INCORPORATING INTERSECTIONAL GENDER ANALYSIS INTO RESEARCH ON INFECTIOUS DISEASES OF POVERTY:

A toolkit for health researchers

World Health Organization

TDR For research on diseases of poverty
UNICEF • UNDP • World Bank • WHO

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Acronyms

FGDs	Focus Group Discussions
HIV	Human Immunodeficiency Virus
HIV/AIDS	Human Immunodeficiency Virus Infection and Acquired Immune Deficiency Syndrome
LMICs	Low to Middle Income Countries
MSC	Most Significant Change
NTD	Neglected Tropical Disease
PAR	Participatory Action Research
TB	Tuberculosis
WHO	World Health Organization

Definitions

Concept	Definition
Sex	The biological or chromosomal attributes that separate males, females and intersex people *(1,2)*. Sex is assigned at birth and may differ from a person's gender identity.
Gender	"The socially constructed roles, behaviours, activities, attributes and opportunities that any society considers appropriate for men and women, boys and girls" and people with non-binary identities *(3)*. Gender is often relational, shaping how men/boys, women/girls and people with non-binary identities interact with each other and the world around them. Due to its social construction, gender frequently varies through spaces, contexts and time, as individuals construct differing roles and identities that are shaped by broader political, social and economic circumstance *(3–5)*. Gender as a power relation shapes vulnerability or risk of disease, access and utilization of health services and ultimate disease experience *(1,2)*. Gender is just one axis of social advantage/disadvantage and although a key entry point into exploring how marginalization and disadvantage can impact health, it is important to consider other individual and power factors that may improve our understanding of health inequalities and why they exist.
Intersectionality	Intersectionality is an analytical lens that examines how different social stratifiers (such as gender, class, 'race', education, ethnicity, age, geographic location, religion, migration status, ability, disability, sexuality, etc.) interact to create different experiences of privilege, vulnerability and/or marginalization *(6).* Intersectionality and its application in health research is an emerging research paradigm, that seeks to "move beyond single or typically favoured categories of analysis (e.g. sex, gender and class) to consider simultaneous interactions between different aspects of social identity, as well as the impact of systems and processes of oppression and domination" *(7).* Intersectional analysis enables a multi-faceted exploration of how factors of privilege and penalty may alternate between contexts or occur simultaneously *(8).* Intersectionality is not additive. You should consider how human and social characteristics such as age, gender, sex, ability, disability, ethnicity, sexuality, etc. interact to shape individual experience at a given point or time.
Gender analysis	The process of analysing how gender power relations affects women's and men's lives, creates differences in men's and women's needs and experiences, and how policies, services and programmes can help to address these differences *(2).*
Intersectional gender analysis	*The process of analysing how gender power relations intersect with other social stratifiers to affect people's lives; creates differences in needs and experiences; and how policies, services and programmes can help to address these differences.*

	While intersectional gender analysis aims to move from one dominant social category of analysis and resist essentializing, it does not follow a pure intersectional approach. In this type of analysis, gender is used as an entry point for analytical purposes.
Gender-analysis frameworks	A framework is a tool to help researchers, policymakers and planners to organize thinking, research questions, data collection and analysis. Gender-analysis frameworks lead you through a process of thinking about and answering questions related to how different domains of gender power relations affect the topic or area of interest. Common domains of gender power relations include: who has what (access to resources); who does what (the division of labour and everyday practices); how values are defined (social norms, ideologies, beliefs and perceptions) and who decides (rules and decision-making).
Gender-unequal research	Research that perpetuates gender inequality by reinforcing unbalanced norms, roles and relations.
Gender-blind research	Research that ignores gender norms, roles and relations.
Gender-sensitive research	Research that considers inequality generated by unequal gender norms, roles and relations but takes no remedial action to address it.
Gender-specific research	Research that considers inequality generated by unequal gender norms, roles and relations, and takes remedial action to address it but does not change underlying power relations.
Gender-transformative research	Research that addresses the causes of gender-based health inequities by transforming harmful gender norms, roles and relations through the inclusion of strategies to foster progressive changes in power relationships between women and men.
Sex-specific indicator	A type of gender-sensitive indicator that pertains to only females or only males.
Sex-disaggregated indicator	A type of gender-sensitive indicator that measures differences between females and males in relation to a particular metric.
Gender equality indicator	A type of gender-sensitive indicator that measures gender equality directly or is a proxy for gender equality. Indicators that can act as a proxy for gender equality include indicators that explore the different domains included in a gender framework. These may include access to resources, distribution of labour/roles, norms and values, decision-making and possibly known risk factors for disease transmission (e.g. education, condom use, etc.).

Introduction to the toolkit

Purpose of the toolkit and intended audience

This toolkit aims to strengthen the capacity of researchers working on infectious diseases of poverty by incorporating an intersectional gender approach. The objectives of this document are to:

1) strengthen the research capacity of disease-affected countries in intersectional gender approaches;

2) understand and address barriers to effective and quality implementation of health interventions oriented to prevent and control infectious diseases; and

3) explore solutions for enhancing equality in access to quality health care.

While this toolkit includes a focus on research that prioritizes the prevention and control of infectious diseases of poverty, it is equally relevant to other health research and interventions.

Structure of the toolkit

The toolkit contains a collection of training modules that can be customized for different contexts. There are two introductory modules, after which, modules mirror the research process in terms of the design and development of the research, data collection, analysis, and reporting and dissemination.

Key resources related to the specific gender analysis activities are included in each module. Each module ends by listing reflection questions/ action items.

Module 1 provides an overview of the role and importance of gender and intersectionality for research on infectious diseases of poverty. Module 2 gives an overview of different approaches to incorporating an intersectional gender lens. Modules 3 and 4 describe intersectional gender analysis activities at the research design and development phase, which includes developing a research protocol. Module 5 explores how research methods can be used to transform inequitable

gender power relations. Module 6 describes gender considerations and best practices within data collection. Module 7 discusses how an intersectional gender lens can be incorporated into the analysis of quantitative and qualitative data. Module 8 focuses on how to incorporate an intersectional gender lens into implementation research on infectious diseases of poverty. Module 9 explores how an intersectional gender lens can be used in the reporting and dissemination of research on infectious disease of poverty.

How to use the toolkit

Researchers new to using the concepts of intersectionality and gender in guiding research design and delivery should read the two introductory modules (modules 1 and 2) prior to reading modules 3 to 9 as these provide important background information. This includes the importance of gender and intersectionality to infectious diseases of poverty (module 1) and providing an overview of different approaches to incorporating an intersectional gender lens (module 2).

The intersectional gender analysis activities outlined in modules 3 and 4 are important for all subsequent activities as they provide the foundation needed for developing a robust study design that incorporates an intersectional gender lens. It is difficult, for example, to analyse data using an intersectional gender lens without giving these concepts consideration in the design and development of the research (i.e. when developing the research protocol).

While many of the activities described in modules 5 to 9 can (and should) be done without this preparatory work, by completing the activities in modules 3 and 4 first, you will have provided a strong foundation and framing within your study for subsequent intersectional gender analysis. You will also have provided the hopeful gender transformative application of your findings within findings reports, policy and programme design.

Module 01

Understanding gender, sex and intersectionality and why it matters for infectious diseases of poverty

This module has the following objectives:

- Introduce key concepts and ideas that will be essential to understand when using this toolkit.
- Explore how gender, sex and other axes of social disadvantage interact to determine inequities in relation to infectious diseases of poverty and shape disease risk and experience
- Leave the reader better informed of the need for intersectional analysis when completing research relating to infectious diseases of poverty

The following subsections respond to each of these objectives, leaving the reader with some key questions and literature sources to consider after reading this module.

1.1 What are the key concepts you need to know to use this toolkit?

There are key differences between sex and gender[1] as described below. The key thing to remember is that sex is about biology and gender is about social constructs.

- **'Sex'** constitutes the biological or chromosomal attributes that separate males, females and intersex people *(1,2)*. Sex is assigned at birth and may differ from a person's gender identity.

- **Gender** is defined as "the socially constructed roles, behaviours, activities, attributes and opportunities that any society considers appropriate for men and women, boys and girls" and people with non-binary identities *(3)*. Gender is often relational, shaping how men/boys, women/girls and people with non-binary identities interact with each other and the world around them. Due to its social construction, gender frequently varies through spaces, contexts and time, as individuals construct differing roles and identities shaped by broader political, social, historical and economic circumstance *(3–5)*. As "a set of roles, behaviours and attitudes that societies define as appropriate for women and men, [gender] can be the cause, consequence and mechanism of power relations", gender as a power relation shapes vulnerability or risk of disease, access and utilization of health services and ultimate disease experience *(1,2)*. Notably, gender is just one axis of configuration, hence advantage or disadvantage, and although a key entry point into exploring how marginalization and disadvantage can impact health, it is important to consider other individual and power mediated factors that may improve our understanding of health inequalities and why they exist.

- **Intersectionality** and its application in health research is an emerging research paradigm that seeks to "move beyond single or typically favoured categories of analysis (e.g. sex, gender, 'race' and class) to consider simultaneous interactions between different aspects of social identity, as well as the impact of systems and processes of oppression and domination" *(7)*. Intersectional analysis enables a multi-faceted exploration of how factors of privilege and penalty may alternate between contexts or occur simultaneously *(8)*. Intersectionality is not additive; you should consider how human and social characteristics such as age, gender, sex, ability, disability, ethnicity, sexuality, etc. interact to shape individual experience at a given point or time.

  The intersectionality wheel below helps us to think about what intersectionality means in practice. It shows us how multiple individual characteristics interact, for example, age, gender, education, etc. within wider processes of social (ableism, racism, etc.) and structural (politics, capitalism, etc.) discrimination to shape an individual's position within society *(6,9,10)*. Intersectional approaches seek to consider the position of all members of a given society, and often try and support transformative aims of changing the power position of the most marginalized through links with community-based initiatives *(6)*.

[1]For the purposes of the toolkit, females and males are included as sex categories, whereas men and women relate to the gender identity of a given individual or when this sex category and social stratifier coincide and are relevant for the purposes of the analysis.

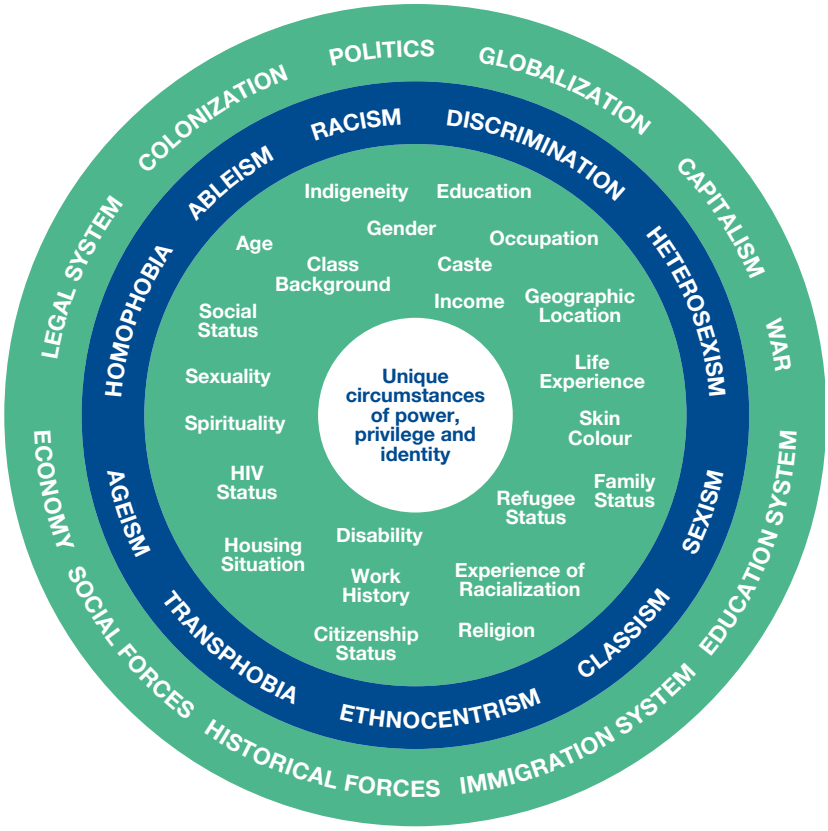


Figure 1: Intersectionality Wheel (10).

- **Intersectional gender analysis** is the process of analysing how gender power relations intersect with other social stratifiers to affect people's lives and create differences in needs and experiences. It also analyses how policies, services and programmes can help to address these differences. While intersectionality analysis aims to move away from one dominant social category of analysis, resists essentializing and is non-additive, sometimes prioritizing one social axis as an entry point into more complex analysis can be necessary (11). Due to the documented importance of the inter-relationship between gender, vulnerability and infectious diseases of poverty, within this toolkit we prioritize gender as our entry point into a deeper intersectional analysis that explores how other categories of difference interact with gender and how this changes through space and time. This is referred to as 'intersectional gender analysis'. Figure 2 below, represents how gender intersects with other characteristics within the intersectionality wheel, emphasizing gender as our main entry point into this analysis.

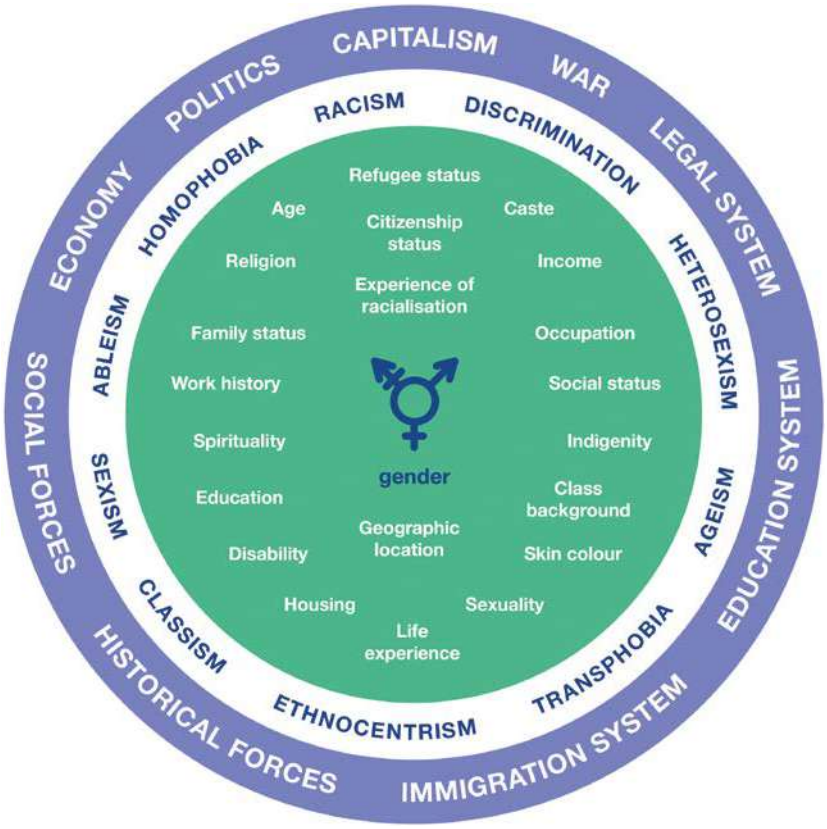


Figure 2: Modified Intersectional Gender Analysis Wheel

Key resources for understanding gender, intersectionality and health

- Larson E, George A, Morgan R, Poteat T. 10 best resources on…intersectionality with an emphasis on low- and middle-income countries. Health Policy Plan 2016; 31: 964-969.
- Morgan R, George A, Ssali S, Hawkins K, Molyneux S, Theobald S. How to do (or not to do)…gender analysis in health systems research. Health Policy Plan 2016; 31: 1069–1078.
- Tolhurst R, Leach B, Price J, et al. Intersectionality and gender mainstreaming in international health: Using a feminist participatory action research process to analyse voices and debates from the global south and north. Soc Sci Med 2012; 74: 1825–32.
- Kapilashrami A, Hankivsky O. Intersectionality and why it matters to global health. Lancet 2018; 391: 2589–91.
- Couto et al. The feminist perspective of intersectionality in the field of public health: a narrative review of the theoretical-methodological literature- published in Salud Collectiva 2019
- Hankivsky, O. Women's health, men's health and gender and health: implications of intersectionality Social Science & Medicine. 2012, 74(11): 1712-1720.
- Hankivsky, O. et al. The odd couple: using biomedical and intersectional approaches to address health inequities. Global Health Action, 2017.

1.2 Why is intersectional gender analysis important in research on infectious diseases of poverty?

An intersectional gender lens enables us to better understand the etiology, prevention, control and management of infectious diseases. This includes vulnerability to disease(s), exposures to disease(s), experiences of disease, health-related decision-making, responses to treatment, and the extent of impact on individuals or social groups.

Intersectional gender analysis in infectious diseases of poverty enables us to better understand the

- etiology,
- prevention,
- control and
- management of infectious diseases

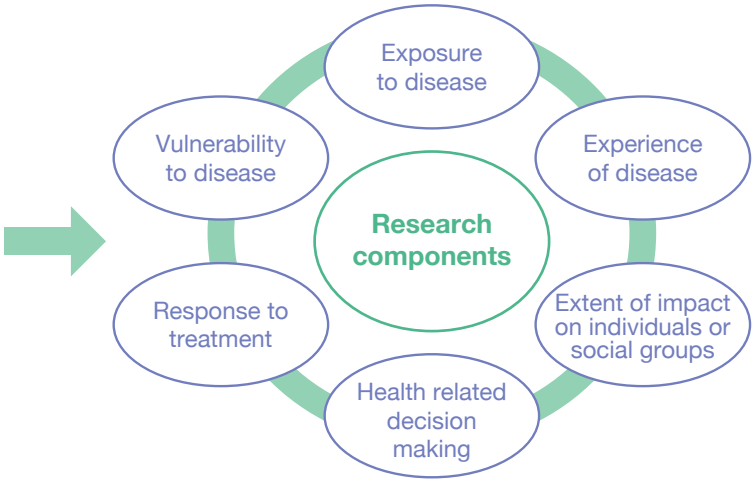


Figure 3: Incorporating intersectional gender analysis into research on infectious diseases of poverty.

Intersectional gender analysis allows us to see how such things are experienced differently by different groups of men/boys, women/girls and people in all their diversity, including people with non-binary identities, and where these differences might be the result of inequities.

By generating evidence about these differences, we are better able to create policies, services and programmes to address them.

Intersectional gender analysis is of critical importance in all forms of research to ensure that 'no one is left behind' in the attainment of the sustainable development goals: particularly goal 5 focused on gender equality. However, it recognizes interactions across gender and the health-related targets of a range of SDGs not limited to goals 3 and 5 (12). Both exploratory and implementation research studies are of equal value in understanding new and emerging challenges for gender equality, as well as in developing solutions to address these challenges.

Gender, as a social determinant of health and a relational construct of power, manifests in different ways to influence the examples above; the ways in which gender power relations manifest are further explored in module 3.

By taking an intersectional gender lens, we can explore how gender interacts with other social stratifiers to create difference. Decisions will need to be made in regard to which social stratifiers are included within your intersectional gender analysis. Further information about choosing stratifiers for inclusion within research is provided in module 3.

1.3 Role and importance of gender and intersectionality in relation to infectious diseases of poverty

This section uses practical examples from literature to illustrate the importance of gender and intersectional analysis when thinking about the control, management and treatment of different infectious diseases of poverty.

We will explore how gender intersects with other factors within the inner circle of the intersectionality wheel **(Figure 1)**, such as age, disability, income, geography and housing to influence health-related decision-making and vulnerability to disease. We will then move on to consider how concepts in the outer two circles, such as ableism, discrimination and social and political forces, intersect with gender to shape disease experience and the development, use and access to health services and interventions.

