, USAID is supporting GRB efforts in the WASH sector, which presents an opportunity for collaboration and knowledge sharing.⁵¹

The national health system in Haiti is coordinated by the Ministry of Public Health and Population (MSPP), which has divided the nation into 10 health departments, and 42 smaller districts.¹¹⁰ The capacity of health care services of each district vary widely.^{110,130} Of the 1,033 health institutions identified in the 2017–2018 Service Provision Assessment, 350 are public.¹³⁰ Nearly half of all health facilities are concentrated in the Port-au-Prince metropolitan area.¹¹⁰ Additionally, traditional medicine plays an important role in Haiti and has been incorporated into a department of the MSPP.¹³⁰ The last three Ministers of Public Health in Haiti have been women, but women often struggle to find inclusion and leadership opportunities in health.^{51,116,131} Health care policies, legislation, and plans rarely include gender-responsive language or priorities. There are also gaps in the provision of care for people living with HIV, and women are disproportionately affected by weaknesses in these systems.^{51,116}

Policies, strategies, and resources

Haiti's NTD Master Plan, *Protocole Unifié sur les Projet des Maladies Tropicales Négligées*, identifies the challenges for females related to NTDs and a clear plan for sex-disaggregated data collection. It explains that LF and STH are responsible for increased iron deficiency anemia among women and can prevent the growth and development of a child. The *Protocole Unifié* lays out which drugs can be provided to pregnant women and provides MDA registration form templates with space for collecting the sex of MDA recipients and whether the recipient is pregnant.

In 2012, the Haitian government developed the 2012–2022 Health Master Plan, which provides strategies to achieve goals established in the National Health Policy.¹¹⁰ This plan aims to reduce morbidity and mortality related to high-burden health issues and improve health system efficiency and accessibility, but makes no mention of gender-responsive approaches to health.^{51,110,116} The Health Master Plan identifies women's health and maternal health as priority objectives, covering concerns relating to non-communicable diseases, cancer, sexual health, family planning, emergency obstetric

care, vaccination, and pregnancy and postpartum care.¹³² The government also adopted a national plan to monitor and protect water quality in 2016, entitled “Promotion of Sanitation, Hygiene, and Life.”¹¹⁰

The Government of Haiti has committed to gender equality in the 1987 constitution, national laws, and policies, and has supported international gender equality frameworks.^{51,116} In 2012, Haiti added a constitutional provision establishing a 30 percent participation quota for women in Haiti’s public service. Despite this mandate, women’s participation in leadership is still low. In 2014, the Government of Haiti adopted the 2014–2034 Policy on Gender Equality and Women’s Empowerment, which promotes equal rights and inclusion.^{51,116} The policy focuses on increasing women’s political participation, addressing GBV, promoting economic empowerment, and legal systems reform. However, the policy fails to include women with disabilities and sexual minorities. Haiti has made efforts to address GBV within the legal system. Rape was established as a crime in 2005, but spousal rape is not recognized.^{51,116}

The Ministry for Women’s Affairs and Women’s Rights is tasked promoting the rights of women and promoting gender integration in all aspects of the government.^{51,116} As such, the ministry, currently led by a woman, takes responsibility for all “women’s issues” within the National Health Policy and is assigned key roles in food security, health activities, education, and GBV response across ministries. Yet the ministry often lacks power to address gender concerns in all of these areas.^{51,116}

Implications for NTD programming

In 2000, Haiti launched national-level efforts to address four PC-NTDs.¹²² Eight years later Haiti combined its NTD elimination programs and developed a Neglected Tropical Disease Control Program, called *Projet des Maladies Tropicales Negligées*.¹²² Haiti received external aid to strengthen its ability to fight these diseases. With USAID funding, the MSPP has coordinated efforts with IMA World Health and RTI under the ENVISION project, and the US Centers for Disease Control and Prevention and the University of Notre Dame focus on MDA implementation.¹²² Through these efforts, Haiti reached full geographic coverage of MDA.¹²² Data from 2016, though incomplete, show 1.4 percentage points higher MDA coverage rates for men and boys, compared to women and girls.⁴¹

- LF – 65% MDA coverage or greater in nearly all districts¹²². Haiti first developed a National Program to Eliminate LF in 2001, which provides support to individuals with chronic and clinical LF. ¹²² Early MDA campaigns addressing LF completely excluded women of reproductive age and, although women are now included in MDA, this strategy has had long-lasting implications for compliance among women.^{133,134} The programs to provide patient support that fall under the National Program to Eliminate LF do not have widespread implementation, but those programs in existence have seen high participation rates from women.¹³⁵ In Haiti’s *Protocole Unifié* and in line with the WHO global LF elimination goals, Haiti aims to eliminate LF by 2021.

STH – 75% MDA coverage or great in the majority of districts, however, STH prevalence still varies widely by district. ¹²² Haiti began national coordination of STH efforts in 2003. The program emphasizes maintaining low prevalence and intensity of infection.¹²² The program focuses on treatment of at-risks groups, including women of reproductive age and children.¹²² USAID is the largest donor of external funding to Haiti and therefore has a responsibility in its work to champion gender equity in programming and human resources. Despite this, sex-disaggregated data from 2012 to 2017 shows that only 33 percent of the drug distributors and 39 percent of supervisors (typically nurses and health professionals) trained by USAID for NTD programming were women.⁶⁰

Haiti has made considerable progress in the collection of sex-disaggregated MDA data. In 2012, no districts collected sex-disaggregated data, but in 2013, all districts were doing so. This is likely due to the USAID requirement made that year for all USAID-funded MDA to collect sex-disaggregated data. Unfortunately, this rate has since dropped to 74 percent, representing a need for continued advocacy.

Various gender-focused programs exist in Haiti, but none specifically address NTDs and gender, although opportunities exist to integrate NTD education and programming into existing activities. Programs like GHESKIO (Haitian Group for the Study of Kaposi's Sarcoma and Opportunistic Infections), a USAID funded local initiative, focus on economic empowerment through income-generation initiatives for victims of GBV.^{51,116} Another program includes a conditional cash transfer program for vulnerable mothers with children in school (*Ti Manman Cheri*, or Dear Mother) and a family nutrition support program (*Kore Fanmi*) implemented through community health workers.^{136(p)}

Discussion

There is currently no gender-specific NTD work underway in Haiti. Health policies, plans, and programs are not well integrated within the sectors that have important synergies to improved health indicators, including WASH, GBV, reproductive health, food security, education, and economic development. Data gaps exist and collection methods are lacking, particularly for sex- and age-disaggregated data and for vulnerable populations. Haiti's health system receives significant financing from foreign donors, which can be helpful for advocacy regarding issues such as gender integration and collecting sex- and age-disaggregated data, the system is also susceptible to external agendas, exterior shocks, and poor sustainability.

There are not enough health care facilities or trained health care providers to meet the needs of the Haitian population. Patients often travel long distances to seek health care, and common obstacles in getting to facilities include inadequate transport, transportation costs, and poor roads. Inadequate transportation is of particular concern for women who are pregnant or in labor.^{51,116} Facilities such as safe houses, direct GBV support, livelihoods development or activities to alter harmful gender norms are limited.^{51,116} With the maternal mortality rate substantially higher than the regional average, it is important to focus attention on prenatal care and delivery services.

With the high HIV burden in Haiti and with NTD susceptibility heightened when infected, considerable attention must be paid to those gender differences in HIV transmission and NTD infection. It is critical to understand and address the needs of the groups most vulnerable to HIV, including women whose partners engage in multiple concurrent relationships, LGBTI individuals, men who travel for employment, sex workers, and men who have sex with men.^{51,116}

Understanding how culturally defined gender categories shape women's, men's, girls', and boys' different levels and types of risk, exposure, and knowledge of NTDs is critical to improved programming and interventions that meet the needs of all Haitians. The occurrence, severity, and frequency of NTDs, along with social and cultural responses to the diseases, affect health outcomes. Women and girls more frequently lack access to health resources and power to exercise control over their bodies and health. Increasing women's access to education, health information, health services is critical in lowering the NTD burden.

Nepal

Findings

Country situation

Nepal is landlocked between China and India. It is one of the poorest countries in Asia, with more than one-quarter of Nepal's 30 million people living in poverty.¹³⁷ Nepal recently transitioned into a federal democratic government grounded in a new (2015) constitution in which the country is divided into 75 districts and 7 provinces.¹³⁸ The number of parliamentary seats held by women is low at 29.6 percent.¹³⁹ Approximately 85 percent of the population lives in rural areas, including mountainous regions where access to roads, markets, health care, or employment is challenging.^{86 86} Almost 30 percent of the population is under the age of 15.¹⁴⁰ Nepal's population belongs to more than 60 castes and ethnicities

who live in geographically and climatically diverse conditions, greatly contributing to inequities for lower castes and certain ethnic groups.¹⁴¹

Nepal ranks 149 out of 189 on the HDI, with an inequality index value of 0.574,¹⁴² placing the country in the medium human development category. However, when the 0.574 value is discounted for inequality, Nepal's HDI value is lowered to 0.427, a loss of 25.6 percent, which highlights high levels of inequity. Nepal faces severe food shortages, high rates of child malnutrition, limited educational attainment, a fragile political state, and high vulnerability to global climate change, including flooding and water shortages.¹⁴³

Nepal has a GDP of US\$21.14, with a GDP per capita of US\$729.53.¹⁴⁴ According to the latest available data (2010), 15 percent of the population was living below the \$1.90 international poverty line.⁶⁸ In 2018, 80.8 percent of Nepalese women over the age of 15 were formally or informally employed, compared with 83.2 percent of men. Of this working population, 70.1 percent are in the agricultural sector. Approximately 80 percent of women and 59.4 percent of men are involved in agriculture, potentially putting them at increased risk for STH or SCH or more likely to be absent for MDA.⁹⁵ In general, Nepal's economy is plagued by low productivity, limited markets, and overall economic stagnation.