Despite the seeming segregation between the inner and outer circles of the intersectionality wheel, there are substantive overlaps between the categories. These create complexities and shape unique outcomes for individuals, families and communities in relation to infectious diseases of poverty. Distinctions are made here for explanatory purposes.

Some practical examples are provided throughout this section. Further illustrative case studies that emphasize key themes identified within this subsection are presented throughout the toolkit within case study boxes.

1.4 Intersecting positionalities and the inner circle

1.4.1 Influences on health-related decision-making

At the household level, gendered roles have been shown to shape and influence decision-making capability. In some contexts, relative lack of autonomy and access to financial resources, as well as gendered responsibility to fulfil expected household roles as a caregiver, can lead women to delay seeking treatment for diseases such as lymphatic filariasis and leprosy, which can increase severity of the condition or impairment *(1,13)*.

Even though men, in the majority, have increased access to resources and decision-making power, expectation and desire to maintain a masculine image by being healthy and strong, coupled with the need to meet their family's economic needs, can act as a barrier to early and timely health care seeking *(14)*.

- For example, desires to uphold masculine ideals have been found to be a key cause of delay in timely diagnosis of TB in Malawi, contributing to the higher burden of undiagnosed infections in men than in women, causing men to remain as a major source of transmission of infection within communities *(14,15)*.

In settings where poverty is prevalent, these delays can be exacerbated and can prevent access to health care until it is too late *(14)*. Masculine ideals have also been shown to delay treatment seeking for men living with hydrocele because of infection from lymphatic filariasis. Hydrocele treatment involves surgical intervention, which in some households in Ghana was a large risk in terms of potential loss of the household's key economic provider *(16)*.

Standalone factors within the inner circle, for example income and social status, also frequently intersect to influence risks and increase vulnerabilities related to infectious diseases of poverty.

- For example, reduced or poor income leads to poverty, which in turn can contribute towards overcrowded living conditions, poor nutrition, exposure to indoor air pollution and substance misuse. Each of these 'lifestyle factors' are also risk factors for infectious diseases of poverty, including TB, leprosy and the spread of Ebola *(17)*.

Factors within the inner circle intersect with each other to contribute toward specific risk factors.

- For example, when gendered masculine ideals and power are compromised during periods of poverty due to lack of resources and the inability to provide, some men feel a greater need to display 'masculine' lifestyle traits like excessive drinking or violence, as found in many LMICs (18).

Not only do such behaviours enhance risk in relation to non-communicable disease but studies have shown that men frequently drink alcohol to suppress pain and illness for TB, thus further delaying treatment seeking and transmission of infection (14). This shows clearly how factors that shape individual positionality, as detailed in the inner circle including income and gender, intersect to shape disease risk to infectious diseases of poverty.

1.4.2 Social and environmental determinants shape infectious diseases of poverty

Living and working conditions also shape vulnerability to infectious diseases of poverty. Factors within the inner circle, such as occupation or livelihood activities, housing situation, geography and environment, can all influence risk of getting sick as well as ability to access and utilize protective health interventions.

Livelihood activities are not uniformly allocated by gender across contexts and can shape exposure to risk of the same infectious diseases of poverty in different ways. For example, in areas where fishing, farming and hunting are the major income activities, prevalence rates of lymphatic filariasis in men can be greater *(19)*. This is often because men sleep outside during these activities and do not use mosquito nets (ibid).

However, in contexts where women and men have very similar livelihood activities, such as agriculture or subsistence farming, lymphatic filariasis infection patterns are almost equal for men and women *(20)*. Similar patterns also hold true for schistosomiasis. In fishing and farming communities, men often report higher rates of schistosomiasis than women; whereas in communities where women wash utensils and clothes in snail infected waters, they may have the same rates or higher infection rates of schistosomiasis than men *(1)*.

Age can intersect with gender, livelihoods and the environment to shape risk factors in relation to infectious diseases of poverty.

- For example, in Yemen, most boys and women work in agriculture and animal care, and are responsible for procuring water, especially at dusk and in the early morning, which increase their exposure to sand-fly bites and their risk of leishmaniasis *(21)*.

- In rural Cameroon, social and cultural norms frequently mean that children and men play and work outside with exposed bodies, whereas women remain more covered. This again increases risk of biting, specifically from black flies, increasing children and men's risk of onchocerciasis infection *(22,23)*.

- When playing, boys and girls in Kenya were also found to spend most of their time in water, increasing risk of infectious disease such as schistosomiasis. With age, time spent in water for boys was also seen to reduce compared to girls of the same age, normally due to household roles, resulting in equal or higher rates of schistosomiasis in women than men *(24,25)*.

1.5 The outer circles: how culture and context shape experience of disease and health service delivery

Elements presented in the outer circles of the intersectionality wheel are as important as those within the inner circle as they are mutually reinforcing, and they interact to shape our understandings and interpretations of illness and disease. Social and historical forces, ableism, discrimination, sexism, etc. can all shape how individuals, communities and health systems develop and respond to disease, ultimately influencing experiences and outcomes *(1)*.

1.5.1 Disease experience

Etiology of disease (i.e. the cause of disease), as perceived by communities, has been described as shaping the lived experiences of affected individuals, as it has been shown to induce both enacted and internalized stigma.

Explanatory models or cultural explanations of disease and illness can shape care seeking as well as peoples' experience of living with different diseases; in turn these socially routed perceptions of disease and illness often intersect with other factors to shape health outcomes.

- For example, in India, there is a perception that lymphatic filariasis is hereditary in women and is therefore not recognized as a condition that can be treated clinically; this causes a delay in presentation at health facilities *(26)*.

- In Ghana, the same hereditary assumptions exist but in this context in relation to men *(16)*. Lu et al. (1988) found within the Philippines that enacted stigma experience increased with disease progression of lymphatic filariasis and resultant lymphedema or hydrocele. In addition, the location of hydrocele in relation to lymphatic filariasis also caused increased stigma, which was greater when it was in the genitals as opposed to the leg *(27)*.

Although inequities and their influence on stigma in relation to infectious diseases of poverty have been relatively widely considered, studies that explore how these inequities interact to shape multiple layers of simultaneous advantage and disadvantage are limited.

Schistosomiasis is often perceived to be associated with promiscuity, based on signs and symptoms in the urinary tract; however, this is not the case for diseases such as lymphatic filariasis and leprosy. Rather, more physically visible diseases are perceived to be hereditary and therefore stigmatization tends to be linked to moral constructions of disability that suggest impairment is the result of wrongdoing in a previous life *(28)*.

Disembodiment (a separation of physical body and soul by an individual) was also often associated with internalized and anticipated stigmatization. This was evidenced by observed covering of limbs or lack of their use. Disembodiment is particularly evident when disease or impairment was acquired in adulthood, since prototypes of health, normalization and ableism were often learned from a young age *(13)*.

One study notes that when individuals are poor because of reduced income, being young and a woman led to increased levels of enacted stigma *(29)*. **Box 1** illustrates from an intersectional standpoint how stigma associated with infectious diseases of poverty can shape unique circumstances of individuals and households.

Box 1: Case study - How social and historical forces intersect with discrimination to shape individual and household position

Many infectious diseases of poverty, particularly those that have visible manifestations, have significant amounts of associated stigma and discrimination.

Diseases such as leprosy, Ebola, leishmaniasis, lymphatic filariasis, onchocerciasis and TB all have high levels of associated stigma. Stigma associated with leprosy has been well researched and there is significant evidence to suggest that such associated stigma is heritable to offspring and the household, and can lead to both social and economic loss *(13)*.

Compounded poverty as a result of leprosy is often transferred to children whose parents are frequently dissuaded from sending them to school due to their economic 'begging potential', thus enhancing the generational impact of this disease within the household *(13)*.

Goffman *(30)*, described such stigma experienced by family members as curtesy stigma, and has also described this as being a common phenomenon among households living with TB. Curtesy stigma and economic loss have both been identified as causing chronic mental health problems within the household, with further research needed to fully explore how these experiences vary based on individual position within the household *(31,32)*.

1.5.2 Health service delivery

The way health systems are designed is shaped by forces in the outer wheel and do not always recognize, consider or address what is in the inner wheels **(Figure 1)**. This can influence both patient and health systems delay in the treatment and management of infectious diseases of poverty for men, women and people with non-binary identities, thus impacting on health outcomes *(33)*.

The case study in **box 2** emphasizes how changes in health systems governance (devolution) can lead to alterations in power that result in health advantage and disadvantage for vulnerable populations.

Box 2: A case study - Applying an intersectionality lens to examine health for vulnerable populations following devolution in Kenya

This qualitative study utilizes an intersectional lens to explore the ways in which health systems devolution in Kenya influences the health of vulnerable populations. The text is taken from: *McCollum R et al. 2019. Applying an intersectionality lens to examine health for vulnerable populations following devolution in Kenya. International Journal for Equity in Health 18:24.*

Background: Power imbalances are a key driver of avoidable, unfair and unjust differences in health. Devolution shifts the balance of power in health systems. Intersectionality approaches can provide a 'lens' for analysing how power relations contribute to complex and multiple forms of health advantage and disadvantage. These approaches have not to date been widely used to analyse health systems reforms. While the stated objectives of devolution often include improved equity, efficiency and community participation, past evidence demonstrates that there is a need to create space and capacity for people to transform existing power relations within these specific contexts.

Methods: We carried out a qualitative study between March 2015 and April 2016, involving 269 key informant and in-depth interviews from across the health system in ten counties, 14 focus group discussions with community members in two of these counties and photovoice participatory research with nine young people. We adopted an intersectionality lens to reveal how power relations intersect to produce vulnerabilities for specific groups in specific contexts, and to identify examples of the tacit knowledge about these vulnerabilities held by priority-setting stakeholders in the wake of the introduction of devolution reforms in Kenya.

Results: Our study identified a range of ways in which longstanding social forces and discriminations limit the power and agency individuals can exercise, mediated by their unique circumstances at a given point in their life. These are the social determinants of health, influencing an individual's exposure to risk of ill health from their living environment, their work or their social context, including social norms relating to their gender, age, geographical residence or socio-economic status. While a range of policy measures have been introduced to encourage participation by typically 'unheard voices', devolution processes have yet to adequately challenge the social norms and intersecting power relations that contribute to discrimination and marginalization.

Conclusions: If key actors in devolved decision-making structures are to ensure progress towards universal health coverage, there is need for intersectoral policy action to address social determinants, promote equity and identify ways to challenge and shift power imbalances in priority-setting processes.

Historically, there has been a large emphasis on women within TB research, and the reasons for delays and losses along the care seeking pathway for men are under investigated. Addressing them is essential in ensuring effective and equitable treatment as emphasized in the End TB strategy. A recent review of global evidence suggests that the way existing TB services are established prioritizes case identification in women, suggesting they are more likely to have a timely TB diagnosis than men *(34)*. Some studies indicate that being a man is a specific risk factor for late HIV and TB diagnosis as well as death while on treatment *(14)*. New evidence also indicates that men are more likely to be lost along the TB care seeking pathway (ibid). Currently, it is hypothesized that untreated infection in men is acting as a 'TB reservoir' and is the reason for most new TB infections in men, women and children due to less constricted social mixing among men in most endemic settings *(14,34)*.

Despite this, in some contexts, earlier research with women in relation to care seeking for TB has shown that reliance on passive case finding can lead to treatment delays for women, with age being a key intersecting factor with gender in exacerbating these delays *(33)*. This would suggest a need for further research that not only explores how to better engage men and women within the TB health seeking pathway, but also how other intersecting factors such as age and geography may require nuanced strategies to address these barriers in the control and management of new TB infection.

Design and delivery of treatment campaigns for many Neglected Tropical Disease (NTDs), particularly those controlled through preventive chemotherapy treatment, can mean that some women remain untreated for most of their reproductive years.

Pregnant and lactating women are usually excluded from mass drug treatment campaigns due to safety concerns, even though praziquantel for the treatment of schistosomiasis was recommended for pregnant women by WHO in 2002 *(35)*. Women living in schistosomiasis endemic areas may spend up to 25% of their reproductive years pregnant and another 60% of this time lactating *(36)*.

Women who repeatedly miss treatment due to pregnancy and breastfeeding may be more susceptible to organ damage and cancer due to chronic schistosomiasis infection *(36)*. Medicines for other preventive chemotherapy NTDs such as lymphatic filariasis and onchocerciasis cannot safely be administered in pregnancy, with consequent higher risk of infection for women who are pregnant during annual medicine distribution campaigns *(37)*. Treatment strategies need to be adapted to consider how to reach pregnant and lactating women to minimize the risk of NTD infection to both mothers and babies.

- For example, mothers living with onchocercal skin disease have reported reducing the period they breastfeed due to itching *(38)*. Pregnant women are also at added risk of hookworm anaemia, which is further compounded by coinfections from malaria, consequently increasing risk of maternal death or premature birth *(39,40)*.

Gender also effects the acceptability of health services in terms of staffing.

- For example, in Uganda, older men were less likely to take drugs when they are provided by young women drug distributors than if they were delivered by men or older women *(36)*.

- In contrast, women community directed distributors in Nigeria were required where social norms forbade a man from entering the household without another man present. In this case, a woman community directed distributor would increase access to the household *(41)*.

In addition, in some household studies, findings suggest that when men are absent from the household, for example when working outside the community, this can have a positive impact on the uptake of drugs for the rest of the household. When men who often function as key decision-makers in the household are absent, women have a higher level of autonomy in deciding whether to take medicines.

Table 1 below is a summary of the information above that explores how gender and other social axes intersect to shape risk and vulnerability to different infectious diseases of poverty in varying ways.

Table 1: Examples of infectious diseases of poverty and the influence of gender and other intersecting social axes on risk and vulnerability

Disease	Risks and vulnerabilities shaped by gender and other intersecting inequities
Lymphatic filariasis	• Household dynamics and lack of access to resources lead to care seeking delays for women. • Men living with hydrocele may delay health seeking due to fear of surgery that may leave them unable to provide economically for their household. • Occupation and gender can intersect in areas where fishing, farming and hunting are common to present greater risk of infection in men when sleeping outside. • In areas where subsistence living is more common, and livelihood activities are less segregated by gender, disease risk is frequently similar. • Cultural interpretation of lymphedema as hereditary in some settings can lead to delays in health seeking for women.
Leprosy	• Household dynamics and lack of access to resources lead to care seeking delays for women. • Poverty and low social status can lead to poor and overcrowded living conditions, which enhances the risk of transmission.
Tuberculosis	• Masculine ideals of men needing to be healthy and strong, and a need to meet economic needs, can lead to delays in care seeking for men. This is exacerbated when households have poor economic status. • Poverty and low socials status can lead to poor and overcrowded living conditions which enhances the risk of transmission. • Intersecting masculinities and poverty can result in increased risk behaviour as well as substance use to suppress pain, which can lead to delays in treatment seeking. • Service design and delivery may give preference to the needs of men and women differently, which can lead to disparities in treatment completion. For example, in Malawi, evidence indicates more men are likely to be lost along the treatment seeking pathway, whereas the opposite is thought to be true for women in India.
Ebola	• Poverty and low social status can lead to poor and overcrowded living conditions, which enhances the risk of transmission.
Schistosomiasis	• Gender and occupation intersect in fishing and farming communities to present higher rates of infection in men. • Gender roles intersect with the environment where women wash utensils and clothes in infected waters, meaning that women may have higher infection rates than men in some settings. • Age and gender also intersect in some settings to leave girls and boys playing in water at greater risk of infection, with time in water decreasing for boys as they got older, less so for girls, presenting the highest rate of schistosomiasis in adult women in many households. • Services are infrequently adapted to meet the needs of pregnant women and therefore they may be left untreated and at greater risk to disease associated morbidities.
Leishmaniasis	• Age, environment and gender intersect in some contexts to increase exposure to sand-fly bites for women and boys who work in agriculture and animal care when collecting water.
Onchocerciasis	• Culture intersects with gender in some contexts to mean that children and men play and work outside with exposed bodies leading them at greater risk of blackfly bites.

1.6 Taking an intersectional approach to gender analysis within the toolkit

Literature that explores multiple axis of oppression simultaneously in relation to infectious diseases of poverty is rare. More frequently, studies consider one axis of oppression in isolation, for example, gender or age, with limited consideration of how other inequities may shape health outcomes.

In this module, we have discussed how factors within the intersectionality wheel may interact to shape health outcomes in relation to infectious diseases of poverty; however, much more research and thinking is required to fully understand and address existing inequities in relation to these diseases.

Gender is often used as an entry point to understand marginalization and disadvantage as it remains one of the most pervasive forms of inequalities and important causes of poor health outcomes, particularly for women and girls *(42)*. Understanding how gender affects men, boys and people with non-binary identities, however, is just as important.

When exploring the role of gender power relations, it is vital that gender is considered alongside other social stratifiers and, in particular, how gender intersects with other social stratifiers to create different experiences of marginalization and disadvantage in relation to health. It is therefore important that all gender analysis is intersectional and all research that takes a gender lens explores how gender inequity is shaped by and interacts with other forms of inequity. Not all women, men, girls, boys and people with non-binary identities are treated the same within our research and interventions.

This toolkit therefore takes an intersectional approach to gender analysis. The information and material included in the following modules incorporates the understanding that the intersection of gender with other social stratifiers will be considered within the research process.

Key resources on gender and infectious diseases of poverty

- Allotey P, Gyapong M. 2005. The gender agenda in the control of tropical diseases: A review of current evidence. Available at: http://www.who.int/tdr/publications/tdr-research-publications/gender-agenda-control-tropical-diseases/en/
- Sommerfeld J, Manderson L, Ramirez B, Guth JA, Reeder JC. 2017. Infectious disease research and the gender gap. Global Health, Epidemiology and Genomics 2: e9
- Tannenbaum C, Greaves L, Graham ID. 2016. Why sex and gender matter in implementation research. BMC Medical Research Methodology 16.
- Theobald S, MacPherson EE, Dean L, et al. 20 years of gender mainstreaming in health: lessons and reflections for the neglected tropical diseases community. BMJ Glob Health. 2017;2(4): e000512.
- Tolhurst R, de Koning K, Price J, Kemp J, Theobald S, Squire SB. 2002. The Challenge of Infectious Disease: Time to Take Gender into Account. Journal of

Health Management 4: 135–51.

- WHO. 2007. Addressing sex and gender in epidemic-prone infectious diseases. Available at: http://www.who.int/csr/resources/publications/SexGenderInfectDis.pdf
- WHO. 2011. Taking sex and gender into account in emerging infectious disease programmes: An analytical framework. Available at: https://hiip.wpro.who.int/portal/Reportspublications/TabId/83/ArtMID/1151/ArticleID/161/Taking-sex-and-gender-into-account-in-emerging-infection-disease-programmes-An-analytical-framework.aspx

1.7 Engaging stakeholders throughout the research process

Ensuring that stakeholders are included throughout the research process is critical in shaping research that is useful for communities and country-based decision-makers, as well as ensuring sustained engagement of stakeholders. Maintaining the involvement of communities and decision-makers throughout the process is also likely to contribute to the use of your newly created evidence.

Module 8 provides additional information on the role and importance of community engagement within implementation research on infectious diseases of poverty, which is relevant for all types of infectious diseases of poverty research.

Some ways to ensure engagement of stakeholders include:

- Mapping the key people who should be involved throughout your research cycle from inception to dissemination. Ensuring you engage actors early and giving them the opportunity to shape the findings and attend dissemination events is important. One way to do this may be to establish

Technical Working Groups with the relevant stakeholders and policymakers. This will provide an opportunity for better engagement for sensitization about the research, inform research findings periodically, discuss implementation challenges, and ultimately uptake of the research findings to formulate evidence-based policy, as well as improving the design of health programmes.

- Participatory approaches, including participatory action research cycles as described in module 5, can support the real-time inclusion of research findings or solutions for gender transformative change within health interventions, or systems delivery, throughout the lifespan of the project.