Among 15–49 year olds, 72 percent of men and 45 percent of women are literate. In 2011, 70% of men over 15 years had attended school compared to only 43% of women.¹⁴⁵ Nepal's exclusion is multifaceted and due not only to gender, caste, and ethnicity but also to language, religion, disability, geography, and regional identity. For example, Dalit women from the Tarai Region have a much lower literacy rate at 17 percent.¹⁴⁶ On April 25, 2015, a 7.8 magnitude earthquake struck Nepal, followed by a series of strong aftershocks until May 12, 2015, causing 8,699 human deaths, 22,220 injuries, and severe structural damage; the disaster severely disrupted the food production system and livelihoods in the 40 most-affected districts. An estimated eight million people were affected; rebuilding the country is a long-term challenge.¹⁴¹

Health and NTD status

In Nepal, the life expectancy at birth is 68 years for men and 71 years for women.¹⁴⁷ The total fertility rate was 2.3 births per woman in 2016, decreasing from 5 births per woman in 1990.¹⁴⁷ Almost 43 percent of married women report currently using any modern method of contraception; however, 23.7 percent of women report an unmet need for family planning. In 2016, the adolescent birth rate was 62.1 births per 1,000 women aged 15–19.⁸⁶ The maternal mortality ratio is estimated at 239 maternal deaths per 100,000 live births.¹⁴⁸ Although abortion became legal in 2002, more than one-half of all abortions are clandestine and unsafe.¹⁴⁹ The infant mortality rate is 32 deaths per 1,000 live births, with an under-5 mortality rate of 39 deaths per 1,000 live births. A total of 40.8 percent of women have anemia, with 0.3 percent of women having severe anemia.¹⁴⁸ The HIV prevalence rate for adults aged 15–49 is 0.2 percent for men and 0.1 percent for women.¹⁵⁰

Twenty-seven percent of Nepalese households do not have a toilet.^{151,152} Twenty-five percent of the rural and 34 percent of the urban population uses safely managed drinking water services.¹⁵³ Caste and ethnicity factor into these numbers and must be considered. For example, in some places, Dalits' access to drinking water facilities is more limited.¹⁵³

Anemia contributes to NTD vulnerability, and rates in Nepal are high, particularly among children and women, and have increased since 2006. In 2016, 41 percent of women of reproductive age (15–49) were anemic, as were 53 percent of all children under 5.¹⁴⁸

Seven NTDs have been present in Nepal: LF, OV, SCH, three types of STH (roundworm, whipworm, and hookworm), and trachoma.^{143(p)} There are at least 16.5 million people at risk of infection from one or

more NTD.¹⁵⁴ However, the research team could not find sex- and age-disaggregated data for these estimates. In 2018, WHO confirmed that Nepal eliminated trachoma as a public health threat, making it the first country in Southeast Asia to achieve this milestone.¹⁵⁵

Gender considerations in NTD infection

Understanding and carefully considering Nepal's unique and complex social structure is critical to achieving equitable health and NTD outcomes. The 2017 GII ranked Nepal 118 out of 160, with its relatively high adolescent birth rate significantly impacting its standing.⁸⁷ Gender-, caste-, and ethnicity-based social exclusion are deeply embedded in Nepali society and influence the country's wide variations in poverty, hunger, and poor nutrition outcomes. For example, 44 percent of the hill Dalits experience poverty compared with a 25 of all Nepalis.¹⁵⁶

For NTDs, sex and gender roles can have a profound effect on health care access, health outcomes, and caregiver responsibilities. Other factors include being seen as second class citizens, a preference for boys, patrilineal inheritance, lower education levels, and limited sexual and reproductive health knowledge.¹⁵⁶ Women and girls face heavy burdens of household chores, and girls must sometimes forego school for household work. According to focus group discussions and interviews with girls, 49 percent identified chores as the main barrier to staying in school.¹⁵⁷ In Nepal, gendered division of labor in the home is rooted in deeply entrenched ideas about masculinity and the role of men. Nepalese ideas of masculinity are associated with bread winning, fertility, physical strength, and aggression. While these concepts are somewhat universal, and held by both men and women, there is a greater prevalence of patriarchal beliefs among lower class and less-educated communities.⁴⁰

Women in Nepal have limited household decision-making power, especially regarding health care. In 2016, more than 40 percent of women could not make decisions regarding their own health care. More than 8 in 10 women (83%) have problems accessing health care for themselves for reasons beyond limited decision making—68 percent do not want to go to the health facility alone, 55 percent are worried about treatment costs, and 53 percent are worried about the distance to the health facility. Approximately 25 percent of women are concerned about getting permission to go for treatment.

The 2016 DHS found that 22 percent of women had experienced physical violence since age 15, with 9 percent experiencing violence in the past year. The victim's husband most frequently perpetuates this violence. Among women who have ever been married, 26 percent have experienced spousal violence, whether physical, sexual, or emotional. About 7 percent of Nepali women are reported to have experienced sexual violence. Early marriage and childbirth are common in rural areas, and in some places, girls are at increased risk for trafficking. Nepal's marriage law stipulates 20 as the legal age for marriage for both sexes, 25 percent of girls are married before 18.¹⁴⁸ According to the 2011 DHS, early marriage is more common in poorer households and varies by region, with a greater frequency in the Western Mountain, Mid-Western Hill, and Central Terai areas.¹⁵⁸ Nepal's limited economic opportunity and open border with India amplify risk for human trafficking, for both sexual and hard labor purposes. Victims of GBV and trafficking have difficulty obtaining justice due to discriminatory laws, slow legal processes, and the persistence of gender-based discrimination.¹⁵⁹ Women's and girl's overall lack of awareness about their constitutional rights compounds the inequality. Women and girls have fewer opportunities to access productive resources, including land or inheritance rights; less mobility; less capital; and unequal household decision-making authority, which affects their ability to make health decisions.

Health system, financing, and women's participation

Under the new government structure, provincial federal ministries of health and population were created to lead health initiatives in coordination with the Government of Nepal and the MOH. Nepal's overall health plans are guided by the National Health Policy 2014 and the National Health Sector

Strategy 2015–2020, both of which are in line with SDG priorities and stress the need for quality and equitable access to health care.¹⁵³ Nepal’s health structure involves a network of primary health care facilities and community health workers who provide basic health services to rural communities. Nevertheless, challenges remain in health care provision, including poor infrastructure, inadequate supply of essential drugs, poorly controlled private providers, insufficient health budgets, and poor retention of human resources in rural areas.¹⁴³

Nepal’s economy is largely reliant on foreign aid, which limits sustainability and ownership. The Nepali Government has committed to improving access to and use of quality essential services, targeting the poorest people, remote areas, and women and children. As such, it spends 6.1 percent of its GDP on health,¹⁴² US\$137 per capita (2014), which is the highest amount among South Asian countries except Afghanistan.¹⁴⁴ The constitution guarantees the right to health, health care, and social security for the Dalit community and includes a policy to increase investment in public health to make citizens healthy. The policy aims at providing “Universal Health Coverage,” in which free medical services are said to be a fundamental right. While this is encouraging and commendable, implementation, adequate budgets, and coordination of policy initiatives have been weak, with little impact toward the intended beneficiaries.¹⁶⁰ Out-of-pocket spending is around 60 percent,⁸⁶ which is significantly above the recommended maximum of 20 percent, raising concerns around equity and financial risk for the poor. This can be seen with treatment of leishmaniasis in Nepal: although treatment is free, “...lack of community confidence in local health services led many patients to use private services, incurring high direct and indirect costs, with consequent depletion of savings, sale of assets and borrowing at high interest rates.”(p.143-144)¹⁶¹ Equity gaps persist, and marginalized and vulnerable communities face barriers in accessing quality health care, particularly rural and ethnic minorities, including women.¹⁴³ UN Women has been assisting the Ministry of Finance on GRB since the early 2000s. In 2005, the Ministry of Finance established a GRB committee, and it has since become mandatory for all government departments to adopt GRB practices. With the support of the committee, and training by the Ministry of Finance, GRB practices have increased at the national and local levels and are increasingly viewed as a strategic tool for mainstreaming gender and achieving equality goals.⁷⁷

Policies, strategies, and resources

The Government of Nepal has taken steps to eliminate and control NTDs within the framework of national policies and strategies.¹³⁸ In 2010 the Government signed the *Plan of Action for Neglected Diseases in Nepal: An Integrated National Control Program (2010–2014)* with the MOH and the Ministry of Education, the *National Guidelines and Tentative Plan of Action for the Elimination of Lymphatic Filariasis in Nepal (2016–2020)* and corresponding 2016–2030 integrated action plan for NTDs.

Nepal’s laws, constitution, and civil code contain provisions that discriminate on the basis of gender, caste, ethnicity, and religion, including formalization of the caste system.¹⁵⁹ For example, sons and daughters do not have equal rights to inherit assets from their parents, and women cannot obtain a judgment of divorce in the same way as men.¹⁰⁵ However, Nepal has put several legal frameworks and policy reform measures in place to improve social inclusion, gender equality, human rights and health equity, including a policy that aims at providing Universal Health Coverage as a basic human right to all. In 2010, the Ministry of Federal Affairs and Local Development formulated a Gender Equality and Social Inclusion policy with additional commitments mirrored in other government agencies’ sector policies, including various WASH policies focused on vulnerable populations. Within the health sector, reproductive health, GBV, sexual and reproductive health, and HIV have been examined from a gender perspective, but gender and NTDs has not been sufficiently explored.

The Government of Nepal has set up structures to improve gender equality. These include the Department of Women Development under the Ministry of Women, Children and Senior Citizens, which

implements women and children's programs through its Women Development Offices, which are key gender focal points at the local level. Gender units also exist under various ministries, including the Ministries of Health and Population, Agriculture and Cooperatives, Education, Federal Affairs and Local Development, Finance, and the National Planning Commission, etc.¹⁶⁰

The United States, Japan, and the United Kingdom are the largest bilateral health donors. The Asian Development Bank and the World Bank are the largest multilateral donors. There has been discussion about the importance of looking at health as a cross-sectoral issue. Although bringing sectors together has proved challenging, a few recent and promising initiatives have contributed to positive health changes, such as the Aama program, a safer-delivery incentive scheme;¹⁶² a social health insurance scheme pilot to protect poor and marginalized populations; and One-Stop Crisis Management Centers to treat and counsel GBV victims.¹⁶³

Implications for NTD programming

The nation's NTD program is led and financed by the Government of Nepal, with technical leadership from the MoH, and is focused on LF elimination and STH control. Nepal has eliminated leprosy, visceral leishmaniasis, and trachoma and aims to eliminate LF by 2021.^{143,155} According to the WHO Director-General, eliminating trachoma is a "remarkable achievement [that] demonstrates what political commitment and sustained partner support can do. It is a big step towards health for everyone and comes at a time when Nepal accelerates its fight against other neglected tropical diseases."¹⁵⁵ Nepal is now in the post-validation surveillance stage for trachoma.

Certain urban areas have historically struggled to achieve high MDA coverage due to low community risk perception, which can lead to treatment refusal. To address these challenges, Nepal is emphasizing targeted advocacy, sensitization, and social mobilization activities in low-coverage communities. Another challenge identified by the ENVISION project is that for LF, some educated households prefer to receive medications from health workers instead of female community health volunteers. It is not immediately clear whether this is a gender bias or a bias toward level of education and training, but would benefit from investigation. The MOH has a specific activity and funding stream to treat preschool-age children and pregnant women for STH; pregnant women are treated by the Family Health Division under the Safe Motherhood Program. In Nepal, women play an essential role in the NTD workforce. Approximately 65 percent of DDs and 51 percent of trainers/supervisors are women.⁶⁰

In line with larger governmental changes, the NTD control program may shift from District Public Health Offices and District Education Offices to being coordinated by district coordination committees under provincial and central governments.¹³⁸ This may be an opportunity to ensure leadership and representation by women and other marginalized groups in line with Nepalese policies and HSS best practices. In addition, community participation through community health volunteers has been a focus of primary health care delivery and health education in Nepal since the 1980s. Originally the volunteers were men, but now women community health volunteers play a vital role in linking communities to the national health system.¹⁵⁹ Female community health volunteers report to village-level health facilities and are the main cadre that conduct public health campaigns at the community and household levels. These women volunteers are trained on proper drug dosage and eligibility, including pregnant women and infants. Resource managers oversee 20–25 resource centers in each district and mobilize government activities. They coordinate with school health teachers who are responsible for school-based deworming.¹³⁸ Gender issues should be examined in the composition and treatment of the NTD workforce to ensure equitable participation and compensation to contribute to program success.

Nepal has made incredible progress in its collection of sex-disaggregated data for MDA. In 2012, no districts collected sex-disaggregated data, and by 2016, 100 percent of districts were doing so. Data from 2016 show 4.2 percent higher MDA coverage for women and girls, meaning more women than

men are accessing PC.⁴¹ The Government of Nepal's health management information system has started to record and will eventually report service statistics disaggregated by caste, ethnicity, and gender.¹⁶³

Discussion

Barriers to inclusion have a long history in Nepal and are embedded in its social fabric: financial, sociocultural, geographical, and institutional barriers impede marginalized communities' access to services. Resulting social norms, practices, values, and biases limit measures that aim to transform power relations. Dalits continue to experience caste-based discrimination, as do women and girls, despite parliamentary declarations and laws outlawing such practices. Women and girls face daily challenges including lower access to education, health services, property, social security and freedom, and decision-making processes; high rates of malnutrition, early marriage, psychological and sexual violence; and fewer economic opportunities. Access to health services in Nepal is limited by poor infrastructure, insufficient and underqualified staff, and sociocultural and language barriers. Women and girls are time-poor, burdened by household chores and societal restrictions, and are at much higher risks of leaving school early. Women employees are commonly concentrated in low-paying and less-productive jobs of low capital intensity, and they make less money than men. Additionally, rural poverty rates are higher than in urban areas. Of further note, caste issues must be considered, and the situation of Dalits should be examined.

Despite a supportive policy environment for gender equity, implementation remains weak. Policies and laws aimed at improving gender equity and the inclusion of women and Dalits have been poorly implemented due to weak government systems, capacity for delivery and accountability. Several national pieces of legislation and programs are framed to make health rights equitable to all people, but areas such as health logistical support, infrastructure, medicine, and health provider capacity are not equally available. The Nepal MOH health management information system is beginning to capture data disaggregated by gender, caste, or ethnicity on the incidence and treatment of various diseases, and NTD programs must follow suit.

Nigeria

Findings

Country situation

Nigeria, located in West Africa, has close to 191 million inhabitants, with 51 percent living in rural areas and an estimated 3 percent population growth rate.¹⁶⁴¹⁶⁵ Nigeria is ethnically and culturally diverse and has one of the most significant youth populations globally--almost 50% are 15–34 years of age.¹⁶⁶ It has a democratic governance structure of 36 autonomous states. Nigeria has the greatest natural gas reserves on the continent, resulting in robust economic growth and relative, but uneven, wealth. Nigeria's Vision 20:20:20 policy, first articulated in 2008 and then again in 2011 with its Transformation Agenda 2011–2015, focused on converting the economy through a “macro-economic framework and economic direction, governance, human capital development, real sector policies, infrastructure, and the enabling environment.” (p. 20)¹⁶⁷(p20) It highlighted the need for improved governance by way of improved management, fiscal policy, and effectual use of public resources. In 2017, the GDP per capita was US\$1,968, but this wealth is not distributed equally, and 53.5 percent of Nigerians live in extreme poverty (below \$1.90 a day), and an estimated 65 percent of those in extreme poverty are women.¹⁶⁶ ¹⁶⁸ In 2018, 47.3 percent of Nigerian women over the age of 15 were formally or informally employed, compared with 56.4 percent of men. Of this working population, 36.6 percent are in the agricultural sector. Over 45 percent of men and 26.4 percent of women are involved in agriculture.⁹⁵ Nigeria's 2017 HDI value of 0.532 places it at 157 out of 189 countries, with poor rankings in multiple areas.¹⁶⁹ Nigeria has the most out-of-school children and some of the world's worst learning outcomes.¹⁶⁸ Disparities

between geographical areas are apparent, for example, literacy rates are higher the South, whereas the North has poverty levels twice as high as some parts of the South.¹⁶⁸ One contributing factor is the Boko Haram insurgency in the Northeast which has caused instability, including disruptions to healthcare and social services, and increased food security in affected areas.¹⁷⁰

Across Nigeria, women and girls lack information, and knowledge about their rights, including “a woman’s right to vote, her right to not be physically or emotionally abused, her rights to basic services, and her rights with respect to decision making (ranging from early marriage, to contraception use, to female genital mutilation) at the household level.” (p.6)¹⁷¹ Fifty-three percent of women and girls are literate compared to 75 percent of men and boys.¹⁷² Among women aged 15–49, 38 percent have no formal education, compared with 21 percent of men.¹⁷² Parents more frequently choose a boy’s education over a girl’s if they can only afford to send one child to school. Nigerian girls often leave school at a younger age than their male peers and siblings. National education levels for girls are low, but there are differences between regions, ethnicities, and genders. Access to education in the North East is extremely low, with an estimated 7.7 percent of girls completing secondary school, compared to 32 percent in the South West.¹⁷² Hausa girls are 35 percent less likely to attend school than Yoruba boys.¹⁷³

Health and NTD status

Life expectancy at birth is 55 years for men and 56 years for women.¹⁶⁵ Nigeria has world’s second-highest number of persons living with HIV/AIDS, following South Africa. The annual HIV incidence rate is 118 new infections per 100,000 population.¹⁶⁵ The rate of death during childbirth among Nigerian women was 811 maternal deaths per 100,000 live births in 2015, ranking forth worst in the world. An estimated 40,000 Nigerian women die annually from pregnancy-related complications, accounting for almost 14 percent of the world’s total maternal mortality.¹⁷⁴ Most maternal deaths and complications are preventable with improved knowledge, access, skilled attendants, and facilities. In 2015, the infant mortality rate was 69 deaths per 1,000 live births.¹⁷⁵ In 2016, the average fertility rate was 5.6 births per woman; the adolescent fertility rate was 109 births per 1,000 women aged 15–19.⁸⁶ Almost half (49.8 percent) of women of reproductive age had anemia in 2016, including 58 percent of pregnant women.⁸⁶ These health outcomes vary by region. For example, maternal mortality rates in Northern Nigeria are significantly higher than the country’s overall average. Conversely, although the South shows improved health indicators, there is a higher frequency of HIV and greater GBV rates.¹⁶⁸ Poor health outcomes are linked to weak health infrastructure, barriers to service access, and consequent low rates of service utilization.

Due to Nigeria’s intense poverty levels, close to 10 million Nigerians are at risk of contracting or have NTDs, including trachoma, Buruli ulcer, human African trypanosomiasis, dengue fever, SCH, LF, OV, and STH, among others.¹⁷⁶ Nigeria has the largest burden of NTDs in sub-Saharan Africa, accounting for 25 percent of the continent's total.¹⁷⁶ Estimates show that 122 million persons are at risk of one or more NTDs. Nigeria has “the highest number of cases globally of river blindness and bilharzia; the second highest burden of trachoma across Africa; and the third highest global endemicity for lymphatic filariasis.”¹⁷⁷ NTD infections and their consequences vary among different groups. Approximately one in five women had a helminth infestation during their third trimester of pregnancy; which significantly “increased their risks of maternal anemia and low birth weight, indicating that routine administration of anthelmintic drugs during early pregnancy might improve perinatal outcomes.”¹⁷⁸ In addition, skin disease from OV has “different prevalence [rates] in different ethnic groups (Yoruba and Fulani) in Oyo State, Nigeria, and females have a significantly higher prevalence of skin conditions caused by OV” (p.143)¹⁶¹ Some reasons for these differences are that the Fulani are pastoralist and were often absent at the time of MDA distribution. In addition, the CDDs varied in literacy levels and success reaching

Fulani settlements, and chiefs may not have been proactive in recruiting people for MDA.¹⁷⁹ Additionally, there are poor quality primary health care services with poor linkages to private sector facilities, where many Nigerians seek services, which contributes to the spread of NTDs.

The use of contaminated drinking water and poor sanitary conditions in Nigeria remain major contributing factors to high morbidity and mortality rates among children under 5, resulting in increased vulnerability to water-borne diseases, including diarrhea, which leads to deaths of more than 70,000 children under 5 annually. Poor access to improved water and sanitation results in 73 percent of the diarrheal and enteric disease burden. Twenty-seven percent of the population uses improved drinking water sources and sanitation facilities, and 24 percent defecate in the open.¹⁸⁰

Gender considerations in NTD infection

The GII did not provide Nigeria with a ranking in 2017 due to lack of data. However, the Global Gender Gap Report indicates that Nigeria has extreme gender inequities across measures of equality and with specific variances in “gender disparities between the Muslim North and the (primarily) Christian South, but equally vast differences between (and even within) the six geo-political zones of Nigeria.” (p.3)¹⁷¹ The deeply entrenched formal and informal rules that reflect kinship patterns, Sharia law, inheritance laws, and social and cultural norms and values discriminate against women and girls,¹⁷¹ resulting in higher poverty rates and disparities in health, education, and other sectors.¹⁸¹ Boys generally enjoy better healthcare access when ill, are more likely to receive extra food and to be immunized. In Northern Nigeria, cultural and religious norms such as purdah (the practice of keeping girls and women in seclusion from those outside the family) impede women’s access to quality health services.¹⁷¹ However, men are reluctant to seek some types of care for themselves, as demonstrated in a study conducted by Promundo, where less than 35 percent of men interviewed reported testing for HIV, cancer, or other preventive treatments. This could be partially attributed traditional concepts of masculinity in Nigeria, where toughness, sexual performance, and income are valued.³⁹ While not a direct indicator, men might be less likely to seek preventive treatment for NTDs as well.

In addition to less access to education, women and girls have fewer legal rights, income-generating activities, and property. For example, an estimated 15 percent of women own a bank account, and only 7.2 percent of all land is titled to women.¹⁷¹ In terms of employment, most women perform casual, low-skilled, low-paid informal sector employment.¹⁷¹ Women carry the burden of household chores and childcare. According to the Promundo study, 94 percent of men and 91 of women believe that “a woman’s most important role is to take care of her home and cook for her family.” (p.6) In Nigeria, it is typically the woman’s role to care for children, wash clothes, clean the house, and prepare food.³⁹ As mentioned in the global section, many of these activities put women at greater risk for trachoma.