- Gender analysis and consideration of how different social stratifiers can shape population needs is often a new concept to many key stakeholders. Creating dissemination meetings, not just as a way to disseminate findings but as a key strategy to strengthen capacity of stakeholders to be able to conduct and interpret intersectional gender analysis, can contribute to understandings among stakeholders, which can ultimately contribute to enhanced use of your findings. Making these meetings as participatory as possible can also contribute to increased uptake of findings.

- Building on newly created capacities through participatory dissemination activities can allow for the introduction of gender frameworks that can help researchers, policymakers and practitioners understand and address the gender power relations most relevant to their work. This can allow for continued intersectional gender analysis beyond the lifespan of your research project *(43)*.

- Dissemination meetings can also be a practical way to get feedback from a wide variety of stakeholders on your interpretation of findings. You should be open to critique and alternative interpretations of your data while also considering how the positionality of different stakeholders in the room could shape collective interpretation and discussion.

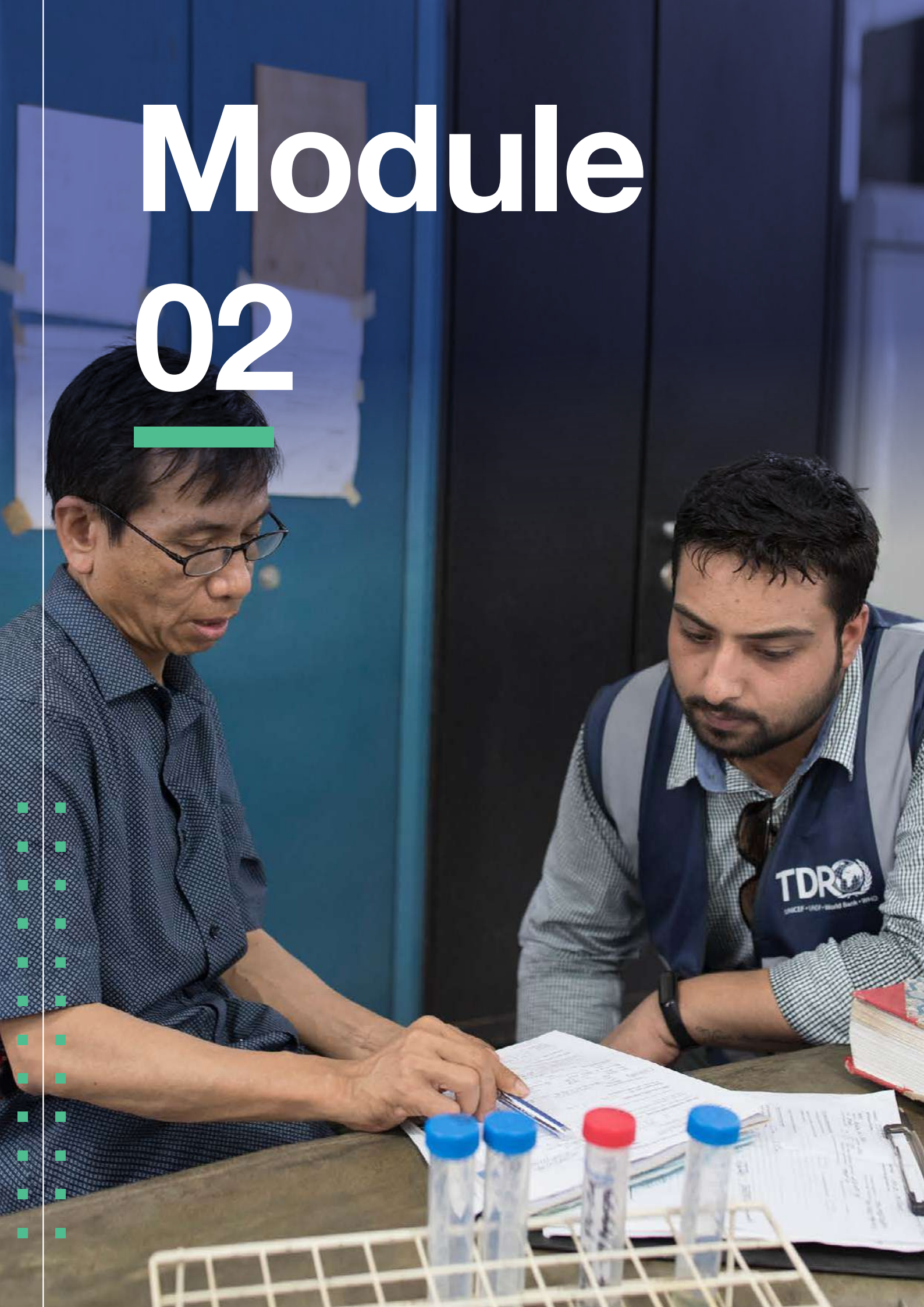
Key resource for stakeholder engagement

- Theobald, S. et al. (2017) '20 years of gender mainstreaming in health: lessons and reflections for the neglected tropical diseases community'. BMJ Global Health. 2(e000512)

Reflection questions/action items

- What is sex?
- What is gender?
- What is intersectionality?
- Why might gender and intersectionality be relevant to the infectious disease of poverty you are researching?
- What is the relevance of using an intersectional gender lens within research on infectious diseases of poverty?
- How will you involve diverse stakeholders in the research process?

Module 02



Getting to grips with how to approach intersectional gender analysis for research on infectious diseases of poverty

This module has the following objectives:

- Outline different approaches to an intersectional gender analysis within research on infectious diseases of poverty
- Introduce gender assessment scales to help researchers determine where an intersectional gender lens should be incorporated within their research
- Introduce intersectional gender analysis activities and map them along research phases
- Outline the role and importance of community engagement to facilitate intersectional gender analysis within research on infectious diseases of poverty.

The following subsections respond to each of these objectives, leaving the reader with some key questions and literature sources to consider after reading this module.

2.1 Approaches to intersectional gender analysis within research on infectious diseases of poverty

Before introducing approaches to intersectional gender analysis, it is important to consider where in the research process an intersectional gender approach should be incorporated. There are several stages within the research process.

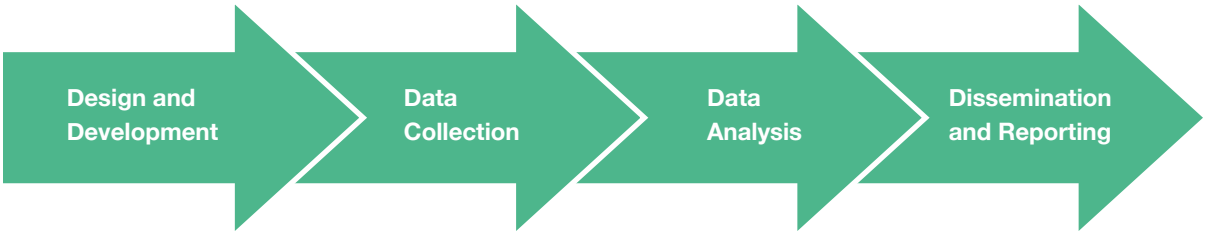
The inception of research (Design and Development in the illustration below) includes:

- Developing research aims, objectives and questions
- Designing the research methodology
- Developing data collection tools

The latter stages of the research process include:

- Collecting data
- Analysing data
- Disseminating and reporting

Ideally, an intersectional gender approach will be taken throughout. If researchers choose to not include an intersectional gender lens in one or more stages of the research process, they should explain why within the written manuscript.



2.1.1 Situating research along the gender assessment scale

The WHO Gender Responsive Assessment Scale (44) is a framework which helps determine the extent to which gender is incorporated into research.

The scale includes five types of research:

1. **Gender unequal research** perpetuates gender inequality by reinforcing unbalanced norms, roles and relations.
2. **Gender-blind research** ignores gender norms, roles and relations.
3. **Gender-sensitive research** considers inequality generated by unequal gender norms, roles and relations but takes no remedial action to address it.
4. **Gender-specific research** considers inequality generated by unequal gender norms, roles and relations and takes remedial action to address it but does not change underlying power relations.
5. **Gender transformative research** addresses the causes of gender-based health inequities

by transforming harmful gender norms, roles and relations through the inclusion of strategies to foster progressive changes in power relationships between women and men.

For those conducting implementation research (see module 8) or interventions, the gender continuum is a useful framework to help you determine how gender is addressed within intervention design and implementation. The gender continuum classifies interventions into those that are gender exploitative, accommodative and transformative.

Gender exploitative interventions take advantage of existing and prevalent gender inequities, norms, behaviours or stereotypes in order to achieve programme outcomes.

Gender accommodative interventions adjust or compensate for existing gender inequities, norms or behaviours to achieve programme outcomes.

Gender transformative interventions attempt to challenge or change existing gender power relations that reinforce gender inequities *(45)*.

Figure 4 juxtaposes the WHO assessment scale with the gender continuum to show how the different categories overlap. Researchers should assess their activities against each approach/level to determine the extent to which their research and/or interventions are currently integrating gender.

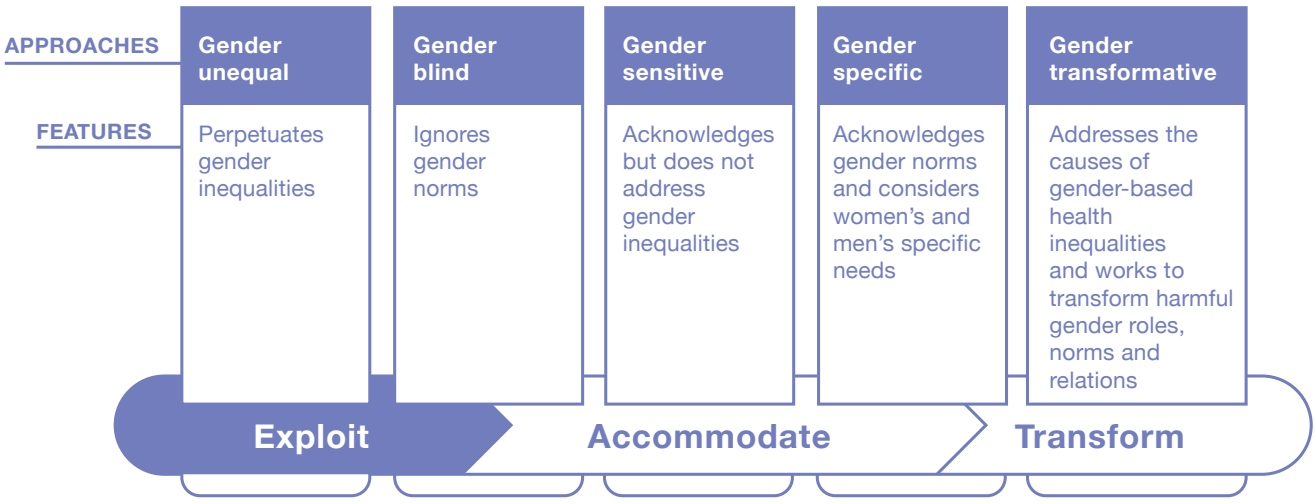


Figure 4: A continuum of approaches for integrating gender *(46)*.

In **Figure 5** below, specific intersectional gender analysis activities are mapped against the WHO gender assessment to help researchers identify the activities required to undertake gender-sensitive, specific and transformative research, and where possible move their research up the continuum.

Explanations on how to carry out these activities are provided in subsequent modules. Researchers should avoid conducting gender unequal or gender-blind research, and at a minimum, all research should aim to be gender-sensitive.

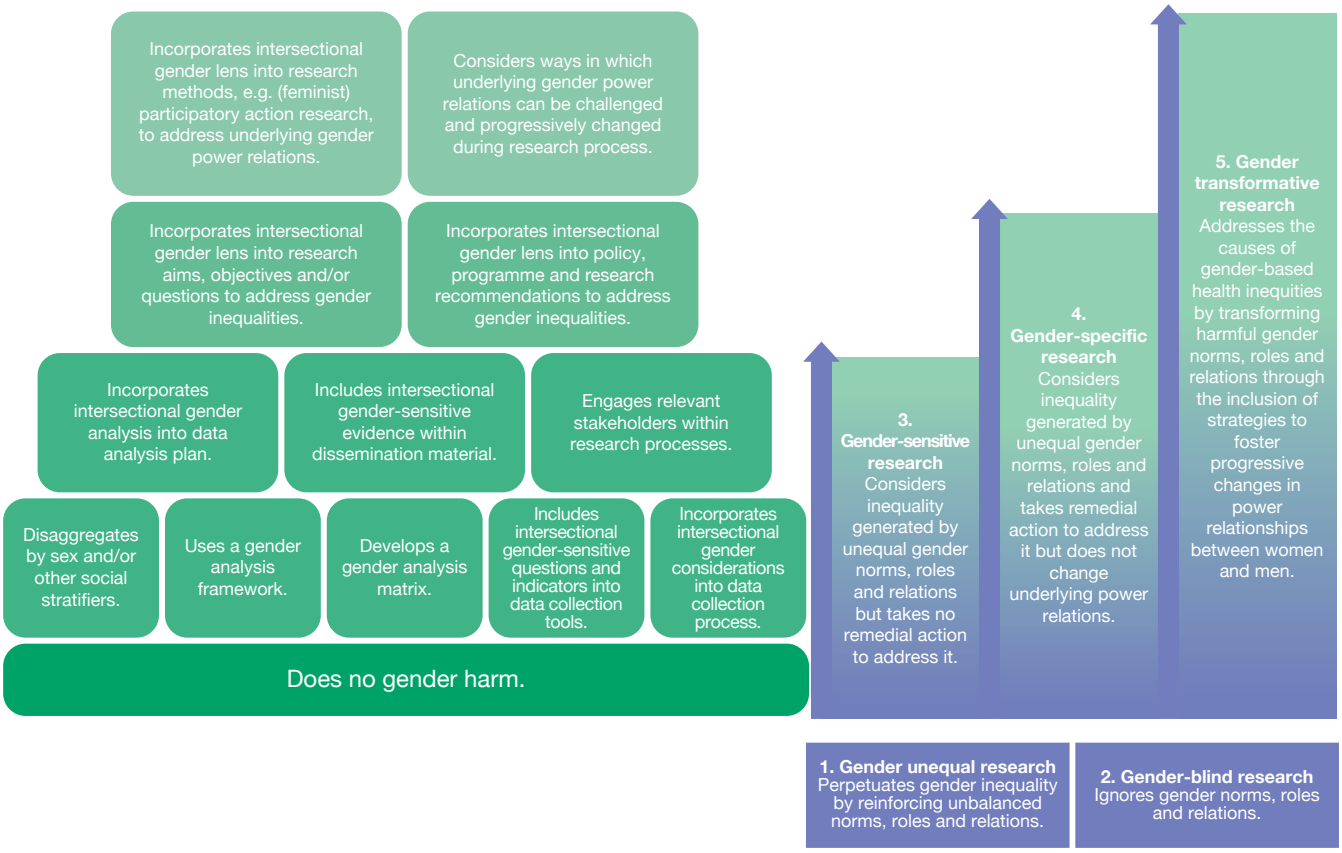


Figure 5: Incorporating gender analysis into research on infectious diseases of poverty: from gender unequal to gender transformative research (RinGs 2016. Adapted from WHO Gender Responsive Assessment Scale: WHO. (2011). Gender mainstreaming for health managers: A practical approach. Geneva) *(44) (47)*

Table 2: Examples of research along the gender assessment scale within the toolkit

Type of Research	Example
Gender sensitive research	McCollum R et al. 2019. Applying an intersectionality lens to examine health for vulnerable populations following devolution in Kenya. International Journal for Equity in Health 18:24. (See box 2; module 1.) Chikovore J, et al. 2014. Control, struggle and emergent masculinities: a qualitative study of men's care seeking determinants for chronic cough and tuberculosis symptoms in Blantyre, Malawi. BMC Public Health 14: 1053. (See box 4; module 2.) Dean, L. et al. (2019) "Neglected tropical disease as a 'biographical disruption': Listening to the narratives of affected persons to develop integrated people centred care in Liberia", *PLOS Neglected Tropical Diseases*. Edited by A. R. Means, 13(9), p. e0007710. doi: 10.1371/journal.pntd.0007710. (See box 5; module 2.) Caroline M. Ng'ang'a, Salome A. Bukachi and Bernard K. Bett (2016). Lay perceptions of risk factors for Rift Valley fever in a pastoral community in north-eastern Kenya. BMC Public Health (2016) 16:32 (DOI 10.1186/s12889-016-2707-8) (See box 6; module 3.)
Gender specific research	Bukachi SA, Wandibba S, Nyamongo IK (2017). The socioeconomic burden of human African trypanosomiasis and the coping strategies of households in the south-western Kenya foci. PLoS Negl Trop Dis 11(10): e0006002 (See box 7; module 4)
Gender transformative research	Bukachi SA, Mumbo AA, Alak ACD, Sebit W, Rumunu J, Biéler S, et al. (2018) Knowledge, attitudes and practices about human African trypanosomiasis and their implications in designing intervention strategies for Yei county, South Sudan. PLoS Negl Trop Dis 12(10): e0006826. (See box 8; module 5.) Participatory Action Research to adapt the delivery of NTD services (See box 9; module 5.)

2.1.2 Overview of intersectional gender analysis activities

Box 3 below situates the intersectional gender analysis activities in figure 5 above along the stages of the research process. Undertaking these activities will help to ensure research does not perpetuate gender inequality by reinforcing unbalanced gender norms, roles and relations. Within data collection, for example, unless researchers consider how gender norms, roles and relations may influence a person's involvement within research and vice versa, their involvement may negatively affect their relationships at the household, community or health system level. Likewise, when undertaking data analysis and dissemination, consider how individuals are portrayed in order to ensure that harmful gender stereotypes are not replicated and that a binary approach to gender is not reinforced (2).

Instruction and guidance on how to undertake these activities is included within the subsequent modules.

Box 3: Intersectional gender analysis activities within stages of research process

Design and development of research, including development of research protocol

- Use gender analysis framework to guide development of research objectives, questions and hypotheses; data collection tools; and analysis — Module 3
- Disaggregate data by sex and other social stratifiers within sample design — Module 3
- Develop a gender analysis matrix — Module 4
- Develop intersectional gender analysis questions to inform overall study objectives, questions, indicators and/or hypotheses, and/or data collection tools and analysis — Module 4
- If aim includes transforming inequitable gender power relations, incorporate participatory research methodology into research design — Module 5

Data collection

- Include intersectional gender analysis questions in data collection tools — Module 4
- If aim includes transforming inequitable gender power relations, use participatory research methods to transform inequitable gender power relations — Module 5
- If aim includes transforming inequitable gender power relations, consider ways in which underlying gender power relations can be challenged and progressively changed during research process — Module 6
- Ensure research process is not negatively affected by gender power relations — Module 6

Data analysis

- Incorporate intersectional gender dimensions into the analysis of data (i.e. through use of variables/indicators and coding framework) — Module 7

Dissemination and reporting

- Include gender-sensitive evidence within reports and other dissemination material — Module 9
- Include gender-related policy, programme and research recommendations that aim to address gender inequalities; disseminate to relevant stakeholders — Module 9
- Ensure that research recommendations do not perpetuate existing gender inequities — Module 9

The first case study (Gender norms and men's care seeking for TB in Malawi) shows the information that can be gained when a gender lens is incorporated into health research, and how gender norms and roles and their relationship to traditional notions of masculinity increase men's vulnerability to TB morbidity and mortality.

The second case study provides an intersectional analysis of experiences of debilitating and disabling neglected tropical diseases (NTDs) in Liberia.