Married women, particularly in Northern Nigeria, have less control over their own lives compared with married men. Nearly half of married women do not participate in decision making regarding their own health care, education, major household purchases, ability to generate income, or visits to family or relatives.¹⁷³ More than one-third of women who have ever been married report that their husband/partner insists on knowing where they are at all times.¹⁸² Rural women tend to marry much younger than rural men, on average at 18 years of age for women and 27 for men, which limits women’s educational and earning potential. Early and forced marriage is common in Nigeria, with 33 percent of girls and young women marrying between the ages of 15 and 19, but this practice varies significantly, with girls in some cultures getting married as early as 10.¹⁷¹

Nigerian culture commonly tolerates or justifies GBV. Among women and girls aged 15–49 in Nigeria, 30 percent have experienced some form of physical or sexual violence, with women in the South-South zone reporting over 52 percent and women who are divorced, separated, or widowed experiencing especially high rates of physical violence, at 44 percent across all zones.¹⁷¹

As mentioned above, gender disparities between the North and the South are high, with equally vast differences between and within Nigeria's six geo-political zones. In the North, although conflict affects both men and women, in conflict zones, women, teenage girls, and elderly women are commonly heads of households and sole providers, which shifts traditional roles and relationships. Heightened vulnerability to sexual violence is common for both men and women. Rape increases the risk of sexually transmitted infections, including HIV, and unwanted pregnancies, and often results in the rejection and community marginalization of the victim. Access to health, food, and education, are negatively affected by conflict and violence. It would be a reasonable assumption that violence and unrest affect MDA and other NTD efforts. Violence also forces people to migrate for their own safety or loss of economic opportunity. Although the constitution guarantees all Nigerians the right to live anywhere in Nigeria, discrimination is common for those not native to the area and they more frequently suffer from lack of access to already limited basic services. Forced migration increases the likelihood of transactional and survival sex and increases vulnerability to trafficking.¹⁷¹

Health system, financing, and women's participation

Nigeria has some of the lowest per capita social spending levels in the world, including in health.¹⁶⁸ Nigeria's federal structure gives primary responsibility for key sectors, such as health and education, to state and local authorities. In 2018, the Government of Nigeria allocated 3.9 percent of its total budget to health care, less than in the previous two years. While 50 percent of the country's national budget is distributed to the country's 36 states and 774 local governments, per capita spending is among the lowest globally. The WHO found that the government's health expenditure per capita was about US\$95.¹⁶⁸ Out-of-pocket spending is around 72 percent, which is incredibly high, reflecting a poorly funded health system and raising serious concerns around equity and financial risk for the poor.⁸⁶

Nigeria's National Strategic Health Development Plan 2010–2015 has been the country's overarching document guiding health system programming, including the NTD program. It outlines eight priority areas that are structured around WHO's six health systems building blocks: service delivery, health workforce, health information systems, access to essential medicines, financing, and leadership and governance.¹⁸³ The document was updated in 2016 with no mention of gender.

Under the former Minister of Finance, Nigeria introduced a GRB initiative that allocated funds to ministries that exceeded specific targets for women and girls. The initiative focuses on agriculture, communications technologies, health, water resources, and public works, however, GRB has yet to be fully appreciated at the national and state levels, resulting in underfunded gender equality interventions exacerbated by designated funds being partially released or withheld.

Policies, strategies, and resources

The Government of Nigeria has established several national NTD frameworks. The *National Policy on Neglected Tropical Diseases Elimination in Nigeria* FMOH, March 2016, is the country's core NTD policy and is set within the framework of the National Strategic Health Development Plan, the National Health Act, and Nigeria's constitution. The Neglected Tropical Diseases Nigeria Multi-Year Master Plan 2015–2020 is one of the most gender-responsive Master Plans among the six priority counties. It describes the role of women, literacy rates compared with men, and the disproportionate burden that poverty places on women. It explains that trachoma is “found in the most vulnerable communities, disproportionately affecting children and women.” (p.23) The Master Plan defines a strategy for community monitoring and social mobilization that engages women's societies, town unions, farmers' and traders' associations, vigilante groups, and others. Finally, and most significantly, the first strategic objective of the Master Plan is to “Support States to develop integrated multi-year strategic plans and develop gender-sensitive annual operational plans for the control, elimination and eradication of targeted NTDs.” (p.96)¹⁸⁴ Other key NTD policies and strategy documents include the *Standard Operating Procedures for NTDs*

Elimination in Nigeria FMOH, February 2015; the *Standard Operating Procedures Manual for NTD Supply Chain Management*; and two state-level NTD Control Master Plans 2015–2020 in Kaduna and Ogun States. There also is a national steering committee on NTDs and state NTD technical advisory committees—but nothing specific on gender and NTDs.¹⁶⁸

Although Nigeria’s gender policies, including its constitution, National Gender Policy, and its signature on CEDAW, promote gender equality, the corresponding budgets, implementation plans, enforcement, and widespread knowledge on laws is absent. Nigeria’s 2006 National Gender Policy aims to eradicate poverty, achieve gender equality, and encourage inclusive governance and development. It works across sectors to emphasize women’s empowerment, prioritize education, and abolish harmful traditional practices. To date, however, results of policies and structures to support gender equality are not evident. Nigeria’s constitution deems civil and political rights actionable in a court of law but denies social and cultural rights. This makes addressing social and cultural norms that perpetuate inequities among women and girls, including in health, extremely challenging. Although Nigeria ratified CEDAW in 1985, implementation is insufficient. Nigeria created a Department of Women Affairs in the Federal Ministry of Women Affairs and Social Development, which serves as the vehicle for improving equity for women and children. The National Women Development Center was established to activate a Women Development Center in each state. There are gender focal points in some of the ministries, but overall there is a lack of coordination or coherent framework for cooperation between and among entities. Furthermore, there is a lack of a legal framework to support access to justice, where most legal cases regarding domestic violence, discrimination, and others never reaching trial. Legal enforcement is equally weak, with inadequate police protection, poor monitoring or enforcement, with law enforcement agents many unaware of existing laws or policies.

Key donors, bilateral organizations, and NGOs supporting, funding, and providing technical support for NTD elimination and control include: USAID, the UK Department for International Development (DFID), Japan International Cooperation Agency (JICA), the Netherlands, the World Bank, the European Commission and the Children’s Investment Fund Foundation, UN Women, WHO, and United Nations Population Fund (UNFPA), United Nations Children’s Fund (UNICEF), Sightsavers, CBM International, Health and Development Support, Helen Keller International, The Carter Center, and Mission to Save The Helpless, among others. Partners in gender in government include: the Ministry of Women Affairs and Social Development Gender, the Central Bank of Nigeria Microfinance Microcredit, the National Bureau of Statistics, the Ministry of Education, FMOH, and the National Directorate of Employment, among others.

Implications for NTD programming

Overall, women are less exposed to health messaging and awareness campaigns than men, and their access to health services is limited due to the heavy burden of household and childrearing duties and cultural and social norms that prohibit them from seeking care. In a study on OV, researchers found only about half of those infected knew how the origin of their symptoms or how the disease was transmitted. Although women were more commonly infected, they had poorer knowledge than men on the disease and transmission pathways.¹⁷⁸ Women’s knowledge and use of effective WASH can have positive health impacts on the entire household, including drinking and serving clean water, insisting on hand washing before eating and after defecating, leading efforts to build latrines, bathing and washing clothes in non-affected water, and wearing shoes.¹⁸⁵ In a study using the 2013 Nigeria DHS, it was found that when women were educated, the rates of child deworming uptake increased significantly; 9.4 percent for children whose mothers had no formal education compared with 42.5 percent for children whose mothers had more than secondary education. The same study found differences in rates of child deworming between wealthy and poor families (7.9 percent for the lowest wealth quintile 39.1 percent

for the highest) and urban versus rural (28.4 vs 15.2 percent) areas.¹⁸⁶ Informing parents, particularly women, about keeping children's faces clean of ocular and nasal discharge, risk factors for trachoma infection, can further help reduce household infection rates.

Nigeria has made significant progress in its collection of sex-disaggregated data for MDA. In 2013, 76 percent of districts collected sex-disaggregated data, and by 2016, 100 percent of districts were doing so.⁵⁰ Sex-disaggregated data provide insight into NTD service delivery, Data from 2016 show a significantly higher MDA coverage rate for women and girls by 12.5 percent, compared with the coverage rate for men and boys. This was the largest gendered coverage difference of all countries in the Cohn et al. study.⁴¹ This represents a major coverage gap and should be a primary area of concern. ENVISION data show that urban areas experience greater MDA challenges because community members go to buy/sell at market, pray, or work in neighboring communities, limiting their availability for MDA.

The emphasis on gender-sensitive plans and activities in the NTD Master Plan is reflected in state-level activities. According to the ENVISION work plan, the Government of Nigeria supports trainings that includes gender sensitization and mainstreaming modules that emphasize the importance of recruiting women drug distributors and supervisors. Studies show that deploying women community health workers and community-led decision-making can contribute to lowering disease burden. Local and known health workers can help assure that information is provided in locally acceptable languages, observing context-specific customs and culture. For example, in a study in Nigeria, researchers "found that when comparing different SCH control programs, those offering their target communities greater decision on where and when to distribute medication had higher coverage rates."^{187,188} Yet despite the benefits of deploying women community health workers, women are still underrepresented in the NTD workforce in Nigeria. Sex-disaggregated data from 2012 to 2017 show that 39 percent of the drug distributors and 33 percent of supervisors/trainers trained by USAID-funded programs for NTD programming were women. Although the exact professions of these trainees are not known, they are likely FMOH staff, volunteers, teachers, and/or health professionals.⁶⁰

Discussion

Pregnant women's biological vulnerability to NTDs coupled with high maternal mortality and poor perinatal healthcare access highlights the need for improved care. Addressing helminth-induced anemia and low birth weight, risk factors for maternal and child morbidity and mortality could be critical in achieving SDGs. Poor NTD knowledge about is common among men and women, including transmission routes, symptoms, and treatment. In some settings, women and men have different means of obtaining information and need unique, culturally, and contextually appropriate avenues for communication. Education, access to information and capacity building are critical to reducing NTD infection rates for women, men, girls, and boys. Gender disparities in health information and education signify the need to engage entire households and communities about transmission and prevention. Increasing women's knowledge and use of good hygiene and sanitation can have positive health household-level impacts .

Although Nigeria's constitution, National Gender Policy, and signature on CEDAW, promote gender equality, corresponding budgets, implementation plans, enforcement, and knowledge on laws is absent. These weaknesses, combined with entrenched formal and informal rules that reflect kinship patterns, Sharia law, inheritance laws, and social and cultural norms, all situate women and girls as second-class citizens, resulting in higher poverty rates and disparities in health, education, and other sectors. Improving Nigeria's NTD and general health outcomes requires attention, understanding, and acknowledgement of gender. Policies and mandates across all sectors must consider gender to improve women and girls' status. This includes: strengthening national, regional, and local public health systems, supporting community health workers, improving WASH, nutrition, and education, prioritizing rural

areas where access to adequate health facilities is poor; and addressing harmful social and cultural norms that place women and girls in disadvantaged positions within Nigeria and their households.