Box 4: Case study - Gender norms and men's care seeking for TB in Malawi

This qualitative study explored the ways in which contemporary notions of masculinity influence TB-related health care seeking in an urban slum setting in Malawi. The text is taken from: Chikovore J, et al. 2014. *Control, struggle, and emergent masculinities: a qualitative study of men's care seeking determinants for chronic cough and tuberculosis symptoms in Blantyre, Malawi*. BMC Public Health 14: 1053.

Background: Tuberculosis (TB) is a leading cause of adult morbidity and mortality globally. Gender norms, roles and relations have been found to differentially affect TB incidence, prevalence and health seeking behaviour among men and women. Men's health care seeking delay, for example, results in higher mortality while on HIV or TB treatment and contributes to ongoing community level TB transmission. National surveys consistently show a much higher burden of undiagnosed infectious TB in men than women, implying men are the major source of TB transmission events.

Methods: This was a qualitative study. Data were collected during March 2011-March 2012 in three high-density suburbs in urban Blantyre. Ten focus group discussions were carried out, of which eight were with 74 ordinary community members (mixed sex = two; female only = three; male only = three) and two (both mixed sex) were with 20 health workers. Individual interviews were done with 20 TB patients (female =14) and 20 uninvestigated chronic coughers (female = eight) and a three-day workshop was held with 27 health stakeholder representatives.

Findings: Themes that emerged through analysis included: control, the expectation on men to be providers; the link between TB, HIV and health care seeking; and care seeking barriers at community and health service delivery levels.

The notion of control and its significance to masculinity and health seeking behaviour was one of the salient themes that emerged from the analysis. Control was found to permeate the ways men handled an expectation to provide when employment opportunities were limited, and incomes were small. Men's sense of adequacy as men was thus perennially threatened, driving them to constantly worry about different sites where their emasculation might occur, including within their own families and the community.

Overall, control was a key defining feature of adequate manhood, and efforts to achieve it also led men into side-lining their health.

Conclusions: Facilitating men to seek care early is an urgent public health imperative, in view of the contexts of high HIV/AIDS prevalence, but increasingly available treatment, and the role of care seeking delay in maintaining TB transmission. The way masculinity emerged in this study indicates the importance of continuing to build on the growing body of work on masculinity and health in African settings, and specifically to complement survey type methods with flexible designs capable of illuminating complexity and providing critical information to inform interventions.

From this study, control seems particularly central in men's lives and to their engagement with their health. The complex manifestations of masculinity reported suggest the need for interventions targeting men in health and TB control to assume supportive, multidimensional and long-term outlooks. There is also need to approach common assumptions about masculinity cautiously, while the signs of 'emergent masculinities' can provide a useful platform from which to support the transformation of harmful masculinity *(14)*.

By applying a gender lens, this study found that men's delay to seek health care is affected by gender norms and roles grounded in traditional notions of masculinity. Through understanding how gender norms and roles negatively affect men's health care seeking behaviour, researchers can effectively design and target health interventions to decrease men's health care seeking delay, as well as reduce the incidence and prevalence of TB among both men and women. Care must be taken, however, not to exploit gender norms and roles within intervention design and implementation. For example, messages that link men's health care seeking to masculinity would be considered exploitative.

Box 5: Case study - Intersectional analysis of experiences of debilitating and disabling neglected tropical diseases (NTDs) in Liberia

This qualitative study uses illness narratives to conduct an intersectional analysis of the experiences of debilitating and disabling neglected tropical diseases (NTDs) in Liberia to inform the development of person-centred health systems. This summary reflects on the use of narrative methods for intersectional analysis, as well as some of the experiences of the ethical dilemmas faced by the research team *(48)*.

Background: The priorities of people living with chronic disease and disability are often left behind in health systems development. Illness narrative methods are unstructured approaches designed to allow individuals to lead and shape discussions about their illnesses in ways that make sense to them, moving away from biomedical approaches to health. This study allowed for a critical appraisal of using illness narratives to enable an intersectional analysis of experiences of debilitating and disabling neglected tropical diseases (NTDs) in Liberia to support the development of person-centred health systems.

Methods: Illness narratives were used as one component of a case study approach to understand patient experience of living with debilitating or disabling clinical manifestations of different NTDs in Liberia. Specific disease focus included: leprosy, Buruli ulcer, lymphatic filariasis complication (lymphoedema and hydrocele) and onchocerciasis complication (blindness and skin manifestation). In total, 28 illness narratives were conducted with people affected by these diseases. Each narrative consisted of two unstructured interviews that took place on separate days.

To allow for deeper understandings of the links between disease and disability, thematic areas for illness narrative exploration were shaped by domains identified in the international classification of functioning (for example, activities and participation). This approach to data collection was designed to allow for intersectional analysis with a focus on the fluidity of the personal illness experience and how this is shaped by multiple individual positionings in the broader social, political, gendered and cultural context.

Findings: There were many successes and challenges of this approach in development of more person-centred health systems; however, the use of such an in-depth method did present some ethical challenges.

Successes involved the development of detailed and nuanced accounts of disease experience that shaped ideas for multifaceted interventions. Participants frequently described this as novel (having never been asked about their experience before) and therapeutic.

Challenges in the narrative process included: difficulty in encouraging participant monologue due to the unstructured nature of the method; barriers to securing confidential environments to conduct interviews based on many participants being dependents; identification of participants who are frequently 'hidden' within communities and under acknowledged by the health system.

Depth of detail within narrative accounts frequently revealed that participants were unaware of the diagnosis or degree of permanency of their condition and significant mental health challenges such as depression and suicidal ideation were described. This presented ethical dilemmas for the research team in ensuring appropriate care referral, particularly given the relative weakness of health system support in study locations.

Conclusions: Illness narratives can be a fundamental tool in unpacking the complexity of disease experience, particularly in contexts where individuals are highly stigmatised and marginalized.

They present an opportunity for health systems to reflect on how they can provide social protection for vulnerable groups in a way that is responsive to their needs and experience.

They are particularly useful when attempting to conduct intersectional analysis as they allow participants to shape descriptions about how their experience may change in different spaces, places and over time.

Key Resources on approaches to gender analysis

- Morgan, R. et al. (2016) 'How to do (or not to do)… gender analysis in health systems research', *Health Policy and Planning*, 31(8), pp. 1069–1078.
- RinGs (2016) *How to do gender analysis in health systems research: A guide*. (http://resyst.lshtm.ac.uk/resources/how-do-gender-analysis-health-systems-research-guide).
- WHO (2011) *Gender mainstreaming for health managers: A practical approach*. Geneva. (http://www.who.int/gender-equity-rights/knowledge/health_managers_guide/en/).

Reflection questions/action items

- How might conducting a gender analysis of secondary data be useful for your study? What questions might you ask?
- Where does your research fall on the gender assessment scale?
- What type of intersectional gender analysis activities do you need to do to ensure your research is gender-sensitive, specific or transformative?

Module 03

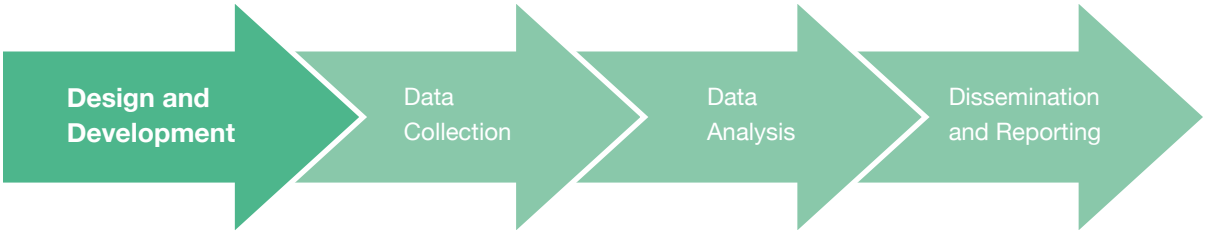
Gender considerations within the design and development of research: data disaggregation and gender frameworks

This module has the following objectives:

- Explore how gender frameworks can be used as an analytical guide to help researchers organize their thinking, frame their study (including the development of overall research objectives, questions and hypotheses) and think about how to develop gender analysis research questions to guide data collection and analysis
- Emphasize the need for data disaggregation within the sample design, including by sex and gender and other relevant social stratifiers
- Show how data disaggregation can be used as an entry point for further understanding the role of gender and other social stratifiers in health outcomes and experiences

This module outlines the initial activities needed to incorporate an intersectional gender lens into the design and development of research on infectious diseases of poverty. The activities included within this module form the foundation of intersectional gender analysis within research. Without engaging in these activities, it will be difficult to carry out many of the subsequent gender analysis activities within the different research phases.

The following subsections respond to each of these objectives, leaving the reader with some key questions and literature sources to consider after reading this module.



Intersectional gender analysis activities included in module 3:

- Use gender analysis framework to guide development of research objectives, questions and hypotheses; data collection tools; and data analysis
- Disaggregate data by sex and other social stratifiers within sample design

3.1 Using gender frameworks as analytical guides

Gender frameworks are a starting point for incorporating gender analysis within research. Gender frameworks are helpful tools to further organize your thinking, frame your study and develop gender analysis research questions to guide data collection and analysis *(2,47)*. Frameworks are particularly useful in helping researchers focus their data collection and analysis on key dimensions of gender relations most relevant to their study *(2)*.

There are many different gender frameworks. Most gender frameworks unpack gender relations into key dimensions where gender inequities have been found to be most prevalent and pervasive.

Within research, such dimensions are often used as proxies to explore and understand how gender inequities manifest, and their influence on health outcomes and experiences. Most gender frameworks "lead you through a process where you are encouraged to [develop and] answer questions related to key domains that constitute gender power relations" *(47)*.

While the key dimensions are often the same across contexts, how they manifest will be different due to the context specific nature of gender and how it is understood and experienced by men, women and people with non-binary identities. These dimensions will be influenced by context and other social stratifiers and drivers of inequality, such as race, age and socio-economic status.

Module 4 explains how the frameworks can be used to develop intersectional gender analysis questions. By developing and answering intersectional gender analysis questions, you will be able to better understand how gender inequities manifest, how they intersect with and are influenced by other drivers of inequality, and their effect on infectious diseases of poverty.

The gender framework in **Figure 6** organizes gender power relations into four categories: who has what (access to resources); who does what (the division of labour, roles and everyday practices); how values are defined (social norms, ideologies, beliefs and perceptions) and who

decides (rules and decision-making). These dimensions are interrelated and reinforce and influence one another. A gender norm regarding what is appropriate for men or women will influence division of labour within and beyond the household, for example, who is responsible for childcare and who works outside the home.

At the bottom of the framework are ways in which power is negotiated and changed at the individual and structural level, which is particularly relevant for those thinking to transform and change inequitable gender power relations.

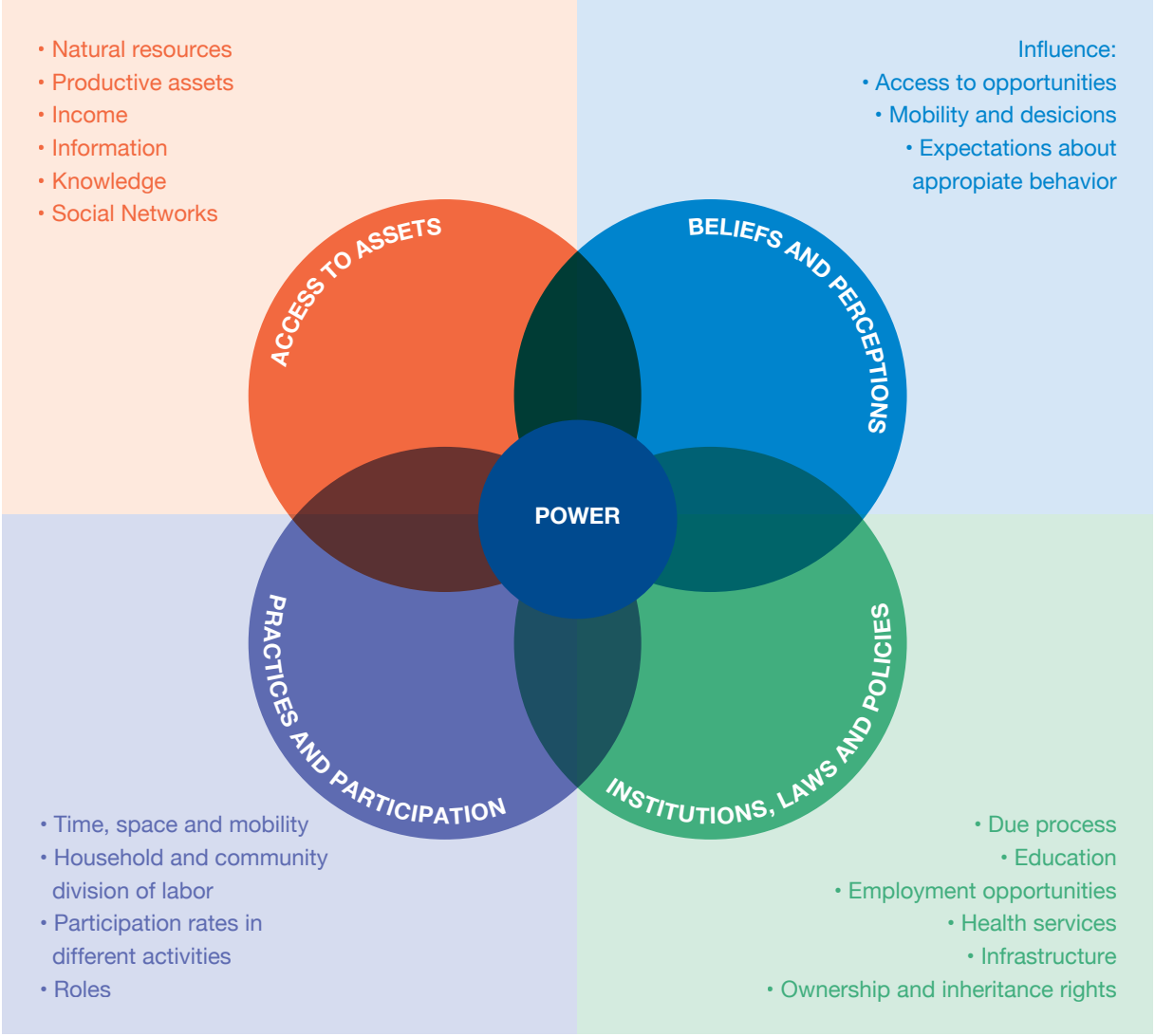
Figure 6: Gender framework - gender as a power relation and driver of inequality (2)

What constitutes gendered power relations	
Who has what?	Access to resources (education, information, skills, income, employment, services, benefits, time, space, social capital, etc.)
Who does what?	Division of labour and roles within and beyond the household and everyday practices
How are values defined?	Social norms, ideologies, beliefs and perceptions
Who decides?	Rules and decision-making (both formal and informal)
How power is negotiated and changed	
Individual/people	Critical consciousness, acknowledgement/lack of acknowledgement, agency/apathy, interests, historical and lived experiences, resistance or violence
Structural/environment	Legal and policy status, institutionalisation within planning and programmes, funding, accountability mechanisms

Another useful framework is the JHPIEGO Gender Analysis Framework *(42)*. The JHPIEGO Gender Analysis Framework is similar to the Morgan et al. gender framework in that it distinguishes key dimensions of gender relations. Unlike the Morgan et al. gender framework, however, it includes institutions, laws and policies as a key dimension and puts power at the centre to demonstrate its cross-cutting and pervasive nature.

Researchers should select which framework to use depending on which key dimensions of gender relations they deem most relevant to their study.

Figure 7: JHPIEGO Gender Analysis Framework *(42)*



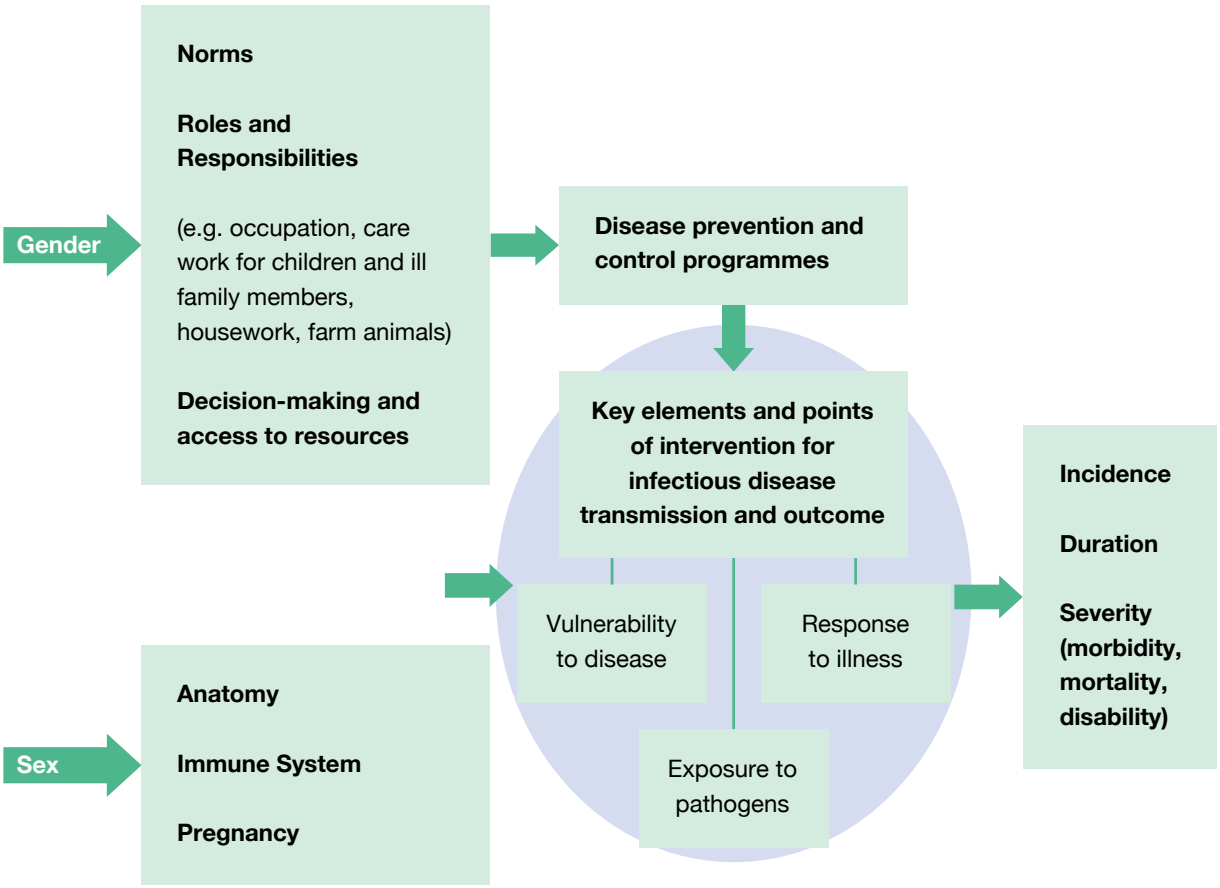
Frameworks can be adapted and modified to meet the needs of researchers and allow researchers to understand "the complex power relations that characterize gender" within infectious diseases of poverty *(2)*. They can also be combined with other frameworks to understand and explore infectious diseases.

Module 4 provides examples of how frameworks can be combined and modified to facilitate the development of gender analysis questions within research on infectious diseases of poverty.

3.1.1 Gender frameworks for research on infectious diseases of poverty

The WHO Framework for Sex and Gender and Emerging Infectious Diseases may be particularly useful for researchers conducting research on infectious diseases of poverty **(Figure 8)** *(49)*.

Figure 8: WHO Framework for Sex and Gender and Emerging Infectious Diseases *(49)*



This framework **(Figure 8)** is based on the transmission model that explores the outbreak of a disease in relation to vulnerability to disease, exposure to pathogens and response/treatment to illness.

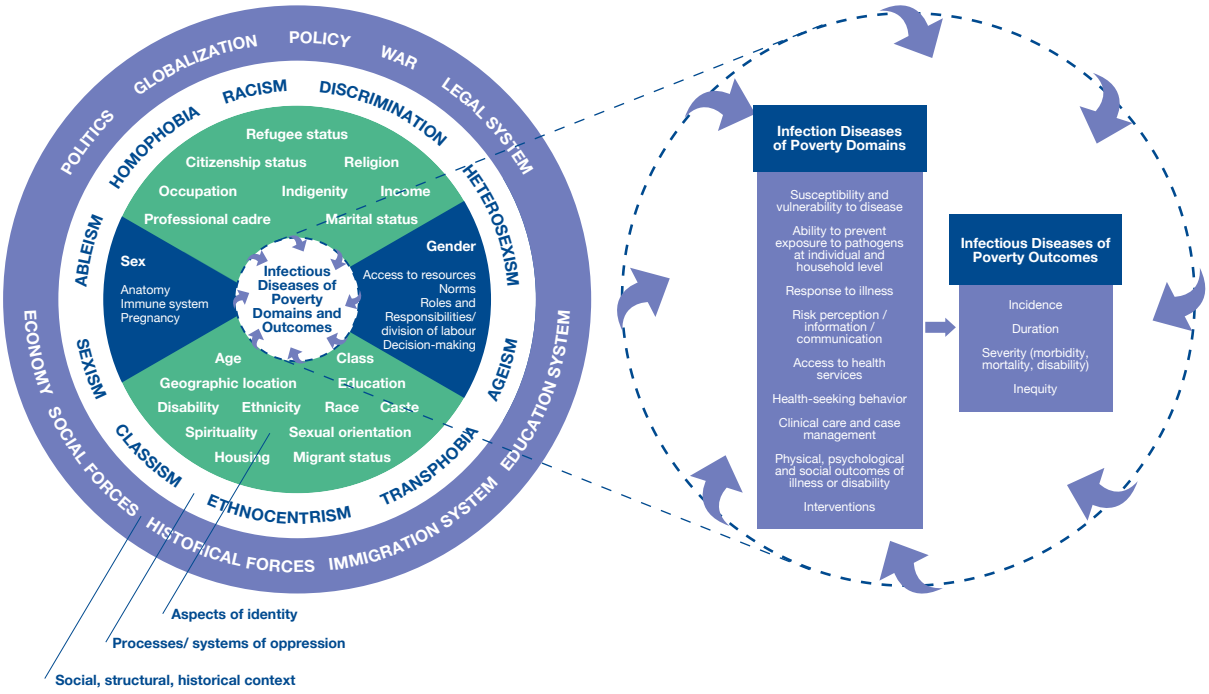
The framework "identifies the effects of sex and gender on the vulnerability of males and females in the population, on exposure and on response to illness" to influence incidence, duration and severity of disease *(49)*. It also puts emphasis on how infectious disease policies, programmes and interventions respond to the different needs of men and women along the life course resulting from the intersection of sex and gender. When using this framework, it is also important to consider how sex and gender intersect with other social stratifiers to influence vulnerability, exposure and disease response.

The framework below **(Figure 9)** combines the elements of the above frameworks to create an intersectional gender analysis framework for research in infectious diseases of poverty. With the help of this framework, researchers can interrogate how gender and sex intersect with other social stratifiers to influence vulnerability to illness, exposure to pathogens and response to illness, which in turn influence disease incidence, duration and severity.

There may be other domains related to infectious diseases of poverty that may be relevant to your study instead of, or in addition to, these three. Additional domains can be found in module 4.

Choosing which social stratifiers to use in addition to sex and gender is discussed in greater detail below. To facilitate intersectional analysis, findings need to be analysed in relation to the larger social, structural and historical context, and the different intersecting systems oppression that impact a person's experience of marginalization.

Figure 9: Intersectional gender analysis framework for research in infectious diseases of poverty



Key Resources on Gender Frameworks:

- Morgan, R. et al. (2016) 'How to do (or not to do)… gender analysis in health systems research', Health Policy and Planning, 31(8), pp. 1069–1078.
- RinGs. 2015. Ten Gender Analysis Frameworks & Tools to Aid with Health Systems Research. Available at: https://www.ringsgenderresearch.org/wp-content/uploads/2018/07/Ten-Gender-Analysis-Frameworks-and-Tools-to-Aid-with-HSR.pdf
- Warren H. 2007. Using gender-analysis frameworks: theoretical and practical reflections. Gender & Development 15: 187–98
- WHO (2011) Taking sex and gender into account in emerging infectious disease programmes: An analytical framework. Geneva. Available at: https://hiip.wpro.who.int/portal/Reportspublications/TabId/83/ArtMID/1151/ArticleID/161/Taking-sex-and-gender-into-account-in-emerging-infection-disease-programmes-An-analytical-framework.aspx

3.2 Data disaggregation as an entry point for further understanding

Data disaggregation is an entry point for understanding how gender affects men, women and people with non-binary identities. This is separate from data aggregation, which is where quantitative data is collected and expressed in a summary form. While data aggregation can show important overall trends, it can mask key differences between and within subgroups of individuals.

To begin, an intersectional gender analysis data first needs to be disaggregated by sex or gender *(2,47)*. Sex or gender disaggregation means that the information collected is distinguished between men, women and people within non-binary identities.

To ensure research incorporates an intersectional perspective, data needs to be disaggregated by other social categories in addition to sex or gender, including different age groups, racial groups, income status, etc. Variation of research participants according to the different social stratifiers should be done in both quantitative and qualitative studies. This implies a deliberate effort to collect data and perform analyses while having gender and other social stratifiers in mind.

Data disaggregation is meant to act as a trigger that encourages deeper reflection, investigation and action. Simply disaggregating data by sex or gender identity is not gender analysis. Gender analysis can occur in both sex- or gender-specific studies (where only men, women or people with non-binary identities are included, for example) and sex- or gender-disaggregated studies (where both men, women and people with non-binary identities are included). When sex or gender disaggregation does occur, it is usually by men versus women. Very few data systems include other gender identities beyond men and women as a routine variable or demographic *(2)*.

Within intersectionality, research samples can be either inter-categorical or intra-categorical.

- Inter-categorical samples are similar to sex- and gender-disaggregated samples as they include multiple social groups and compare experiences across groups, i.e. men's and women's vulnerability to disease exposure.

- Intra-categorical samples are similar to sex- and gender-specific samples in that they focus on one social group only and analyse experiences of that one group, i.e. adolescent girl's vulnerability to disease exposure *(50).*

Disaggregation needs to be maintained throughout the research, rather than being aggregated at higher levels (2). This is important as aggregated data sets can mask differences between different groups (both within and between the sexes), which can lead to "assumptions that all people share the same experiences. This bias can affect the validity and reliability of research in negative ways" *(47,51).*

For example, if you are exploring vulnerability or exposure to infectious disease, while sex disaggregation will allow you to see whether a disease is more prevalent between men or women, disaggregating data by sex and age will allow you to see if certain age groups are more affected among men or women. It is also often necessary to reanalyse available aggregated data in a disaggregated manner to uncover these differences. This information will therefore allow you to tailor subsequent interventions accordingly, i.e. by focusing on groups that are most vulnerable.

Data that is disaggregated by sex or gender and other social stratifiers (including both quantitative and qualitative data) can help researchers to examine various factors of the disease process, such as those shown below *(52)*:

- Who gets ill (different ages, sex, ethnic groups and socio-economic groups)?
- What types of illness do men, women and people with non-binary gender identities get?
- When do they get sick?
- Where do they get sick the most (place of work or specific regions)?

A study exploring the prevalence and risk factors of schistosomiasis among Hausa communities in Kano State, Nigeria found that the prevalence of schistosomiasis was much higher among men (20.6%) than women (13.3%) in the sample *(53)*. Disaggregation by age showed that prevalence was highest among the 11-20 age group (27.4%), followed by the 21-20 age group (14.4%).

While these stratifiers were explored separately and one can surmise that prevalence is highest among men aged 11-20, an intersectional analysis would combine these categories to explore prevalence among men and women within different age groups, which would potentially tell a different story. There is a need here to disaggregate data across different social stratifiers, moving beyond single categories to explore the intersection of social stratifiers.

Figure 10: Prevalence and distribution of schistosomiasis among the participants according to age and sex (n = 551) among Hausa communities in Kano State, Nigeria *(53)*.

Prevalence	No. examined	No. Positive	%
Overall schistosomiasis	551	98	17.8
S. mansoni	551	49	8.9
S. haematobium	551	46	8.3
Co-infection with both *S. mansoni* and *S. haematobium*	551	3	0.5
Sex			
Male	340	70	20.6
Female	211	28	13.3
Age groups (years)			
≤ 10	56	6	10.7
11 - 20	190	52	27.4
21 - 30	104	15	14.4
31 - 40	89	11	12.4
> 40	112	14	12.5

Data exploring the incidence of HIV in sub-Saharan Africa by age and sex in 2013 shows that while the majority of new HIV infection occurs in adults aged 25-49, the proportion of new infections is much higher among young women and adolescent girls aged 15-24 compared to men *(54)*. A gender analysis would look to explore the reasons for young women and adolescent girls' increased vulnerability and ensure that this age group is not left behind in efforts to reduce HIV infection rates among the population as a whole.

3.3 Rationale for selection of social stratifiers for intersectional gender analysis

When conducting intersectionality analysis, researchers should try not to make a *priori* assumptions regarding the importance of any one or multiple social stratifiers; however, within research we often have to place boundaries on what it is we are exploring and analysing. This includes the identification and selection of social stratifiers. The rationale for selection of social stratifiers therefore becomes important.

Some questions you may want to ask yourself include:

- Why did you choose to focus on a specific set of social identities/differences? What is your rationale?
- Why are these social identities/differences more important than others?
- Where is the benefit falling (i.e. who is the most marginalized)?

To answer these questions some preliminary work may be needed, including review of the literature or demographic profiles within a country.

When considering your rationale for choosing social stratifiers, considerations include *(55,56)*:

1. Intersectional approaches often focus on knowledge development/experience via non-dominant, minority and marginalized groups. Importantly, however, individuals can hold positions of power and privilege at the same time as being marginalized and marginalization can exist within all groups, including those that are seen as typically more privileged. How one conceptualizes marginalization therefore is important.

2. The magnitude of disease burden and disparity in health outcomes with categories may help you to identify who may be the most marginalized and vulnerable.

3. There is a need for research that focuses on individuals with power and privilege and how they may undermine health outcomes.

If, during the analysis stage, other categories emerge as important, they should be captured within your data analysis.

More information about analysing data through an intersectional gender lens is included in module 7.

Box 6: Case study - Lay perceptions of risk factors for Rift Valley fever in a pastoral community in north-eastern Kenya

Caroline M. Ng'ang'a, Salome A. Bukachi and Bernard K. Bett (2016). Lay perceptions of risk factors for Rift Valley fever (RVF) in a pastoral community in north-eastern Kenya. ***BMC Public Health (2016) 16:32 (DOI 10.1186/s12889-016-2707-8)***

This study investigated the lay perceptions of risks for RFV transmission in a pastoral community in north-eastern Kenya. A qualitative study was carried out in Ijara district, Kenya which was one of the hotspots of RVF during the 2006/2007 outbreak. Data were collected using focus group discussions and narratives guided by checklists. Eight focus group discussions consisting of 85 participants (44 women and 41 men) and six narratives (4 men and 2 women) were conducted. Findings demonstrated the complex way that gender norms, roles and relations intersect with occupation to increase vulnerability to infection among men and women of a pastoral community.

Gender and access to assets

Gender differences were reported in the proportions of livestock kept by species. Men reported that the community mainly kept goats, followed by cattle, sheep, chicken and donkeys in that order (4/8 FGDs). Women, on the other hand, noted that the community mainly kept sheep, followed by goats, cattle, chicken and donkeys in descending order (4/8 FGDs). The men gave the reasons they preferred to keep more goats as being drought resistant, fetching better market prices, the meat tasting good, producing more milk than sheep and easier to milk than sheep. On the other hand, women reported that sheep were more preferred because they produced a lot of fat when slaughtered, and their fat was useful for cooking and as food for nursing mothers, while the raw blood from sheep was useful in replenishing blood lost during childbirth. Sheep, according to the women, were also cheaper to purchase, reproduced faster within 5 months, their milk was tastier in tea and on high demand in the market.

Risk factors for RVF and gender: Products from sheep are highly valued, especially by women, due to their perceived medicinal and dietary value, yet sheep were reported to be the most affected species of livestock by RVF. This may have important implications on the gender dynamics of RVF infections. This notwithstanding, much as previous studies have indicated, men and women are likely to be differentially exposed to RVF infection depending on the roles traditionally ascribed to them. Men have been reported to be three times more likely to be seropositive than women because their main role as herders cause then to interact closely and for longer periods in isolation with animals, hence increased vulnerability to RVF.

The above findings demonstrate how men's and women's identity as a pastoralist intersected with gender norms and roles in their community to influence individual's access to and use of livestock, and to their vulnerability to RVF. These findings have important implications for public health messaging for prevention and control interventions for RVF and other zoonoses. They show that different messaging may be required for men and women as a result of the types of livestock they keep and how they interacted with the livestock. The findings also show the importance of collecting data and reporting findings disaggregated by sex. Aggregated data sets would mask the key differences and risk factors that increase pastoral men's and women's vulnerability to RVF infection.

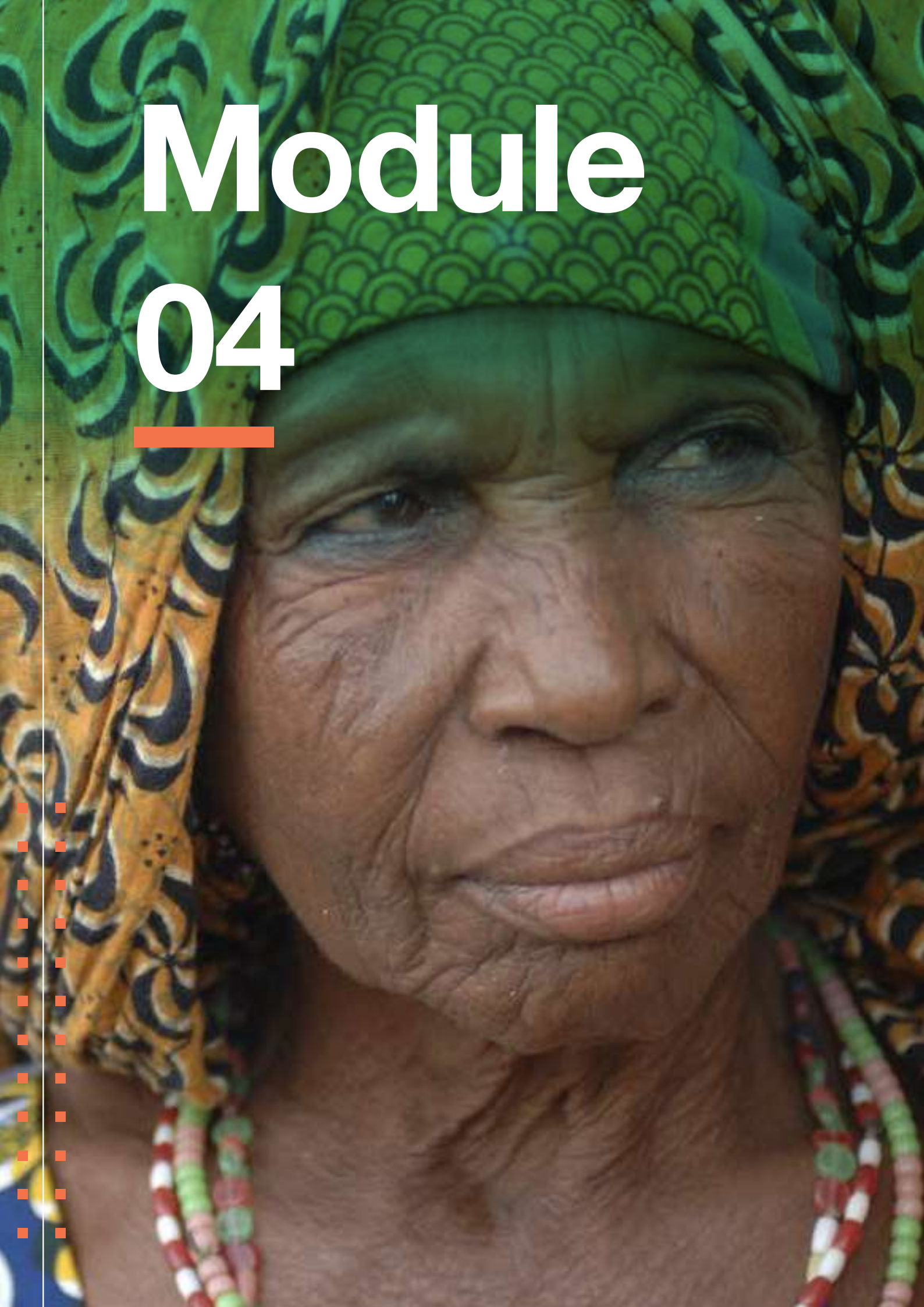
Key resources for data disaggregation

- Mazurana, D., Benelli, P. and Walker, P. 2013. 'How sex- and age-disaggregated data and gender and generational analyses can improve humanitarian response', *Disasters*, 37(s1), pp. S68–S82.
- MEASURE Evaluation (2017) *Factors Affecting Sex- and Age Disaggregated Data in Health Information Systems: Lessons from the Field*. Available at: https://www.measureevaluation.org/resources/publications/fs-17-215.
- Morgan, R. et al. (2016) 'How to do (or not to do)… gender analysis in health systems research', *Health Policy and Planning*, 31(8), pp. 1069–1078.

Reflection questions/action items

- Are there certain domains of gender relations that are more relevant for your study?
- Which domains related to infectious diseases of poverty are relevant to your study?
- Will you use the existing intersectional gender analysis framework for infectious diseases of poverty or modify it? How might it be modified to better fit your study?
- How will you disaggregate your data within your sample design, i.e. will you disaggregate data by sex and age? Or by sex, age an income status? Which social stratifiers will you use?

Module 04

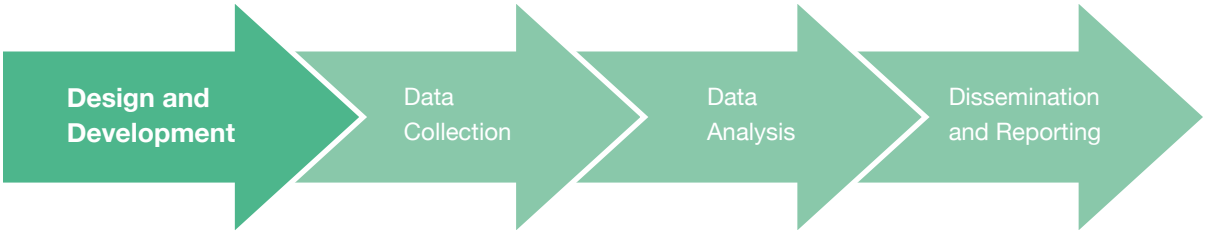


Gender considerations within the design and development of research: developing gender analysis questions

This module has the following objectives:

- Explore how intersectional gender analysis questions can be used as entry points for further understanding the role of gender in health outcomes and experiences
- Discuss how intersectional gender analysis questions can be developed to inform overall study objectives, questions, indicators and hypotheses, and/or data collection and analysis
- Describe activities to facilitate the development of intersectional gender analysis questions, including creating an intersectional gender analysis matrix, the use of broad gender analysis questions, and mapping gender analysis questions against relevant infectious diseases domains

The following subsections respond to each of these objectives, leaving the reader with some key questions and literature sources to consider after reading this module.