Tanzania

Findings

Country situation

The United Republic of Tanzania is the largest country in East Africa and one of the continent's fastest growing economies. Over the last decade, Tanzania has averaged 6–7 percent growth annually. In 2017, the GDP per capita was US\$936. However, this growth has been uneven, and the poverty rate has declined only moderately:ⁱ from 59.9 percent in 2007 to 49.1 in 2011.⁸⁶ Furthermore, the absolute number of people living in poverty has remained steady due to a high population growth rate of around 3 percent. Poverty reduction has been accompanied by improved human development outcomes and living conditions. Better health outcomes have driven this progress, along with strong gains in education and income. In 2018, Tanzania ranked 154 out of 189 countries on the Human Development Index. One of the weakest areas of performance was expected years of schooling.⁸⁷

Nearly twice as many men have formal education (19 percent versus 10 percent), with the greatest disparity among older men and women. Approximately 72 percent of women and 82 percent of men are literate. Among younger age groups, the gendered educational divide is decreasing, which indicates that gender equality in education is improving. Access to education has a direct impact on NTD control and elimination; more-educated women have healthier, more-educated children. Literacy can improve access to essential health or other information; and, if girls or boys are out of school, they are more likely to miss critical opportunities for deworming or preventive medications.³⁴

Of Tanzania's population of 57 million, 70 percent lives in rural areas. Women make up 50 percent of the population, but gender inequities persist. Tanzania's population growth is driven by high fertility rates and declining mortality. In 2016, the estimated total fertility rate was five children per woman, and youth (aged 0–14) constituted 44 percent of the population, making Tanzania one of the youngest and most rapidly growing populations in the world. At the current growth rate, Tanzania's population is projected to reach 70 million by 2025.¹⁸⁹ In 2018, 77.5 percent of Tanzanian women and 85.9 percent of men over age 15 were formally and informally employed. Of this working population, 69.4 percent of women and 63.5 percent of men worked in agriculture.⁹⁵

Health and NTD status

There has been significant progress across many health indicators in Tanzania. In 2016, life expectancy was 65.7 years; in 2017, the under-5 mortality rate was 54 per 1,000 live births and the infant mortality rate was 38.3 per 1,000 live births. Maternal mortality rates are improving quickly—down from 608 per 100,000 live births in 2007 to 398 per 100,000 live births in 2015. This can be partly attributed to an increase in attended births, currently 64 percent, and a lower adolescent fertility rate—117 births per 1,000 women aged 15–19.⁸⁶

Improved water and sanitation remain major challenges, especially in rural areas. In Tanzania, 79 percent of urban and 37 percent of rural households have clean drinking water access. Similarly, 37 percent of urban and 17 percent of rural households areas use improved sanitation. Nationally, 47 percent of the population has access to basic hand washing facilities including soap and water.⁸⁶

Many Tanzanians lack access to high-quality health services, and there is chronic under-nutrition and high, although improving, maternal mortality rates. On average, women have five children; with nearly

ⁱ Poverty headcount ratio at \$1.90 a day (2011 PPP) (% of population)

25 percent of women would like to prevent pregnancy but lack access to sexual and reproductive health services and commodities. In line with high rates of child marriage, 23 percent of girls aged 15–19 are pregnant or have already given birth to a child. More women than men are interested in limiting childbearing.³⁴ High fertility rates have direct implications for NTD programming because pregnant women cannot take certain PC drugs. Furthermore, the HIV epidemic continues to undermine health and wellbeing, and women comprise almost 55 percent of people living with HIV. The HIV prevalence among women is 5.5 percent compared with 3.4 percent among men.¹⁹⁰

LF, trachoma, OV, SCH, and STH are all endemic in Tanzania, and much of the population is at risk for two or more diseases. Tanzania has made great progress towards elimination goals—as of 2018, 77% of LF-endemic districts were under post MDA, pre-validation surveillance and 80% of trachoma-endemic districts have stopped MDA. Still, over 6 million people are at risk of OV infection (in 27/186 districts) and 100% of districts are endemic for SCH and STH. According to a 2011 study, Tanzania has high rates of FGS.¹⁹ STH has not been fully mapped, but is believed to be endemic throughout Tanzania.¹⁹¹

Recent studies show that gender is a leading predictor of health inequalities, including morbidity and mortality rates for men and women affected by NTDs in Tanzania.¹⁶¹ Some studies have found that men are more affected by SCH due to exposure, whereas women suffer more from trachoma.¹⁵ Although men are less exposed to certain NTDs, when accounting for poverty, location, and age, the results shift. Older, poor men who live in rural areas without access to health services are at greater risk for NTDs compared with their younger, wealthier, more urban counterparts.¹⁹²

Multiple studies have been conducted in Tanzania that look at the connection between HIV and FGS. HIV is highly prevalent in Tanzania, as is FGS, which disproportionately affects women under 30 years of age. According to a study by Downs et al., in 2011 the national HIV prevalence rate was 5.9 percent, but was 17 percent among women with FGS. They found that FGS is a risk factor for HIV and could be a contributing factor to high rates of HIV among young women and lead to more rapid HIV progression.¹⁹ FGS also adds to the disease burden among women, due its sexual and reproductive health impact FGS is not the only form of SCH that has a direct impact on other areas of women's health. *Schistosoma mansoni* is highly prevalent in Tanzania, particularly among young women. It has been found to increase risk of anemia, which can be dangerous during pregnancy.¹⁹³ In Tanzania, in 2017, 48 percent of pregnant women were anemic.

Gender considerations in NTD infection

Tanzania ranked 130 out of 160 on the 2018 GII, a composite measure of inequality between the sexes.⁸⁷ Inequality between men and women is evident in high rates of adolescent pregnancy, gender gaps in literacy and in secondary and tertiary education, high rates of maternal mortality, low decision-making power for women, high rates of unmet family planning needs and violence against women. Many of these inequities women are rooted in entrenched gender norms and power dynamics, which shape opportunities, behaviors, and attitudes.¹⁹⁴ Women, particularly married women, have less control over their lives than men do. In 2017, 35 percent of women did not make decisions about their own health care, major household decisions, or visits to family.⁸⁶ Decision-making power varies by region and level of education: urban and educated women tend to be more empowered. Only 8 percent of women participate in household decision making in Mara (northern Tanzania) compared with 64 percent in Kilimanjaro. More than 50 percent of women say that their husbands must always know their location.³⁴ In general, rates of controlling behaviors over women, such as marital rape are high.¹⁹⁴

Although early marriage is declining in Tanzania, the rate for women is still high. The average age of marriage for women is 19 years, 5 years younger than the average age of marriage for men. More than 30 percent of women aged 20–24 were married by the age of 18.⁸⁶ This is in part because the legal age of marriage for girls is 15 years, or 14 with parental permission and 18 for men.^{189,195}

In Tanzania, women are severely disadvantaged compared with men in terms of income and financial independence. Employed women are twice as likely as employed men to report being doing unpaid labor. Among women who are paid for their work, 73 percent report earning less than their husbands. Seventeen percent of women report that their husbands decide how to spend their earnings.³⁴ Women spend 2.5 times as many hours on household tasks and do the vast majority of the childhood caregiving. According to a 2017 study in Tanzania, 71 percent of women and 63 percent of men believe that a woman's most important role is to take care of the home and cook for the family.¹⁹⁴

GBV against women is common in Tanzania: 10 percent of women underwent female genital mutilation; 60 percent have experienced physical or economic violence, 33 percent sexual violence, more than 60 percent emotional violence; and 44 percent of ever married women report physical or sexual by their partner. In Tanzania, 54 percent of women believe that a man is justified in beating his wife. Interestingly, only 38 percent of men believe it is justified to do so.¹⁹⁶

Women typically engage with the health system more than men, largely reflecting the time that women spend at clinics during pregnancy or childbirth.¹⁹⁴ Interestingly, interaction with the health system, such as having knowledge of HIV status, does not affect men's risky behaviors. Cubbins et al. found that traditional gender attitudes are barriers to preventing HIV/AIDS that increased knowledge about risks may not overcome. Men are also less likely to be tested for HIV—only 40 percent of men have been tested compared with 55 percent of women.³⁴ This mirrors a broader pattern of men having more limited health-seeking behavior, which could potentially translate to lower uptake of PC for NTDs. This suggests that access to information may not change deeply rooted beliefs and behaviors, that could affect PC uptake.¹⁹⁷ This is especially important in light of the lower MDA coverage among men in Tanzania.

Health system, financing, and women's participation

The Government of Tanzania currently spends 2.2 percent of its GDP on health care, which is significantly lower than the 15 percent target set by the Abuja Declaration. This means that the government's expenditure accounts for only 35 percent of the total health expenditure.⁸⁶ The country is thus heavily reliant on donor funding for health care financing.

In Tanzania, service delivery, leadership, and governance are decentralized. Regional Health Management Teams provide technical supervision to Council (District) Health Management Teams that develop plans and budgets and implementation and monitor programs. The Tanzania NTD Control Program is under the Ministry of Health, Community Development, Gender, Elderly and Children (MOHCDGEC). Within the Ministry, NTD programming falls under the Office of the Chief Medical Officer, Directorate of Preventative Services at the Tanzania National Institute for Medical Research. The Tanzania NTD Control Program works through Regional Health Management Teams, Council Health Management Teams, and local communities to plan and implement NTD control activities.

Tanzania's Health Sector Strategic Plan IV lays out specific guidelines and goals for gender and health. The plan states that gender mainstreaming, integration, coordination, and GBV reduction are priorities for the health and health-related sectors. In 2015, the MOHCDGEC committed to ensuring equitable service provision; creating gender-balanced decision-making mechanisms and governance structures; and analyzing gender issues and the underlying drivers of inequities—including structural, policy, and budgetary processes—using disaggregated indicators.¹⁹⁸

Tanzania's Minister of Health and Social Welfare is a woman, which is a sign of progress in terms of gender equality and women's empowerment. However, gender balances, discrimination, and patriarchal systems persist.¹⁹⁹ A 2004 World Bank strategic assessment recommended incorporating more gender-transformative objectives in policies and plans and greater gender consideration during budgeting.²⁰⁰ However, since that recommendation, little progress has been made. According to Acosta et al., there

are still many gender-blind policies, insufficient integration of gender in policies, and limited enforcement of gender or gender-responsive policies.²⁰¹

Tanzania's Strategic Master Plan for NTDs (2012–2017) is the guiding policy document for the national NTD program. The Master Plan does not focus on gender or the unique needs of men and women. It does discuss the importance of women's groups for community engagement, social mobilization and PC distribution for STH and SCH at clinics for pregnant and lactating women.

The United Republic of Tanzania developed its second Five-Year Development Plan (2016/7-2020/1) with the aim of more evenly distributing income growth and social development across income groups and urban and rural populations.²⁰² The government established the Tanzania Vision 2025, the goals of which include peace, stability, good governance, improved education, a competitive economy, and higher quality livelihoods. Under health, Vision 2025 lays out a gender direction and philosophy for longer-term development and prioritizes gender equality and empowerment of women.²⁰³

The MOHCDGEC guides policy development, leads strategic planning, and provides guidelines to districts on health program implementation and service delivery. In addition to provisions in development plans and health policies, the MOHCDGEC has championed specific gender laws and policies. The constitution, originally adopted in 1977, was amended in 2005 to include provisions of equality before the law. It calls for increased women's participation in Parliament. That same year, the MOHCDGEC developed the National Strategy for Gender Development, which requires the Tanzanian legal system to consider women's rights as human rights, and community availability of legal frameworks in the local language, Kiswahili. It requires the review and repeal of discriminatory laws, such as the Marriage Act. Furthermore, it calls for the amendment of inheritance laws and the Sexual Offences Act (regarding female genital mutilation).²⁰⁴ However, while some Tanzanian laws and strategies support gender equality and women's empowerment, they have yet to be fully operationalized. Tanzania ranked 101 out of 118 in the 2019 Social Institutions and Gender Index.⁹⁸ The index ranked Tanzania's family code as "highly discriminatory," and physical integrity and resources and assets as "highly restricted."

Improving the status of women and girls in Tanzania is a priority for both the Government of Tanzania and for USAID. According to USAID's HSS Strategy (2015–2019), there are many health system challenges in Tanzania that hinder the achievement of development goals, such as a shortage of health care workers, health commodity stock-outs, and insufficient financing.²⁰⁵ The first development objective of the USAID Country Development Cooperation Strategy (CDCS) is for women and youth to be empowered. The CDCS states that "USAID will increase the capacity of the [Government of Tanzania] and other key Tanzanian stakeholders to empower women and youth to be healthy, educated and active participants in society." (p.16) USAID intends to focus on technical assistance for gender equality and to build the Government of Tanzania's capacity for service delivery and to better support women and youth. The CDCS stipulates that programming should include a gender action plan that considers gender gaps and opportunities and allows for leadership opportunities for women. This presents a great opportunity to make gender a significant component of the Act | East Program. USAID has also made HSS a priority in Tanzania. The USAID HSS Strategy, which is set to expire this year, aimed to support development of a sustainable health system that is responsive to the needs of all Tanzanians. It focuses on three interconnected areas: quality integrated services, HSS, and healthy behaviors. This strategy, along with the CDCS, provides a platform for collaboration and advocacy for NTD programming, specifically as it relates to HSS and gender activities.

Implications for NTD programming

MOHCDGEC's Office of the Chief Medical Officer, Directorate of Preventative Services, oversees the NTD Control Program, which is largely integrated into the primary health care system. At the community level, CDDs are trained in household distribution. Tanzania was able to stop LF MDA in 74 districts, and

anticipates stopping the rest in 2019, reaching national LF elimination by or before 2020, trachoma elimination by 2020, and OV by 2025.

Tanzania has made significant progress in its collection of sex-disaggregated data for MDA. In 2012, 72 percent of districts collected sex-disaggregated data, by 2014, 100 percent of districts were doing so. Unfortunately, in 2016 this number fell to 99 percent, which shows the need to continued advocacy.⁵⁰ Data from 2016 show that the MDA coverage rate for women and girls was 7.1 percent higher than among men and boys.⁴¹ This represents a major gap in drug coverage, especially considering that pregnant and breastfeeding women are not targeted for certain medications, and therefore not included in this higher coverage. To address these challenges, the ENVISION Tanzania FY18 Work Plan includes supporting the government to analyze sex- and age-disaggregated MDA data to identify challenges and improve program planning. Although qualitative data are not available to understand the nuanced and gender-related barriers to MDA uptake, the ENVISION project identified Liwale District as a priority for community engagement, sensitization, and social mobilization to increase the demand for and uptake of trachoma MDA, due to challenges around strong cultural and traditional beliefs, seasonal migration of nomadic pastoralists, misinformation, and rumors. Nationally, the NTD program found challenges for SCH treatments offered in schools, which could exclude out-of-school children.

Tanzania has almost achieved parity in its human resources for NTD programming. Sex-disaggregated data from 2012 to 2017 show that 49 percent of the drug distributors and 42 percent of supervisors/trainers trained by USAID programs for NTD programming were women. Although the exact professions of these trainees are not known, they are likely MOHCDGEC staff, volunteers, teachers, and/or health professionals.⁶⁰ Tanzania has one of the most equitable groups of USAID-supported trainees for NTD programming, which should be a model for other countries and studied for its impact.

There are many opportunities for cooperation and partnership in Tanzania, which could be leveraged to expand NTD knowledge and elimination buy-in among healthcare workers. For example, Engender Health's work with MOHCDGEC on family planning, gender issues, HIV integration, and Jhpiego's HIV and midwifery workforce programs. USAID has a project called Tumaini (Hope), which supports gender equality and women's empowerment through "strengthening women- and youth-friendly policies at the national level, working with communities and local government to increase women's equality and youth inclusion, and ensuring that Tanzanian women and youth are healthier and more productive."²⁰⁶ There are many PEPFAR-funded interventions, many of which have both gender and HSS components. Finally, international donors supports several women's empowerment programs, particularly political empowerment, aimed at increasing women in leadership positions.

Discussion

The gender dynamics, norms, and behaviors in Tanzania are underlying drivers of inequality, including imbalanced power dynamics and relations. These gender issues impact NTD programming and morbidity and mortality rates for men and women affected by NTDs.¹⁶¹ The intersectionality of vulnerability, or overlapping disadvantage, further disadvantages some populations and influences access to treatment. Poverty, location (urban/rural), and age affect NTD outcomes, and these and other sociodemographic factors should be considered when designing and implementing NTD programs. Additionally, given the higher rates and faster progression of HIV infection in women with FGS, there is an urgent need to invest in FGS prevention, screening, and treatment. Furthermore, *schistosoma mansoni* should be prioritized as it is highly prevalent, can increase the risk of anemia, and almost half of pregnant women in Tanzania are anemic, which can be particularly dangerous during pregnancy.

Beyond infection, these results indicate the need to develop for NTD education, prevention, screening, and treatment interventions that reflect local needs and context. Because FGS adds significantly to the

disease burden of all women (e.g., infertility, ectopic pregnancy), providers must be able to accurately and consistently diagnose and treat the disease. Better understanding how gender impacts access to treatment, and the gap in MDA coverage of boys and men could identify opportunities to address gender-related barriers to MDA uptake. Furthermore, there has been insufficient research on how men's controlling behaviors and women's low levels of decision-making power impact women and children's treatment seeking for symptoms of NTDs. Finally, GRB and gender transformative policymaking are not prioritized currently. This area needs to be investigated to understand how progress could be made, the role of women in policymaking and how gender could be further incorporated into the policy-making and budgeting processes.

Uganda

Findings

Country situation

Uganda is a geographically small landlocked country in Central-East Africa. Although it is a politically stable nation, it shows varied signs of fragility, including high numbers of refugees, risk of natural disaster, and chronic economic vulnerability for many citizens. It has a population of 42.86 million and an annual growth rate of 3.26 percent. The estimated total fertility rate is 5.6 children per woman, and youth (under age 14) constitute 48 percent of the population, making Uganda among the youngest and most rapidly growing populations in the world.⁸⁶ If not managed well, this rapid population growth could undermine development gains. In June 2018, Uganda established a new National Population Policy to take advantage of the population dividend to transform and develop the country.²⁰⁷

Uganda has made significant economic and social progress, with a 5.7 percent average annual GDP growth rate for 2008–2017. GDP per capita rose from US\$450 in 2008 to US\$604 in 2017. However, economic and social inequalities continue across regions, social groups, and rural and urban communities. The poverty ratioⁱ declined only slightly from 43.5 percent of the population earning at or below US\$1.90/day in 2009 to 41.6 percent in 2016.⁸⁶ Furthermore, Uganda dropped from 110 on the Human Development Index in 2012 to 162 in 2018.⁸⁷ Considering that NTDs and poverty are inextricably linked, this high poverty rate is concerning. Additionally, conflict in neighboring countries, including South Sudan, the Democratic Republic of the Congo, the Central African Republic, Somalia, and Burundi, has led to social and political instability, population displacement, and an influx of refugees and asylum-seekers, currently estimated at 1,505,323 people.ⁱⁱ²⁰⁸ Uganda is also prone to natural disasters such as drought, flooding, and landslides, which have led to internal displacement. Large numbers of internally displaced persons and refugees are stretching the health and social services in host communities.²⁰⁹

In 2018, 65 percent of Ugandan women over the age of 15 were formally and informally employed, compared with 74 percent of men. Of those in the labor force, 65.9 percent of men and 76 percent of women work in the agricultural sector.⁹⁵ In Uganda, the gender parity in primary school is largely due to Uganda's policy for free Universal Primary Education. However, at the secondary level, enrollment is low overall, but lower for girls than boys.²¹⁰ According to the most recent data, 79 percent of adult men and 70 percent of women, are literate. Women are overrepresented in unpaid subsistence, domestic, and care work,²¹¹ which disproportionately exposes them to various NTDs.

Health and NTD status

Uganda's inequality is reflected in the unequal access to clean water and improved sanitation. Ninety percent of urban households have access to clean drinking water, while 74 percent do in rural areas.

ⁱ Poverty headcount ratio at \$1.90 a day (2011 PPP) (% of population)

ⁱⁱ As of August 13, 2018. Based on data from the Office of the Prime Minister as of August 14, 2018 and subject to ongoing biometric registration and verification.

Similarly, 27 percent of urban households and 16 percent of rural households use improved sanitation. Nationally, 20 percent of families use a shared sanitation facility, 55 percent use an unimproved facility, 7 percent have no facility, and 60 percent of households have a place for handwashing.²¹²

In 2016, life expectancy was 59.9 years; in 2017, the under-5 mortality rate was 49 per 1,000 live births, and the infant mortality rate was 35.4 per 1,000 live births. Unequal gender dynamics are reflected in women's health outcomes. As of 2015, the maternal mortality ratio was 343 per 100,000 live births. When pregnant, 3 in 10 women receive antenatal care visit in the first trimester, as recommended and 3 in 5 women receive four or more antenatal care visits. Less than 75 percent of births are attended by a skilled health professional. In 2016, the adolescent fertility rate was 111 per 1,000 women aged 15–19.⁸⁶ Approximately one-third of pregnant women are anemic and rates are increasing. Additionally, one-third of all women aged 15–49, are anemic compared with 16 percent of men.²¹²

Despite progress towards OV, trachoma, and LF elimination, LF is highly endemic in parts of Northern and Eastern Uganda, with prevalence over 30 percent in some areas. Trachoma is endemic in all mapped districts, women and girls face increased risk, and rates in children range from 30 to 75 percent. An estimated 2 million people are infected with OV, and nearly 3 million people are at risk. Approximately 5.4 million people are infected with SCH, and 10.9 million are at risk. Of the 93 SCH-endemic districts, 37 are considered high risk, 13 moderate risk, and 43 low risk. STH is endemic in all 128 districts.⁵² The HIV prevalence rate among women aged 15–49 is 7.3 percent, compared with 4.5 percent for men. The rate for young women is 3 times as high as for young men. The rate for female sex workers is more than 34 percent.²¹³ These higher HIV prevalence rates are a direct result of women's limited control over their sexual and reproductive health.²¹⁰ High rates of HIV in Uganda are relevant to NTD programming because FGS infection leads to greater HIV susceptibility.⁸⁶ People living in refugee communities experience additional health challenges, such as healthcare interruptions, which can result in higher maternal and infant deaths.