Intersectional gender analysis activities included in module 4:

- Develop intersectional gender analysis questions to inform overall study objectives, questions, indicators and hypotheses, and/or data collection tools and analysis

4.1 Intersectional gender analysis questions as entry points for further understanding

Intersectionality frameworks can advance thinking about which women, which men and which non-binary people - among others - experience difference, discrimination or privilege. This allows for meaningful attention to diversity during the analysis process.

Informed by gender frameworks, intersectional gender analysis questions can be developed to help researchers move beyond describing the differences between men, women and non-binary people *(47)*, to examine and critically interpret how gender inequities manifest within a particular context, how they intersect with and are influenced by other drivers of inequality, and their effect on infectious diseases of poverty. These questions can then be used to guide the overall direction of the study (i.e. inform research objectives, questions or hypotheses) incorporated into data collection tools (i.e. interview guides, questionnaires) and/or used to guide analysis.

There are a number of activities you can engage in to help you develop relevant intersectional gender analysis questions to inform your study.

These include developing:

1. a broad intersectional gender analysis questions table that includes gender analysis questions relevant across contexts and topics;

2. an infectious diseases of poverty intersectional gender analysis matrix to identify key areas of inquiry within research; and

3. a table mapping intersectional gender analysis questions against relevant infectious diseases domains that is informed by the infectious diseases of poverty intersectional gender analysis matrix.

4.1.1 Developing gender analysis questions

Table 3 below provides some illustrative examples of broad intersectional gender analysis questions related to each domain of gender relations included in the gender framework presented in module 3. These demonstrate what an intersectional gender analysis question looks like and guide you in your thinking about what domains or questions may be most relevant to your study.

In thinking through the questions in Table 3 below, you may want to think about how individual characteristics emphasized in the inner circle of the intersectionality wheel in module 1 interact to shape individual experience or circumstance. For example, you may want to consider how ability, disability, wealth, age and geography may interact with gender to shape experience.

Similar intersectional gender questions as those included in Table 3 can be used to guide the design and development of overall research objectives, questions and hypotheses if the research includes a specific focus on gender. Otherwise, they can inform your thinking about how to develop intersectional gender analysis questions for inclusion with data collection tools and analysis.

Note: the domains below are interrelated. For example, gendered access to resource is related to gendered decision-making, influencing curative and preventative health care. Researchers may therefore want to pose broader questions that ask how the different domains intersect to influence vulnerability to illness, exposure to pathogens, and response to illness, as outlined in the intersectional gender framework presented in module 3.

Table 3: Broad intersectional gender analysis questions

Gender analysis domain	Gender analysis questions
Access to resources	• To what extent do men, women and people with non-binary identities have access to financial resources to pay health care access or supplies? How does this differ between different groups of men, women and people with non-binary identities? • To what extent do men, women and people with non-binary identities have access or lack of access to knowledge about disease prevention? How does this differ between different groups of men, women and people with non-binary identities? • What are the indirect costs that could affect men, women and people with non-binary identities differently? Indirect costs of seeking health services for diseases of poverty include missing paid employment, the need for childcare, etc. How does this differ between different groups of men, women and people with non-binary identities?
Division of labour, roles and everyday practices	• How do men's, women's and people with non-binary identities' roles and responsibilities affect their vulnerability or exposure to disease? How does this differ between different groups of men, women and people with non-binary identities? • How do men's, women's and people with non-binary identities' roles and responsibilities affect their ability to engage with preventive and curative health care interventions for infectious diseases of poverty? How does this differ between different groups of men, women and people with non-binary identities? • What are costs of illness to men, women and people with non-binary identities (i.e. inability to perform household chores or childcare responsibilities, inability to work outside the home)? How does this differ between different groups of men, women and people with non-binary identities? How does this influence the broader household? And how does this impact differ between different groups of men, women and people with non-binary identities within the household?
Social norms and values	• How do gender norms affect men's, women's and people with non-binary identities' vulnerability to illness or exposure to pathogens/disease? • Do gender norms affect willingness or ability to recognize illness and seek treatment? How does this differ between different groups of men, women and people with non-binary identities? • In what instances do women value health of family members above her own? • In what instances do men value household productivity above their own health?
Rules and decision-making	• Do women have autonomy to decide when and where to access health care? How do other social inequities, e.g. disability or age, influence an individual's ability to access health care? Do people living with disability have autonomy about where and when to access health care? • Who has decision-making power regarding use of household finances? • Are there policies in place at health facilities that require permission of parent/partner to access services? Are there adequate adaptations in place at health facilities that allow communication needs of different population groups to be met?

4.1.2 Developing an intersectional gender analysis matrix

An intersectional gender analysis matrix can be used to help you think about which domains might be most relevant for your study. The domains of gender power relations, under gender within the intersectional gender analysis framework for infectious disease of poverty, represent areas of inquiry. These can be included with relevant social stratifiers to help you incorporate an intersectional lens.

Table 4 provides a list of other social stratifiers which may be relevant for your study. This is not an exhaustive list and other social stratifiers that could be considered are those highlighted in the inner circle (of the intersectional gender analysis framework for infectious disease of poverty). Within the matrix, the social stratifiers and gender relations domains are included in the top row. They are mapped against relevant infectious diseases of poverty domains included within the intersectional gender analysis framework for infectious disease of poverty presented in module 3.

Researchers should begin by filling in the matrix below by identifying how the different gender relations domains may affect relevant infectious diseases of poverty domains (i.e. areas of interest relevant to your study) and which social stratifiers are likely to intersect with gender to influence a person's marginalization or vulnerability in regard to these domains.

Within the matrix below and subsequent tables, the following domains are used:

- vulnerability to illness
- exposure to disease
- response to illness

These domains will then be turned into gender analysis questions to be incorporated into data collection tools and analysis. Illustrative examples are provided within the framework to demonstrate how it may be filled in.

Note: many of the examples will fit under more than one domain.

Table 4: Intersectional gender analysis matrix

Infectious diseases of poverty domains	Biological and social stratifiers					Gender relations domains			
	Sex	Age	Race/ ethnicity	Income	Disability	Access to resources	Distribution of labour and roles	Norms and values	Decision-making power
Vulnerability to disease/ illness	X	X	X	X	X		Women care for sick family members. Women wash clothes outdoors.	Boys permitted to swim in infected bodies of water	
Ability to prevent exposure		X		X		Women lack knowledge of how to prevent exposure.	Men unable to reach health facilities during opening hours due to employment.		Men decide whether to buy bed nets.
Response to illness		X		X		Women lack access to financial resources to access health facilities.			

Table 5 below is a summary of areas that can be included within an intersectional gender analysis matrix depending on type of disease(s) being studied and the areas of interest.

These areas have been informed by tables included within 'Taking sex and gender into account in emerging infectious disease programmes: an analytical framework' *(49)* and the gender analysis framework presented in module 3. These lists are not exhaustive and there may be other domains you wish to include in your study.

Examples of gender analysis questions against the three infectious diseases of poverty domains in table 4 above are included in table 5 below.

For additional examples of sex and gender analysis questions against each area in the first two columns of table 5 below, refer to WHO 2011.

Table 5: Illustrative areas for intersectional gender analysis matrix

Type of disease/ transmission	Infectious disease domain	Biological and social stratifiers	Gender relations domains
• Vector-borne infectious diseases • Diseases transmitted through contact with soil and water • Diseases transmitted through close contact • Foodborne and waterborne diseases • Zoonotic diseases • Sexually transmitted diseases • Diseases that can be transmitted vertically from mother to child during pregnancy, delivery or lactation • Bloodborne transmission	• Susceptibility and vulnerability to disease • Exposure to disease • Response to illness • Risk perception/ information/ communication • Access to health services • Health seeking behaviour • Clinical care and case management • Physical, psychological and social outcomes of illness or disability Interventions	• Sex • Age • Race • Ethnicity • Disability • Education • Income • Sexual orientation • Geographic location • Migrant status • Type of health provider/ professional cadre • Marital status • Refugee status • Citizenship status • Religion • Occupation • Indigenity • Spirituality • Housing • Caste • Class	• Access to resources • Distribution of labour and roles • Norms and values • Decision-making power

4.1.3 Intersectional gender analysis questions for research on infectious diseases of poverty

Table 6 below maps intersectional gender analysis questions against the intersectional gender analysis framework presented in module 3. It explores the role of gender relations and their intersection with other social stratifiers in relation to vulnerability to disease/illness, ability to prevent exposure and response to treatment.

The information in **Table 6** is modified from the resource: *Taking sex and gender into account in emerging infectious disease programmes: an analytical framework (49)*. There may be different domains relevant for your research (see **Table 5** for examples). Some of the questions in the table are taken directly from the above resource, while others have been added. The questions in bold bring in the intersectional dimension and should be applied to all questions asked. The questions included in the table are illustrative; there are likely to be many more questions that could be incorporated.

Filling in the intersectional gender analysis matrix above will help you identify which social stratifiers are relevant for your research. When developing a gender analysis matrix, you want to include questions that may be relevant for your research and warrant further exploration. Intersectional questions are shown in italics and bold text.

Table 6: Mapping gender analysis questions against relevant infectious diseases domains

Infectious diseases of poverty domains	Gender relations domains			
	Access to resources	**Distribution of labour and roles**	**Norms and values**	**Decision-making power**
Vulnerability to disease/ illness	To what extent do men, women and people with non-binary identities have access to knowledge about disease prevention? To what extent do men, women and people with non-binary identities have access to financial resources to purchase equipment and material needed? ***How does the above differ between different groups of men, women and people with non-binary identities?***	Are there occupational or household activities that bring men, women and people with non-binary identities in contact with contaminated soil or water? Are there occupation or household activities that bring men, women and people with non-binary identities in contact with infected individuals? Are there occupation or household activities that bring men, women and people with non-binary identities in contact with vectors during peak biting hours? Are their leisure or other activities of men and women that put them into contact with contaminated soil or water? Are their leisure or other activities of men and women that put them into contact with vectors during peak biting hours? Does clothing or perfume worn by men or women make a difference in exposure? ***How does the above differ between different groups of men, women and people with non-binary identities?***	To what extent do gender norms influence the activities that girls/women and boys/men can do? ***How does the above differ between different groups of men, women and people with non-binary identities?***	Do women need to seek permission to leave the house? Who decides how financial resources will be used? ***How does the above differ between different groups of men, women and people with non-binary identities?***

Ability to prevent exposure	Do men and women have equal knowledge about methods to prevent exposure? Do men and women have equal access to methods to prevent exposure? Do households have to pay for use of a method to prevent exposure? If so, who pays? ***How does the above differ between different groups of men, women and people with non-binary identities?***	Are there protective measures that men and women can use to prevent exposure? Are these methods used appropriately by both men and women? ***How does the above differ between different groups of men, women and people with non-binary identities?***	Are there any socio-cultural reasons why methods to prevent exposure may be used or avoided by either men or women? Does using a particular method to prevent exposure place a burden on men, women and people with non-binary identities? ***How does the above differ between different groups of men, women and people with non-binary identities?***	Who is responsible for using the method in the household? Who makes the decision to use the method? ***How does the above differ between different groups of men, women and people with non-binary identities?***
Response to illness	To what extent do men, women and people with non-binary identities have access to financial resources to pay health care access or supplies? What are the costs of illness to men and women, e.g. lost wages, inability to perform household roles and responsibilities? ***How does the above differ between different groups of men, women and people with non-binary identities? How does the above affect others within the household? How does this vary by social stratifiers of those within the household?***	To what extent does men's work outside the home prevent them from access health care? To what extent are men able to reach health facilities during opening hours due to employment? To what extent does women's domestic workload prevent them from accessing health care? How do roles and responsibilities affect men, women and people with non-binary identities ability to continue treatment? ***How does the above differ between different groups of men, women and people with non-binary identities? How does the above affect others within the household? How does this vary by social stratifiers of those within the household?***	Do socio-cultural consequences of illness affect men and women differently? Do gender norms affect willingness or ability to recognize illness and seek treatment? How does this differ between different groups of men, women and people with non-binary identities? Are there differences in attitude towards men, women and people with non-binary identities by health services staff? ***How does the above differ between different groups of men, women and people with non-binary identities? How does the above affect others within the household? How does this vary by social stratifiers of those within the household?***	Do women have the autonomy to access treatment? ***How does the above differ between different groups of men, women and people with non-binary identities? How does the above affect others within the household? How does this vary by social stratifiers of those within the household?***

The following table presents information on why the above gender analysis questions are relevant for each of the infectious diseases domains. This is a useful exercise when justification for each question is needed.

Table 7: Relevance of gender analysis questions in **Table 6.**

Infectious diseases domains	Relevance of above questions
Vulnerability to disease/ illness	• Clothing may afford some protection from some vectors/insects. • What is considered appropriate clothing for men and women will be influenced by gender norms. • Some vector insects are attracted by perfume or dark clothing. • Roles and responsibilities, such as collecting water or firewood, or working outside the home, may put individuals at increased risk of coming into contact with vectors or contaminated soil or water. • Norms around who is allowed to swim can put boys and men at increased risk of exposure to waterborne diseases. • Women are often the family caregivers. • Occupational exposure is likely to affect men and women differently. • Men and women have different social activities and networks. • Burial traditions can put men at increased risk of coming into contact with infected individuals.
Ability to prevent exposure	• Examples of protective methods include bed nets, insect repellent and wearing long sleeves or trousers. • Use of protective methods has been associated with decision-making power. • Insect control inside the home (such as eliminating breeding sites of dengue carrying mosquitoes inside home and covering water containers) is usually done by women. Although men may be responsible for some outdoor tasks.
Response to illness	• Differential hospitalization and treatment rates can be caused by gender bias by health providers. • Different consequences of illness may lead to different use of health services, e.g. fear of stigma can delay seeking treatment. • Women may not have ability to access resources or seek treatment without permission.

4.2 Developing gender-sensitive indicators

If you are conducting a quantitative study, gender-sensitive indicators may be relevant. These can be developed alongside the gender analysis questions above. A gender-sensitive indicator is an indicator that helps to measure and assess gender inequality in a society and how it changes over time. The process discussed above to develop a gender analysis question can be used to develop a gender-sensitive indicator.

Three types of gender-sensitive indicators are defined below *(57)*. It is important that research includes gender equality indicators in addition to sex-specific and sex-disaggregated indicators in order to be considered gender-sensitive.

Table 8: Gender-sensitive indicators.

Type of Indicator	Example	Example of intersectional indicator
Sex-specific indicator: a type of gender-sensitive indicator that pertains to only females or only males.	Proportion of females who are HIV positive.	Proportion of females who are HIV positive disaggregated by income, age, education, etc.
Sex-disaggregated indicator: a type of gender-sensitive indicator that measures differences between females and males in relation to a particular metric.	Proportion of females and men who are HIV positive.	Proportion of females and males who are HIV positive disaggregated by income, age, education, etc.
Gender equality indicator: a type of gender-sensitive indicator that measures gender equality directly or is a proxy for gender equality. Indicators that can act as a proxy for gender equality include indicators that explore the different domains included in a gender framework (see module 3). These may include access to resources, distribution of labour/roles, norms and values, and decision-making, and may be known risk factors for disease transmission (e.g. education, condom use, etc.).	Percentage of married women aged 15–49 who usually make a decision about their own health care either by themselves or jointly with their husbands. Percentage of women who are able to leave the house without permission. Percentage of women who have worked in the last seven days. Percentage of women who decide how their own income will be used.	Percentage of married women aged 15–49 who usually make a decision about their own health care either by themselves or jointly with their husbands disaggregated by income, age, education, etc. Percentage of women who are able to leave the house without permission disaggregated by income, age, education, etc. Percentage of women who have worked in the last seven days disaggregated by income, age, education, etc. Percentage of women who decide how their own income will be used disaggregated by income, age, education, etc.

4.2.1 Incorporating intersectional gender analysis questions into data collection tools

After mapping gender analysis questions against relevant infectious diseases domains, the next step is to decide which questions are the most relevant to include within your data collection tools and guide your analysis.

When deciding which questions to use to within data collection and analysis, consider:

- Which gender relations domains are most relevant for the issue under study?
- How do the gender relations domains interact?
- How might each domain affect overall outcomes of research?
- What differences between men, women and non-binary people do you need to take account of?
- Are there differences between different subgroups of men, women and/or non-binary people?
- What questions do you need to ask to probe further?

Answering these questions will help you to decide which questions to use to inform your study and why. The questions can be used to select areas of inquiry and include related appropriate questions in qualitative and quantitative data collection tools, including the development of relevant indicators.

Table 9 provides examples of questions.

Note that while specific intersectional questions can be included within data collection tools, often an intersectional lens will be incorporated during the sampling and analysis stage when answers to questions are compared across different demographic characteristics.

For qualitative research, however, an intersectional lens can be applied to the way in which questions are asked. For example, you may choose to ask a participant how their identity as a young unmarried woman influences their knowledge of how to prevent being bitten by a mosquito. By combining the individual's different social identities of interest within your research, you are allowing them to identify which aspects of their identity (and the ways in which they may intersect) influence their ability to access or utilize knowledge. You can then analyse how the intersection of their different social identities may lead to increase vulnerability or marginalization.

Table 9: Using gender analysis questions to inform development of data collection tools

Infectious diseases of poverty area of inquiry	Gender relations domains	Gender analysis question(s)	Example question(s) for inclusion within qualitative data collection tools	Example question(s) for inclusion within quantitative data collection tools	Gender-sensitive indicator
Vulnerability to disease or illness	Distribution of labour and roles Norms	Are there occupation or household activities that bring men, women and people with non-binary identities in contact with vectors during peak biting hours?	Can you tell me about any activities you do outside? What time of day do you usually do these activities? How does your identity as a married woman influence the type of household activities you engage in outside the home?	Which outdoor activities do you usually engage in? Tick all that apply: • Swimming • Collecting water • Cooking • Shopping in market • Etc.	Proportion of women and men who engage in swimming, collection of water, cooking, shopping, etc.
Ability to prevent exposure	Resources	Do men and women have equal knowledge about protective methods?	Can you tell me what you know about how to prevent being bit by a mosquito? How does your identity as a young unmarried woman influence your knowledge of how to prevent being bitten by a mosquito?	State your level of agreement with the following statement. I know how to protect myself from being bitten by a mosquito. • Strongly disagree • Moderately disagree • Neutral • Moderately agree • Strongly agree	Proportion of men and women who decide how household money will be used.

Response to illness and/or treatment	Resources Decision-making	To what extent do men, women and people with non-binary identities have access to financial resources to pay health care access or supplies?	Can you tell me about who earns money within your household? What does this money get used for? Probes: access health care, buy supplies Who decides what this money is used for? How are decisions about seeking treatment for [name of infectious disease of poverty] usually made in your household?	Who usually decides how household money will be used: • You • Your (husband/wife/ partner) • You and your (husband/wife/ partner) jointly	Proportion of men and women who decide how household money will be used.

Key Resources for Gender Analysis Questions

- Morgan, R. et al. (2016) 'How to do (or not to do)… gender analysis in health systems research', *Health Policy and Planning*, 31(8), pp. 1069–1078.
- WHO (2011) Taking sex and gender into account in emerging infectious disease programmes: An analytical framework. Geneva. Available at: https://hiip.wpro.who.int/portal/Reportspublications/TabId/83/ArtMID/1151/ArticleID/161/Taking-sex-and-gender-into-account-in-emerging-infection-disease-programmes-An-analytical-framework.aspx

Box 7: Case study - The socio-economic burden of human African trypanosomiasis and the coping strategies of households in the south-western Kenya foci

Bukachi SA, Wandibba S, Nyamongo IK (2017). The socio-economic burden of human African trypanosomiasis and the coping strategies of households in the south-western Kenya foci. PLoS Negl Trop Dis 11(10): e0006002. https://doi.org/10.1371/journal.pntd.0006002

This study explored the socio-economic burden that households with Human African Trypanosomiasis (HAT) faced and the coping strategies they employed to deal with the increased burden in Kenya. A mixed methods approach was used and data were obtained through review of hospital records, structured interviews (152), key informant interviews (11), case narratives (12) and focus group discussions (15) with participants drawn from sleeping sickness patients in the south-western HAT foci.