Gender considerations in NTD infection

In Uganda, some of the most prominent displays of gender inequalities and power imbalances are child marriage, polygamy, cross-generational relationships, and high adolescent fertility rates, all of which are associated with higher rates of GBV and rapid population growth. Almost 40 percent of Ugandan women are married by 18, and 25 percent of adolescents aged 15–19 are or have already been pregnant.²¹²

In 2017, the GII ranked Uganda 126 out of 160. Uganda performed worse than its sub-Saharan African peers in measures of adolescent fertility and education achievement for both sexes. These measures of gender inequality are important because gender inequalities result in different levels of disease exposure, vulnerability, and responses health outcome disparities.²¹⁴ Gender inequality is often rooted in cultural norms, beliefs, and deeply entrenched power imbalances. The relative power that women and men have in a household dictates who makes health decisions and whose health needs are met,²¹⁵

Gender inequalities affect NTD elimination and control. Differences in educational attainment mean women are less likely to understand NTDs transmission, symptoms, and management. Women are more vulnerable to trachoma infection because they care for children who may harbor the disease, and they do housework where infected flies can be found. Additionally, if a household member becomes disabled, women tend to take on the burden of care, or a daughter may be withdrawn from school or work to do so, especially if it is the mother who becomes disabled. This perpetuates a cycle of lower educational outcomes for girls and gendered poverty. Disability disproportionately affects women and children, and when living with disabilities they are more vulnerable to poverty and social exclusion. Ugandan women with disabilities report challenges accessing antenatal care due to health workers' bias against people with disabilities having children.

One of the greatest challenges to equitable healthcare access and uptake for women is their lack of financial and decision-making power.²¹² In Uganda, household decision making is unequal, with 37.5 percent of women participating in making decisions about their own health care, major household purchases, and visiting family.⁸⁶ In parts of Northern Uganda, men tend to have complete control over women, resources, and health-related decision-making. In turn, many women are unable to negotiate safer sex, access sexual and reproductive healthcare, and are more likely to be coerced into sex or experience intimate partner violence. Rates of sexual violence and GBV are high, with 22 percent of women experiencing sexual violence and 22 percent experiencing physical violence. Over 55 percent of ever-married women have experienced intimate partner violence, and half of women agree that a husband could be justified in beating his wife. In Uganda, as in elsewhere in the world, the costs of GBV are high. In 2016, it was estimated that the annual cost of intimate partner violence was more than US\$22.4 million.²¹⁶ Furthermore, intimate partner violence and rape account for a 5 percent loss of healthy life years for women of reproductive age.²¹⁷ The causes of GBV and intimate partner violence are multifaceted and complex, but they are deeply rooted in unequal power dynamics, harmful customary norms, and unequal access to and control over resources. Rates of GBV and intimate partner violence are higher in post-conflict regions, which aligns with research showing that armed conflict exacerbates gender inequalities and increases women's vulnerability to and risk of violence.²¹⁸

Uganda's NTD programming must consider the needs of men and boys and social constructs of masculinity. Ugandan men are expected to be powerful and dictate household decision making, including health decisions, which can be detrimental to family health outcomes.²¹⁹ Men themselves can be particularly at risk: in Uganda, low treatment-seeking behavior can delay timely treatment.²¹⁵ Furthermore, men in Uganda tend to be more distrustful of medications and more likely to be away from home during MDA campaigns.

Health system, financing, and women's participation

Due to competing priorities, the government of Uganda decreased its government health sector expenditure from 7.5 percent in 2008 to 5.6 percent in 2015, which is lower than the 15 percent target set by the Abuja Declaration. In 2015, the government's expenditure on health of US\$6.20 per capita fell short of the WHO recommendation of US\$33.00, and Uganda's Health Sector Strategic Investment Plan's target of US\$17.00.²¹⁵ Out-of-pocket spending is around 37 percent, which is above the recommended maximum of 20 percent, raising concerns around equity and financial risk for the poor. Low government health expenditure means that Uganda is heavily reliant on external support, which accounts for 40 percent of health expenditure.⁸⁶ In general, the high burden of disease coupled with a weak health system and low levels of education means that a large proportion of the Ugandan population has low resilience in the face of external shocks and stressors.²²⁰

Uganda's national health system and health services delivery framework incorporate the public and private sectors, with the public sector accounting for 44 percent of services. The MOH oversees leadership and governance, but the health system is decentralized and local governments plan, budget recruit and manage personnel, and delivery services. According to USAID, "systems in Uganda are weak and are plagued by corruption, patronage and neo-patrimonialism that generate high levels of inefficiency, public distrust and poor services to Ugandans." (p. 4)²²⁰ At the national level, all three MOH officials and eight out of 25 senior managers are women. However, traditional norms and responsibilities affected women's participation. For example, village health team participation is voluntary, but many women must prioritize household and childcare duties. The MOH is moving toward a model that trains and pays educated community workers. Where monetary incentives are involved, women risk being excluded if thoughtful efforts are not made to ensure recruitment equity.

Uganda has made impressive strides in gender equity in budgeting, planning, and distribution of public resources. The government has worked to ensure that gender issues are addressed through planning and budgeting process, which has led to positive results in national and local education, health, and rule of law.⁷⁵ In 2015, the Government of Uganda introduced new sections into the Public Finance Management Act that require a gender lens in all planning processes. Government ministries must present a Certificate of Gender Equity Compliance from the Equal Opportunities Commission within the Ministry of Gender, Labor and Social Development before their budget, policy, or plan is approved by Parliament. The certificate verifies that the budget or policy is gender and equity responsive and has measures to further gender equality.⁷⁶ To build this capacity, institutions of higher learning offer courses on gender budgeting, government officials receive training, and efforts have been made to include gender targets in performance reviews. Local governments are encouraged to use gender-aware budget statements and conduct sex-disaggregated beneficiary assessments, however, adherence is mixed.⁷⁵

Historically, social factors, such as patronage and misogyny, and the opportunity cost of participation have undermined women's participation. Women's councils have been established at all levels of government to help women rise into leadership positions. There is an affirmative action provision in the Local Government Act of 1997, which creates avenues for women's political participation. Finally, Uganda has established a quota system mandating that a third of Parliament be women.²²¹ However, analysis of existing policies shows that despite these measures, challenges with implementation and impact are commonplace, and women's ability to influence policy and decision-making remains limited.

Policies, Strategies, and Resources

Uganda's social and legal frameworks promote human rights, good governance, peace, and security. Investments in reducing gender inequalities have potential to improve women's rights and equality. Over the last decade, laws and policies have strengthened women's political participation and land rights, among other steps toward equality. In 2010, the Government of Uganda established Vision 2040 to modernize the country, slow population growth, and transform into a competitive upper middle-income nation. Reduction of gender gaps in political participation, education, health, and the economy is prioritized. It also states that, "effort will be made to ensure gender responsive policies, programs and actions, [and that] deliberate policies and programs will be put in place, to facilitate [women] to equally participate in the development process." (p.64)²²²

Uganda established the National Gender Policy in 2007 to: reduce gender inequalities, including GBV, increase human rights knowledge; strengthen women's decision-making capacity and presence in political processes; and include of a gender lens during policy formulation, implementation, and measurement. It obligates the MOH to encourage and enable gender mainstreaming in health care and service delivery to ensure equitable benefit from the Uganda Minimum Health Care Package.²²³ Since the Gender Policy was established, several national policies have included provisions on gender equality, women's empowerment, or GBV. In 2010, Uganda criminalized domestic violence and female genital mutilation.⁸⁹ The 2015–2020 National Development Plan II prioritized GBV as a priority for achieving economic growth and transformation and emphasized the importance of women's equal participation and leadership at all levels of decision making in political, economic, and public life.²²⁴

However, gaps and challenges remain in the realization of women's rights and the elimination of discriminatory laws. Despite the constitution guaranteeing equality between women and men before the law, women cannot apply for a passport in the same way as men, sons and daughters, and female and male surviving spouses do not have equal inheritance rights, and there is no legislation on sexual harassment in education.¹⁰⁵ Despite the health sector provisions in the 2007 Gender Policy, multiple health policies have been developed without mention of gender or women. The Ugandan health sector is guided by the 2015–2020 Health Sector Development Plan, which outlines strategies to accelerate

movement toward Universal Health Coverage. It highlights equity as a key principle, “delivering health care which does not vary in quality because of personal characteristics such as gender, race, ethnicity, geographic location, or socioeconomic status”—but the Plan does not fully incorporate a gender lens.

To achieve the Health Sector Development Plan goals, the health sector has several policy and planning frameworks: the Health Sector Strategic and Investment Plan 2010/11–2014/15, National Health Policy II (2010/11–2019/20), the Uganda Minimum Health Care Package, and the Health Ministerial Policy Statement 2011/2012. The 2015 health financing strategy, which is meant to promote progress towards Universal Health Coverage, emphasizes equity in resource mobilization and allocation and calls for the establishment of an equity fund to “subsidize the indigents.”²²⁵ However, this policy does not sufficiently incorporate a gender lens. The 2016–2021 Strategy for Improving Health Service Delivery offers presidential directives for health sector improvements to attain middle-income status by 2020 but does not mention equity, equality, women, gender, or sex.

Along with Nigeria, Uganda's NTD Master Plan is one of the most gender sensitive. The Uganda 2012–2015 NTD Master Plan states that “implementation of the [NTD] program will be guided by the right to health, with due attention to gender and equity issues...” The Plan’s = strategic objectives include developing an “integrated gender-sensitive multi-year strategic plan and annual operational plans for the prevention, control, elimination, and eradication of targeted NTDs.” The Master Plan states that it will collaborate with the Ministry of Gender, Labour and Social Development on community mobilization for health promotion, gender mainstreaming in budgeting, advocacy and GBV prevention, and policy development for social protection of vulnerable groups. In 2013, the MOH launched a new NTD Master Plan to control or eliminate NTDs by 2020. With support from ENVISION, the MOH created an integrated platform for NTD interventions, which will provide the structure and human resources for controlling and eliminating NTDs.²²⁶ According to WHO, remaining challenges include adequate funding, reliance on external partners, lack of quality data, and cross-border NTD transmission.²⁰⁹

Implications for NTD programming

Uganda is making progress toward its goal NTD elimination and control by 2020. The NTD Control Program successfully stopped LF MDA in 48 of 57 endemic districts, trachoma MDA in 43 of 46 endemic districts, and OV MDA in 18 of 38 endemic districts. However, this research suggests that NTD efforts not adequately addressed gender and social inclusion. For example, Anguzu et al. found that women’s lower socioeconomic status in Busia District of Uganda made it more difficult for them to participate in health programs and access vital information about NTDs or treatment.²²⁷ However, Rilkoﬀ et al. did not find a bias in terms of access to information or decision-making power regarding treatment access. These differences could be due to the regions in which the studies took place or the distribution strategy (centralized versus home based). In 2016, nationally there was a 3.0 percent higher MDA coverage rate for women and girls compared with the coverage rate for men and boys.⁴¹ Men experience barriers accessing NTD treatment due to distrust of medications. They are also more likely to miss MDA due to occupational roles outside the home. Women, on the other hand, miss beneficial treatment when they are pregnant or breastfeeding. Considering high fertility rates in Uganda, and the resulting high number of women not eligible for treatment, the gendered differences in eligible numbers treated were likely underestimated.⁵ Understanding nuanced, regional gender dynamics and how different distribution strategies influence access will provide an opportunity to achieve equitable coverage.⁵ However, without high-quality, sex-disaggregated data, this will not be possible, and according to a forthcoming paper by Daniel Cohn et al., Uganda was one of two countries, out of 32, that has not improved its collection such data. Instead, collection of sex-disaggregated data has gone down from 85 percent in 2014 to 66 percent in 2016.⁴¹

Quality of care during MDA was identified as a program weakness, where CDDs feel inadequately trained to answer NTD questions, medications, or eligibility. Some CDDs excluded all pregnant women from all NTD treatment, meaning they missed beneficial and safe treatment for SCH and STH. Alternatively, other CDDs administered contraindicated drugs pregnant and breastfeeding women, like ivermectin. This emphasized the need for better trained for CDDs.²⁷ Additionally; research found that women do not seek NTD treatment after giving birth or stopping breastfeeding. Therefore, CDDs should be trained to advise women to seek NTD treatment at health centers once they are eligible, and train healthcare staff to provide it.

Women are underrepresented in Uganda's NTD workforce. Sex-disaggregated NTD training data from 2012 to 2017 show that 32.5 percent of the drug distributors and 14.5 percent of supervisors/trainers trained by USAID-funded programs were women.⁶⁰ Although the exact professions of trainees are not known, they are likely MOH staff, volunteers, teachers, and/or health professionals. Outside of the official health workforce, the NTD program engages women, specifically women's associations, for advocacy and social mobilization.

There are national and international partners in the NTD, WASH, and HSS space in Uganda, presenting opportunities for collaboration and coordination. For HSS, IntraHealth is implementing the USAID-funded Strengthening Human Resources for Health (2014–2019) program, which includes developing and strengthening workplace gender and management guidelines. There are also many gender and health programs, including DREAMS—a community quality improvement program that uses evidence-based interventions to reduce HIV infection among adolescent girls and young women—and Saving Mothers Giving Life—a public-private partnership that uses a health systems approach to ensure that pregnant women have access to clean, safe childbirth services and lifesaving emergency care.

Discussion

Gender roles and dynamics, and structural barriers directly impact NTD programming. Women are at greater risk for trachoma and frequent contact with water puts them at higher risk of SCH. Furthermore, biological consequences are more severe for women. Women and girls are less knowledgeable about NTDs transmission, symptoms, and management and their roles as caregivers increase exposure. They are less likely to get surgery, when needed, or seek help, often due to low decision-making power, lack of access to finances, and the high opportunity cost of spending time away from home. Women and children face greater disability-based discrimination and are more vulnerable to poverty and social exclusion, which perpetuates a cycle of lower educational outcomes for girls and gendered poverty. Men face greater barriers to treatment due to distrust in treatment and medications and their likelihood of being away from home during MDA. Conversely, considering high fertility rates in Uganda, women are excluded from many NTD treatments while pregnant or breastfeeding. To ensure men and women, particularly pregnant and breastfeeding women, receive appropriate NTD treatment and guidance CDDs need additional training on medication eligibility, and availability outside of MDA Improved sex-disaggregated data are essential to ensure that drugs are distributed equitably. Additionally, there is a need to understand differences in coverage and ways to increase coverage rates for men and boys.

The power inequalities and gender norms described above are driving factors of intimate partner violence and GBV. These dynamics and incidences of intimate partner violence contribute to Uganda's high fertility rate and have direct implications for MDA. This is of greater concern for poor women: the poorest households tend to have less access to clean water and sanitation, higher rates of NTDs, and 3.3 more children on average compared with women living in the wealthiest households.²¹² NTD programming in Uganda must also consider the unique challenges and needs of internally displaced and refugee populations. Many of these migrants experience financial constraints; low access to quality

health care, and racial, ethnic, or religion discrimination. Furthermore, populations on the move are at higher risk of missing MDA.

Finally, despite some progress with gender-sensitive policies, gaps between laws and perceived and actual practices highlight the need to integrate a comprehensive gender-transformational approach. There are many platforms for reform and commitments to be upheld. Programs should advocate for an accountable health sector that addresses gender and equity concerns and uses budgets, policies, and human resources to drive gender and social equity forward.

Conclusion

This desk review aims to shed light on gender and social inclusion dynamics affecting NTD and HSS programming outcomes at the global and country levels. It explores how greater gender equality and equity of services contributes to NTD control and elimination and how harmful gender norms and roles affect and are affected by the health system, with a specific focus on NTD programming. The analysis looked at gender considerations at all levels of NTD programming within the health system—from human resources to financing to service delivery—to identify key barriers to and opportunities for enhancing gender considerations, accelerating progress towards NTD control and elimination, and building more equitable, resilient, and sustainable NTD programs and health systems.

The desk review reveals a lack of gender-sensitive and sex- and age-disaggregated data and uneven resources across countries. It is clear that gender, social, and cultural norms heavily influence health access, but there is a dearth of qualitative and quantitative data describing NTD exposure, susceptibility, and barriers to treatment. There is limited country-level information around some of the social circumstances that further expose men, women, boys, and girls to certain NTDs, such as who collects water and wears shoes, and when and how hands and faces are washed. The NTD community could benefit from further insights into gender-related barriers to NTD treatment and care and the role of community engagement and social mobilization efforts in addressing these barriers. There is insufficient knowledge and research into NTD drugs that are safe for pregnant and lactating women. Furthermore, although many governments and institutions are committed to gender equality and social inclusion, there has historically been an insufficient focus on implementing and integrating these considerations into NTD plans and policies.

NTD control and elimination goals can be achieved more effectively and efficiently with an understanding of and focus on gender issues to reach the most vulnerable and at risk. There are opportunities to better engage men, improve training and social mobilization, integrate gender across the health sector, and implement innovative approaches that incorporate an informed gender lens. Integrating gender into policies, program implementation, and monitoring will advance efforts toward national control and elimination goals, strengthen health systems, and also improve health service delivery across other diseases.

This desk review outlines key findings, gaps, challenges, and recommendations to accelerate achievement of NTD elimination and control goals. It is intended to complement the NTD and HSS assessments being undertaken by the Act | East Program. Findings from both analyses will be used to inform a gender strategy and action plan for the Act | East Program. The strategy document will be based on these recommendations, program objectives and activities, and informed by more in-depth discussions with the Act | East team and national counterparts. It will address more specifically how to integrate gender into national policies and programs in order to reach national objectives and Act | East Program goals. Field investigation, surveys, key informant interviews, and focus groups will be conducted in the future as part of the Act | East in-depth sustainability assessment of selected countries to further refine action plans and activities.

Appendix A – Key Terms*

Gender: The economic, political, and cultural attributes and opportunities associated with being male or female. The social definitions of what it means to be male or female vary among cultures and change over time. (USAID ADS Chapters 200–203). Gender refers to the array of socially constructed roles and relationships, personality traits, attitudes, behaviors, values, and relative power and influence that society ascribes to the two sexes on a differential basis. Gender is an acquired identity that is learned, changes over time, and varies widely within and across cultures. Gender is relational and refers not simply to women or men but to the relationship between them.

Sex: Sex refers to the biological characteristics that define humans as female or male.

Gender analysis: A systematic approach, usually using social science methodologies, for examining problems, situations, projects, programs, and policies to identify the gender issues and impacts. There are a number of tools available for conducting gender analyses. Gender analysis of a development program involves identifying the gender issues for the larger context (i.e., structural factors); specific sites; and the issues and differential impacts of program objectives, strategies, and methods of implementation. Gender analysis must be done at all stages of the development process; one must always ask how a particular activity, decision, or plan will affect men differently from women in areas such as access and value of labor, property access and ownership, access to information and services, and social status.

Gender equality: Refers to the absence of discrimination, on the basis of a person's sex, in the allocation of resources or benefits or in the access to services. Gender equality entails the concept that all human beings, both men and women, are free to develop their personal abilities and make choices without the limitations set by stereotypes, rigid gender roles, or prejudices. Gender equality means that the different behaviors, aspirations, and needs of women and men are considered, valued, and favored equally. It does not mean that women and men have to become the same, but that their rights, responsibilities, and opportunities will not depend on whether they are born male or female. Inequality, discrimination, and differential treatment on the basis of sex can be structural (i.e., it is practiced by public or social institutions and maintained by administrative rules and laws and involves the distribution of income, access to resources, and participation in decision making).

Gender equity: Gender equity means fairness of treatment for women and men, according to their respective needs. This may include equal treatment or treatment that is different but considered equivalent in terms of rights, benefits, obligations, and opportunities (e.g., equal treatment before the law, equal access to social provisions; education; equal pay for work of the same value). In the development context, a gender equity goal often requires built-in measures to compensate for the historical and social disadvantages of women. Specific measurements and monitoring are employed to ensure that, at a minimum, programs, policies, and projects implemented do not leave women worse off than men in their peer groups and families and that measures are taken to compensate for historical and social disadvantages.

Gender integration or mainstreaming: The process of assessing the implications for women and men of any planned action, including legislation, policies, or programs in any area and at all levels. It refers to strategies for making women's as well as men's concerns and experiences an integral dimension in the

* Source: USAID: https://pdf.usaid.gov/pdf_docs/Pnadi089.pdf

design, implementation, monitoring, and evaluation of policies and programs in all political, economic, and social spheres—such that inequality between men and women is not perpetuated. A continuum exists for gender mainstreaming. Gender-Negative refers to development activities in which gender inequalities (norms, roles, and stereotypes) are reinforced in the process of achieving desired development outcomes. Gender-Neutral activities are ones in which gender is not considered relevant to the development outcome but the process and the outcome do not worsen or improve gender norms, roles, and relations. Gender-Sensitive activities view gender as a means and aim to redress existing gender inequalities and gender norms, roles, and access to resources so that project goals can be reached. In Gender-Positive activities, the focus remains on development outcomes, but changing gender norms, roles, and access to resources is seen as central to achieving positive development outcomes. For Gender-Transformative activities, addressing gender issues is viewed as central to both positive development outcomes and transforming unequal gender relations to promote shared power, control of resources, decision making, and support for women’s empowerment.

Gender-sensitive indicators measure gender-related changes in society, such as the status and roles of women and men in a community. These are used to assess progress in achieving gender equality.*

Gender sensitivity: The ability to recognize gender issues and especially the ability to recognize women's different perceptions and interests arising from their different social location and different gender roles. Gender sensitivity is considered the beginning stage of gender awareness. The latter is more analytical, more critical, and more "questioning" of gender disparities. Gender awareness is the ability to identify problems arising from gender inequality and discrimination, even if these are not very evident on the surface or are "hidden" (i.e., not part of the general or commonly accepted explanation of what and where the problem lies).

Social inclusion is the process of improving the ability, opportunity, and dignity for everyone to take part in society, including those disadvantaged because of their identity.†

* WI-HER, LLC

† WI-HER, LLC

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