Here gender norms, roles and relations intersected with social stratifiers, such as marital status (including whether respondents were widows/widowers or from a monogamous or polygamous household) and age to increase women's marginalization or vulnerability in relation to their experienced socio-economic burden.

Women as caregivers and the intersection marital status and age

Discussants in the FGDs were in consensus that when a man was sick, his wife or wives were forced to interrupt their daily activities to take care of him, while if a woman was sick, it was her co-wives (if she had any), her children or her sisters who would come in to take care of her and perform her domestic chores. In polygamous families, the burden of taking care of a sick husband mostly rested on the younger wife, who would usually be wrongly blamed for having infected the husband with HIV or having bewitched him, hence left to fend for herself, her children and her sick husband.

The immediate family were identified as the main care provider of HAT patients in this study. This implied that households had to find ways of coping with decreased household labour and income and increased expenditure on health. The burden of caregiving fell heaviest on women, who lost a considerable amount of productive time giving care. The study found that, invariably, when women are ill, other productive members of the community, particularly women relatives, are drawn out to provide caretaker services.

Death placed a differential burden on men and women. Widows tended to have a challenge with farming because they lacked the men to do the initial farm preparation of slashing and tilling, roles which are traditionally allocated to men in these communities. Death in the household also caused reversal of roles which, when not well handled, led to negative impacts. Widowers were forced by circumstances to undertake reproductive roles like cooking and caring for the children. However, given they were not well versed in these areas, older children, especially girls, were forced to undertake these domestic chores, hence affecting their performance in school or causing them to drop out of school and get married.

The authors stated that burden of disease measurements and analyses need to consider that the burden of disease is not felt equally across gender. Measurements or analyses taking an intersectional gender approach would consider how gender intersects with social stratifiers such as age and marital status to increase marginalization and vulnerability among specific subgroups.

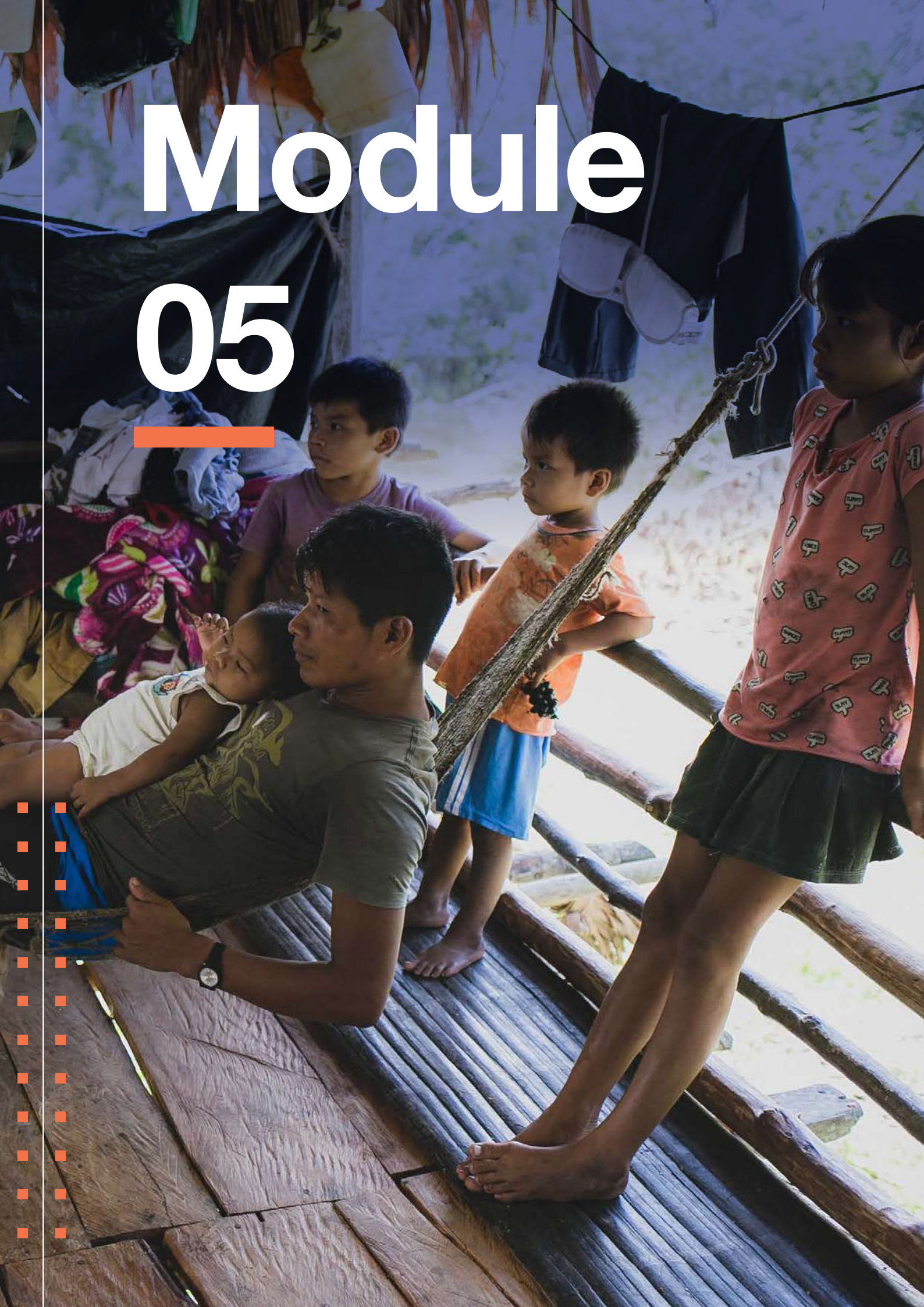
Intersectional gender analysis questions that may help researchers interrogate the complexity marginalization and vulnerability include:

- How does the socio-economic burden of human African trypanosomiasis differ between men and women?
- How does it differ among different groups of women and men?
- How are men's and women's productive and reproductive roles affected by HAT?
- In what ways does this differ in relation to who falls sick?
- How may this lead to increased vulnerability at the individual and household level?
- How does this differ among different groups of women and men, taking account of age and marital status?

Reflection questions/action items

- How will you create an intersectional gender analysis matrix for your study? Which social stratifiers and infectious diseases of poverty domains will you include?
- Which gender analysis questions are most relevant for your study and why?
- How will you collect information to answer these questions, i.e. which questions will you ask during data collection?

Module 05



Research methods to transform inequitable gender norms

Activities included in module 5

- Incorporate participatory research methodology into research design to transform inequitable gender power relations
- Use participatory research methods to transform inequitable gender power relations

This module has the following objectives:

- Explore how research methods, in particular participatory approaches, can be used to transform inequitable gender norms within communities
- Discuss key considerations necessary when thinking about how power dynamics can be measured.

The following subsections respond to each of these objectives, leaving the reader with some key questions and literature sources to consider after reading this module.

5.1 Why transform inequitable gender norms through research?

There are several arguments as to why it is important to transform inequitable gender norms through our research, and these can be divided into two broad categories: ethics and pragmatism.

From an ethical standpoint, reasons to transform inequitable gender norms include issues of social justice and fairness, and in specific reference to equitable access to health and health care as a fundamental human right *(58)*.

As we learnt in module 1, gender inequities can shape vulnerabilities to infectious diseases of poverty as well as access to household resources and health care. Thus, addressing gender inequities is likely to contribute to the better control and management of these diseases.

Pragmatists would argue that equity has a positive impact on economic development and it is widely documented that income inequalities, which are frequently driven by underlying gendered power dynamics, contribute to worse health, well-being and societal outcomes *(59)*. Consequently, if we address underlying power dynamics and inequitable gender power relations, we are likely to live in a healthier society.

5.2 Why conventional research methods might not work

Research that aims to be gender-sensitive, gender-specific or gender transformative is likely to adopt particular study designs. For example, a quantitative study that looks at sex or gender differences in the prevalence or incidence of malaria may tell us something about patterns of infection, but it is unlikely to address wider social and structural determinants that influence these disease outcomes.

Studies that are perhaps more gender-sensitive or gender-specific and utilize qualitative and quantitative methodologies, such as household surveys or in-depth interviews, to understand and document existing gender norms and imbalances are beneficial in raising the profile of inequities within the literature and policy agendas; however, it is unlikely that such methods and study designs will do much to effect change that addresses such inequities at the local level.

Direct questioning could also hide gender and equity issues if people feel unsafe to openly express their views and fear consequences of speaking out. Ultimately, for research to be gender transformative it will need to utilize a study design that specifically challenges existing gendered power relations while protecting participants as they navigate the political terrain of promoting social change.

Gender mainstreaming approaches and, more recently, efforts that focus on the concept of intersectionality highlight a need to strengthen capacities of everyone within organizations and communities to be able to recognize gender dimensions and power imbalances that relate to social inequities to be able to take action for change to address them. Traditional empirical research approaches infrequently allow for this and can be extractive and disempower

individuals; it is essential in seeking to transform unequal societies that we create more long-term engaging approaches that can sustain change *(60)*.

The case study below illustrates how thinking about data from a gender-sensitive and intersectional perspective can generate recommendation for intervention that when implemented may contribute to making health interventions more equitable. The key challenge, however, comes in implementing strategies and ensuring they contribute to enhancing equity.

Box 8: Case study - Knowledge, attitudes and practices about human African trypanosomiasis and their implications in designing intervention strategies for Yei county, South Sudan

Bukachi SA, Mumbo AA, Alak ACD, Sebit W, Rumunu J, Biéler S, et al. (2018) Knowledge, attitudes and practices about human African trypanosomiasis and their implications in designing intervention strategies for Yei county, South Sudan. PLoS Negl Trop Dis 12(10): e0006826. https://doi.org/10.1371/journal.pntd.0006826

This study carried out a survey in South Sudan to identify gaps in community knowledge, attitudes and practices (KAP) and determine the preferred channels and sources of information on human African trypanosomiasis (HAT). The cross-sectional KAP survey utilized questionnaires, complemented with key informant interviews and a focus group discussion to elicit communal as well as individual KAP on HAT.

Findings - knowledge on HAT

In terms of gender, the study found that more women (43%) than men (25%) gave incorrect responses to causes of HAT. In terms of education, those with at most a primary level of education had higher percentage of people (15%) giving incorrect answers as opposed to those (4%) who had attained at least a secondary level of education.

Incorporating gender considerations into interventions

Given that more women than men gave incorrect responses in relation to HAT, communication interventions need to take gender factors into consideration to ensure that public health interventions do not only target individuals by virtue of their position in the household or community and ensure that both men and women are targeted appropriately to ensure inclusivity of all the household members.

According to the study authors, some previous interventions on reproductive health have registered low uptake because spouses of the women enrolled in the programmes were not included in the study, and hence they stopped their wives from participating. On the other hand, some agricultural projects have left out women, given that they only deal with household heads, who are mostly the owners of the farms. Then again, given that the main economic activity in the community in this survey was crop farming, the timing of public health campaigns should take into consideration this socio-economic context to avoid scheduling them during peak seasons when activities such as planting, weeding and harvesting are going on. Engagement in farming activities was one of the barriers to community participation in active screening for HAT, as people were reluctant to interrupt their activities to go for screening.

The findings from this study show the importance of considering gender, and its intersection with other social stratifiers such as education and occupation, when designing and implementing interventions.

5.3 Participatory research methods to transform inequitable gender norms

A common critique in the design and delivery of disease control efforts and services is that too often the solutions or strategies to problems are conceived by those in positions of power, with limited consideration of the needs and priorities of those who are supposed to benefit *(61)*.

Friere's work emphasized that poor people can and should conduct analysis of their own reality (62). This work, and others, led to the development of values and principles such as democratic education and learning, social justice and equality that guide participatory research and their associated methods *(63–66)*.

Participatory research methods seek to place people most affected by a problem at the centre of the research and allow for the sharing of community norms, beliefs and practices that can guide the development of health interventions at minimal cost. These methods can be used at any point in your research study to understand key issues facing study populations and to support them to work out solutions to their challenges that are both feasible and acceptable. When using these to contribute toward gender transformative approaches, it can help us to understand how to navigate and challenge existing power hierarchies in communities in ways that are strategic and directed by those affected.

Table 10 provides a brief overview of some participatory methods and provides practical examples of how they can be used in relation to infectious diseases of poverty. The dialogue in producing the output is often what tells us most about a situation. Conducting the same methods with lots of different groups also shows us a lot about how different people see or understand the same issue, which can provide opportunities for change.

These methods can be used at any point in your research study to understand key issues facing study populations and to support them to work out solutions to their challenges that are both feasible and acceptable. When using these to contribute toward gender transformative approaches, it can help us to understand how to navigate and challenge existing power hierarchies in communities in ways that are strategic and directed by those affected.

Table 10: Example participatory research methods and their potential use in research on infectious diseases of poverty *(67)*

Method name	Brief description	Potential use	Potential challenges
Timelines • Critical incident lines • Life histories • Daily activity	These methods involve participants drawing a line of a particular time period. This may be a day, week or lifetime. Participants are then asked to mark important events they wish to highlight or describe to the researcher that are of particular relevance to the research question. These methods are usually used with individuals.	Daily activity lines could be used with individuals in the community to understand how they interact with water/the broader environment to help develop interventions aimed at controlling schistosomiasis.	Methods may raise particularly personal or distressing experiences for participants that if unexpected or not thought through in advance could present a challenge to the research team. Sometimes when people are illiterate, they may find the drawing and labelling of lines difficult. Be adaptable in these situations and enable people to use circles, things on the ground or whatever they feel happy using to construct a lifeline.
Participatory mapping • Community maps • Transect walks	These methods involve participants drawing a map of their community, normally as a group, to highlight key features of the community in relation to a specific question or problem. They can also be used to elicit solutions to a problem as well as to understand how people see their community should develop. These methods are normally used in groups.	These methods could be used to understand where would be appropriate to deliver health awareness messaging for infectious diseases of poverty so that everyone could access the messages.	When conducting group activities in the community, more and more people may decide to join. This can be challenging in ensuring consent is taken and is particularly common during transect walks. In the event of this happening, take time to ensure one member of the research team gains consent from joining participants.

Venn diagramming	These methods involve the use of Venn diagrams/circles to show the power and interactions of certain individuals or groups within communities. Where circles overlap there are relationships between entities and the size of a circle indicates how powerful a person or group is. These methods are normally used in groups.	This method could be used in the earlier phases of a research project to understand who key members of the community would be to engage in various activities. It also shows us who is more and less powerful, which can be key when understanding how to address underlying power dynamics within communities.	This can be tricky if people feel uncomfortable identifying people of power within their community in writing. To overcome this, you could support individuals to develop codes to label circles or draw pictures that are only understandable to those taking part in the research activity.
Priority ranking	This method allows us to work with community groups to understand their priority issues. For example, it asks participants to choose between two issues and decide which is the most important. These methods are normally used in groups.	This could be used to understand which are the most pressing health issues for different groups within a community. An example of this method is provided in box 9 below.	Sometimes it can take a long time to support group members to come to consensus of ranking. This should be reflected in study documentation and time allowed for the long duration of activities in logistics planning.
Matrix scoring	This can be used to help us understand who has the most access or control over issues within the household or community. Participants are asked to weight categories, normally using seeds or beans, regarding control over specific resources. Resources include things such as the farm, trees, money, etc. and groups could be divided by men or women or other community groups. This can help illustrate to different groups how they see things differently to other groups in terms of control over resources. These methods are normally used in groups.	This method could be used to understand access to resources needed to access specific types of health care within the community.	The same challenges may be faced here as with priority ranking. In addition, managing power dynamics within group discussions can often be difficult. Conducting group activities in groups of two or three and removing dominant people for an informal side discussion can be helpful.

Problem tree	Using this method, a problem, normally identified by the research team is placed on a picture of the tree at the trunk. Participants are then asked to describe causes of this problem and place them as roots of the tree. Participants are then asked to discuss solutions to this problem and place them within the branches of the tree. This method can be used with individuals or with groups.	This could be used to understand challenges in seeking or accessing health care for specific community groups, as well as the solutions to these challenges. For example, this method could be used to understand delays in treatment seeking for TB in men.	This method can be hard to interpret if not explained properly. Preparing the tree visual in advance can support with this challenge. Give initial examples of issues to put on the roots and solutions on the leaves to support participants to engage early.

Key resources on participatory research methods:

- Loewenson R, et al. 2014. Participatory Action Research in health systems. A methods reader. Available at: http://aura.abdn.ac.uk/bitstream/handle/2164/3806/PAR_leaflet_HR.pdf?sequence=1
- Chambers, R. 2017. From PRA to PLA to Pluralism: Practice and Theory. Available at: http://www.ids.ac.uk/files/dmfile/Wp286.pdf

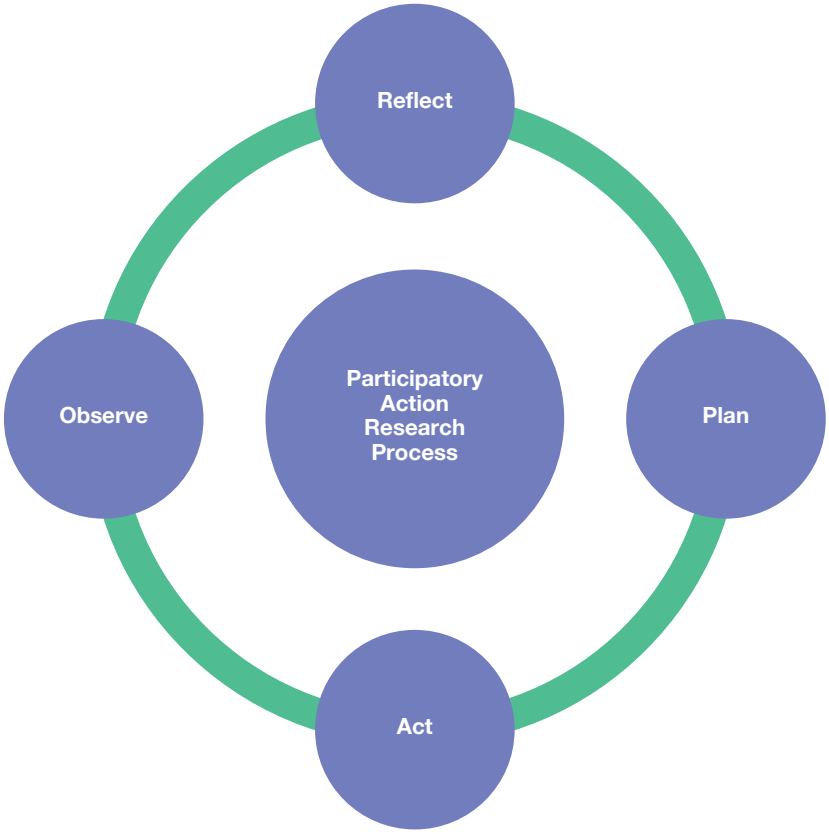
5.3.1 Participatory action research as a catalyst for change

More recently, participatory action research (PAR) that draws on the methods described above has been used as a tool to encourage both communities and health systems actors to recognize their own problems and create solutions that can promote social change.

PAR often takes a cyclical approach of co-learning between researchers and communities. It encourages collaborative problem identification, action and reflection, leading to further inquiry and action for change. See **Figure 11** below. It shows the cyclical nature of participatory action research processes.

The use of participatory methods described above enables individuals and communities to make the last shift to be engaged in action and joint planning processes. These can shape how power imbalances are addressed as society changes and evolves *(67)*. **Box 9** presents a practical example of how participatory methods have been used in a study related to Neglected Tropical Diseases in Nigeria to inform a larger PAR process aimed at improving the equity in delivery of mass drug administration campaigns.

Figure 11: Participatory action research process: an iterative cycle of problem identification and action planning for change. Adapted from Lewin (1946) *(100)*



Box 9: Participatory action research to adapt the delivery of NTD services

Mass drug administration using freely donated medicines is the primary intervention used for the control and elimination of several NTDs, including lymphatic filariasis, schistosomiasis, onchocerciasis and soil transmitted helminths. Medicines are usually distributed by community-based volunteers, either through fixed point or house to house distribution strategies.

A situational analysis of the NTD programme in Ogun and Kaduna State, Nigeria, conducted through the COUNTDOWN consortium, emphasized challenges in equity of understanding about NTDs and their associated treatment in many communities. The situational analysis also revealed that not all community members were able to access medicines based on existing distribution strategies due to how and when medicines were available *(68)*.

As part of a PAR cycle to address the challenges currently faced by the NTD programme in Ogun and Kaduna State, COUNTDOWN has utilized different types of participatory methods with community members to understand their preferences in relation to awareness messaging and other drug distribution strategies as described below. The purpose of the use of these methods was to generate solutions to existing programme bottlenecks that could be used to adapt existing programme delivery by NTD programme staff and frontline health workers. Breaking down barriers between health workers and communities was paramount in the use of these methods and NTD programme implementers were a key part of the research team.

Method one: understanding community structures for use in NTD interventions

Two types of participatory community mapping were used with different community groups to understand what places and people within the community would be beneficial to engage with for different steps involved in delivering mass drug administration; these include sensitization, mobilization and drug administration.

1. **Transect walks** were completed with groups of influential leaders within the community. This served as part of the community entry process and involved walking with these leaders through the most 'used' path in the community, with them pointing out and describing structures that would be of benefit to the NTD programme. At the end of the walk, participants and researchers sat together to understand more about each of these structures.

2. **Social mapping** was conducted with separate groups of men and women (who were also disaggregated by age) brought together to compare maps. Social mapping involves community members drawing a map of their community as they see it. Participants then add to the map places and people who they think would be useful in delivering mass drug administration. Groups of men and women are then brought together to look at each other's maps and gain consensus on places and people that could help in the delivery of this health intervention.

Method two: priority ranking to understand varying communication preferences among different community groups

To understand community preferences in what and how they would like to receive information, matrix ranking was used with different community groups, including men, women and youth. Matrix ranking involved asking community members to decide which information, education and communication materials they liked best and found easiest to understand. The picture below shows an example of the matrix template that was drawn for communities.

	Picture of Tool A	Picture of Tool B	Picture of Tool C	Picture of Tool D
Picture of Tool D				X
Picture of Tool C			X	
Picture of Tool B		X	X	X
Picture of Tool A	X	X	X	X

Participants were then asked to draw a picture of the material they preferred out of the tools represented in that row and column. As a group, they were asked to come to a consensus about the material. That discussion, as well as the matrix, formed part of the research process. Conducting this activity with different community groups allowed for understanding about which groups preferred which materials. In shaping programme awareness activities, implementers could be sure to use materials that reach everyone within communities.

A note on equity: in compiling groups to be involved in the participatory methods described, the research team were mindful of underlying power dynamics at the community level. For example, groups were always segregated by gender and age (including social age) and where participants were of influence in the community (e.g. traditional or community leaders), they were also spoken to in separate groups. Age, gender and religion of the researcher was also considered as it was important to take into account participant and researcher positionalities in order to ensure homogeneity within groups of participants.

5.3.2 Participatory health research and the links to feminist principles

PAR prioritizes those who are less powerful, and encourages researchers and practitioners who are frequently outsiders to continue to challenge their own position and power within the research process (see module 6). Power relations frequently act as a barrier between communities and health interventions and services. Breaking down these power relations is essential for the development of person centred health systems that allow for sustained health development and social change *(69,70)*.

Participatory action research and participatory research methods are rooted in ideals of social justice and, as such, aligns to feminist principles. Feminist or intersectional participatory research seeks to assess the way gendered power relations shape societies. Feminist PAR approaches then seek to move communities along the last step of the participatory continuum to change underlying gendered power relations *(71)*.

When used effectively, participatory approaches can raise a critical consciousness among individuals and communities regarding gender and health issues. They also allow for the development of a strategic alliance between communities and health workers, cumulating in the implementation of solutions for transformative change.

Just as participatory methods and PAR approaches can be catalytic in transforming gender and other social norms, they can also be gender-blind and reinforce underlying power dynamics. For this reason, it is critical that even when using more transformative approaches, we consistently consider the ways in which underlying gendered power relations are shaping participatory processes and make a conscious effort to consider how they can be challenged and progressively changed. We discuss this in greater detail in module 6.

5.4 Indicators for transformative change

Measuring transformative change is difficult and few indicators exist from an intersectional or gendered perspective. Include such gender and intersectional indicators in log frames and theories of change at the beginning of research design.

Some of the participatory approaches described above could also be adapted and used to support the development of gender and intersectional indicators within log frames and theories of change. For example, problem tree analysis could be adapted so that the roots of the tree become the problems the research is trying to address, and the leaves become indicators that could track the programme's impact on these challenges.

The key criteria below could be used as a guide to support indicator generation in this case.

Some key criteria in the development of indicators to measure transformative change are as follows *(72)*:

- **Ensure there is a comparison to the norm** - for example, comparing women and men within the same country, or women across countries, or people living with disability compared to those who are not.
- **Allow for data disaggregation** - data should be disaggregated by sex, age, socio-economic status, ability, disability, geography, data source, etc. Data should be disaggregated at all levels.
- **Data should be accessible and easy to understand.**
- **Availability** - data should be available for the whole project area.
- **Reliability, comparability and quality assurance** - data should be checked for quality by independent advisors to the research project or to that component of the research project. Indicators should also be comparable on an international scale.
- **Measurability** - indicators should be tangible, for example, instead of 'women's empowerment', indicators may include things such as 'access to women for a particular health service'.
- **Time Sensitive** - there should be a series of indicators through time to be able to measure change.
- **Measure impact**- indicators should look at outputs and not inputs, for example, literacy rate would be more robust than educational enrolment.
- **Participation** - indicators should be developed in a participatory way.

Box 10: Examples of indicators for gender transformative change

Care's document, 'Measuring gender-transformative change: a review of literature and promising practices', (https://www.care.org/sites/default/files/documents/working_paper_aas_gt_change_measurement_fa_lowres.pdf) provides useful documentation on how to develop gender transformative indicators. These indicators need to be project specific and linked directly to the issues you are trying to address, as well as broader 'proxy' issues that may affect exposure and outcome of infectious diseases of poverty (as described in module 1). For example, household decision-making is a key determinant of exposure to and impact of infectious diseases of poverty. Care's toolkit emphasizes how agency, relations and structures as a consequence of gendered power hierarchies could be monitored within programme indicators.

However, measurement of household decision-making within standardized survey tools is frequently gender-blind and therefore without adaptation may mask inequities within the household and limit data available to support the above indicators. Below is an example taken form Care's toolkit (p46) that enables the generation of gender transformative indicators in relation to household decision-making.

Using these tools during project data collection can enable you to assess the relationship between broader determinants of infectious diseases of poverty and investing resources in strategies that can promote gender transformation within study populations. For more examples such as this, please explore Care's toolkit.

5.5 Alternative methods to measure change: Most Significant Change techniques

It is difficult to measure changes in gender norms and values through traditional indicators. One participatory monitoring and evaluation technique that can be used to document change is the Most Significant Change (MSC) technique *(73,74).*

MSC is often used alongside the implementation of an intervention or other participatory method, such as those described above. The process involves collecting significant change stories from participants and systematically selecting the stories deemed to be most important by engaging key stakeholders or project staff. This allows for the collection of data on impact and outcomes that can be used to assess intervention or programme performance (73). Unlike tradition monitoring and evaluation methods, MSC does not use pre-defined indicators, especially ones that are counted and measured (74). For more detailed information on how to implement MSC, see *Davies, R. and J. Dart (2005) The 'Most Significant Change' (MSC) Technique; A Guide to Its Use*.

Key resources for indicators for transformative change

- Davies, R. and J. Dart (2005) The 'Most Significant Change' (MSC) Technique; A Guide to Its Use, see: https://www.kepa.fi/tiedostot/most-significant-change-guide.pdf
- Hillenbrand, E., Karim, N. and Wu, D. (2015) Measuring gender-transformative change: A review of literature and promising practices. Available at: https://www.care.org/sites/default/files/documents/working_paper_aas_gt_change_measurement_fa_lowres.pdf
- WHO (2003) Comparative evaluation of indicators for gender equity and health. Kobe, Japan. Available at: http://www.who.int/iris/handle/10665/68623

Reflection questions/action items

- Why is it important to transform inequitable gender norms?
- How do inequitable gender norms shape outcomes in relation to infectious diseases of poverty in your study context? How are these shaped by other social stratifiers?
- What participatory methods may help you to understand these norms?
- What participatory methods may help you to transform these norms?
- What indicators could you include within your study to monitor change?
- What steps will you take to put these indicators in place?

Module 06

Gender considerations within the data collection process

Activities included in module 6

- Include intersectional gender analysis questions in data collection tools
- Ensure research process is not negatively affected by gender power relations
- Consider ways in which underlying gender power relations can be challenged and progressively changed during research process

The data collection process is vital for any research work. During this period, the researchers collect data from various sources depending on the type of research being conducted. The outcome of the research analysis is largely determined by how the data is collected for research and the ultimate quality of the data collected.

This module has the following objectives:

- Explore how to incorporate an intersectional gender lens into the data collection process
- Showcase examples of how power relations affect the data collection process and how to minimize the effect of inequitable biases on the data collection process

The following subsections respond to each of these objectives, leaving the reader with some key questions and literature sources to consider after reading this module.

6.1 Including intersectional gender-sensitive questions within data collection tools

Modules 3 and 4 explored how gender frameworks (module 3) can be used to develop intersectional gender-sensitive questions (module 4) relevant for the research.

Intersectional gender-sensitive questions seek to uncover the ways in which gender power relations (represented by the gender relations domains discussed in module 3) impact such things as vulnerability to disease, exposure to disease, and response to illness and treatment, and how these are shaped by the intersection with other social stratifiers. Gender-sensitive questions can be used to select areas of inquiry and include related appropriate questions in qualitative and quantitative data collection tools. An important part of the data collection process is therefore the inclusion of gender-sensitive questions.

Refer to module 4 for greater explanation on how to develop gender-sensitive questions.

6.2 Understanding how the data collection process itself can be imbued with power relations and biases

Power inequities can influence different aspects of the data collection process, including who participates as respondents, when data is collected and where, who is present, who collects data and who analyses the data *(2,75)*.

Researchers should consider the different ways that gender power relations can influence the data collection process, and how this in turn might affect the quality and validity of the data collected. Researchers must take steps to minimize any negative effects that may be caused by their own positionalities. They must also take care not to aggravate (or at least try to minimize) existing gender inequities while carrying out data collection, for example, by ensuring that respondents are not overburdened by participating within the research or that their relationships within the household are not strained by their participation.

Understanding how research decisions are negotiated within diverse household structures, and within study teams, demands a critical examination of gender roles and relations *(76)*.

Knowing beforehand about the social and cultural context of the chosen community from where data collection is planned helps to identify gatekeepers of the community, build rapport and negotiate with them for consent to conduct research in their community. Trust, values and relations are critical in negotiating how gendered power relationships play out in different contexts *(77)*. During the rapport building phase, interaction with household members can be the ideal time to try to understand the power dynamics within each household. This can also be assessed by observing the interaction of household members between themselves.

6.2.1 Who participates as respondents?

Who is included as a respondent is often decided during the design and development of research depending on what data is needed to answer the research questions *(2,75)*.

Gender power relations may inadvertently influence who is chosen as a participant. For example, gender intersects with other social stratifiers to influence individual's access to education and literacy. In many contexts, the education and literacy level of women and girls may be much lower than men and boys due to differential access to education. They may also have different proficiency in national languages compared to local or ethnic languages, or may have less proficiency with the use of technology, including mobile phones or tablets *(2)*. In such instances, efforts need to be made to address these inequities to ensure that key groups are not excluded from the research process; this often requires additional time and resources.

Some participants might have additional restrictions on their participation. For example, women may need to have additional permissions to participate in the research and/or to travel to research locations to participate in focus group discussions. They may also have less free time to participate in research or privacy, and will often have more gatekeepers inhibiting their involvement *(2)*.

Researchers need to implement an intentional strategy to identify and respectively access appropriate types of respondents, minimize any harms their participant in the research might cause and ensure that key respondents are not being excluded. It has been seen that consent taking processes are easier and more acceptable if the researchers taking consent are well aware of the community and can speak the local language. Consent taking might not be a straightforward process but researchers must be sensitive to look out for 'silent refusals' where, for example, a woman respondent might refuse to participate in a study even after obtaining permission from the household head as evidenced in a study from Kenya *(78)*.

As researchers, we also need to consider those who may not be reached by existing services and therefore excluded within the research process. For example, in research linked to infectious diseases of poverty, we often access participants through the existing health service delivery platform. However, it is often the most marginalized who do not engage with these platforms and are less 'advantaged' in terms of access to health care. In order to reach out to respondents from these specific population groups, we need to adopt different approaches, e.g. snowball sampling, which will help to identify these 'hidden'

respondents. This is also true about engaging with specific population groups. For example, if we only engage with persons with disabilities who are already linked to disability support services or the health system, we may miss accessing those who are more marginalized or hidden *(11).*

The above considerations are particularly important for research that involves data collection tools where participants self-select their participation, such as online surveys. In these cases, self-selection bias may be the result of additional constraints of respondents that affect their participation, including men's and women's responsibilities within or outside the home. Special effort might be needed to ensure that appropriate representation of respondents is included within the sample.

Research that focuses on women's health needs, explores women's vulnerability to disease or women's access to health services often excludes other influential family members, such as partners, who are men and heads of households, or mothers-in-law. Such individuals can play a large role in women and girls' daily activities and health-seeking behaviour. It is important that research processes engage with, and triangulate data from, gatekeepers or decision-makers; however, it is equally important that these processes are conducted without further disempowering women and girls or other marginalized groups *(2)*.

Case study approaches that explore the interactions and interpretations of various groups within the household can be useful in these instances. A study done in Ghana by Tolhurst et al. *(79)* highlights how specific consideration of gender responsive questioning can reveal details about how household dynamics can affect access to health care in relation to Malaria.

6.2.2 When is data collected and from where?

As a result of gendered norms and roles, men, women, boys and girls have different responsibilities within and outside of the home that affect when they will be available.

Women often have to work in the home and outside it, creating a double burden, which may affect their ability to participate within a study. To avoid excluding women from the research process, or negatively impacting them or their relations with those at home, it is important to choose a convenient time and place in which to engage in data collection *(2,75)*. Similar considerations should be made for all those participating in the study.

You may also want to consider how to adapt but not limit participation based on community-based consent processes. For example, some individuals in communities may need to take consent from several gatekeepers before partaking in your research study to avoid backlash from community elders or members of their household. This may include ensuring consent from community leaders and household heads before proceeding with data collection with certain individuals.

Considerations regarding the location of data collection activities are important to ensure full participation from respondents. This is especially important if the research involves those who have been affected by an infectious disease of poverty, as they may be subjected to social stigma and isolation within the community as well as within households; their participation within the research may exacerbate this.

Gender power relations and their intersection with other social stratifiers may also intensify any social stigma experienced. For example, in Indonesia, it was found that men delayed seeking treatment for leprosy as they preferred travelling further from their residence to both seek higher quality of care and ensure secrecy *(80)*. Likewise, ensuring privacy and confidentiality during

recruitment and data collection is therefore very important. For people living with disability as a result of many infectious diseases of poverty, this can be particularly important, specifically if they are seen as a dependent within the household due to their disability.

As researchers, we must not compromise people's right to participate in research in the same way as others; supporting them to negotiate safe spaces to be able to share their thoughts and opinions is critical.

6.2.3 Who is present during data collection?

Power relations between and among respondents can affect the quality and accuracy of data collected. As such, consider who is present when data is being collected. Women may respond differently in the presence of men and may remain silent, even if they disagree or if inaccurate information is given *(2,81)*. Specific strategies will be needed to ensure data is collected in private, particularly in relation to in-depth interviews or surveys.

In the case of focus group discussions, groups may need to be separated according to sex and/or other social stratifiers, such as age. While conducting FGDs, individual level sensitive information should not be collected, due to the likelihood that those who divulge confidential information could be stigmatized. Knowledge of the local context, and how social stratifiers intersect to lead to different experiences of marginalization or exclusion, will be important, as there may be context specific power dynamics (such as caste in India and Nepal) that exist among participants; this can impact their participation.

If research is being conducted in health care settings, consider how health system hierarchies combine with gender to mediate dynamics between patients, health providers and managers. For example, a health care worker may be reluctant to speak up if a woman/man superior is present, or a patient may be unwilling to provide sensitive information if a health care worker of the same or opposite sex or gender identity is present *(2)*.

In an exploratory qualitative study conducted by Pathak et al in 2010 in Nepal, for example, lesbian patients sought out women doctors while accessing health care *(82)*.

6.2.4 Who collects and analyses data?

In many cultural settings, the positionality of the researcher, including their class, age, ethnic background and occupation, may also influence participants' responses. In some cases, respondents may feel the need to tell the researcher what they think they want to hear or may feel uncomfortable disclosing certain information. This is particularly relevant when an inequitable power dynamic exists between the researcher and respondent, for example, a researcher from a high income country interviewing a respondent from a low income country, or a researcher who is a man interviewing a respondent who is a woman *(2,81)*.

The composition of the research team is very important and careful consideration should be made as to who is hired to collect data. In some cases, women researchers should collect data from respondents who identify as women/girls (and researchers who are men collect data from respondents who identify as men/boys), particularly when the research is on a sensitive topic or when questions related to gender relations are being asked, otherwise incorrect information may be gathered. For example, a study that explored effects of gender on diagnosis of leprosy found that in instances where patients who identified as women had to discuss their problems with data collectors who were not women, there was a delay in diagnosis *(80)*.

Hiring local data collectors will also help to address differential power dynamics; however, respondents may be less willing to share sensitive information with those from their community.

Researchers have gender biases that influence the data collection and analysis process. In order to try to achieve objectivity, it is important to acknowledge our own biases, preferences, values and socio-cultural background, and to be constantly aware that these

factors could influence the process of the research and its findings *(2,83)*.

All members of the research team should receive training and supervision to become aware of their own gender or other biases and try to minimize these biases where possible *(2)*. Regardless of the data collection method used, it is imperative that data is cross-checked for accuracy and bias. "Processes that support reflection on data collection, such as joint reviews of transcripts and debriefing meetings among team members, are critical to identify potential bias and check assumptions" regarding how gender and power relationships may shape interactions and data *(2,47)*.

All researchers need to be aware of the intersectional gender dimensions of the study during the data collection process, which must be emphasized during training. In addition, there should be mechanisms in place to ensure the research teams involved in data collection are repeatedly reminded of these dimensions during the data collection process. This would help to ensure their field activities conform to the intersectional gender lens.

A summary of the key considerations within the data collection process related to gender power relations and associated actions is provided in **Table 11** below.

Table 11: Key gender considerations within the data collection process

As a power relation gender influence	Key considerations	Actions
Who participates as respondents	• Respondents may be excluded to differential levels of education, literacy, proficiency in national languages or proficiency with technology. • Respondents who are women/girls may need to have additional permissions to participate within the research and/or travel to research locations to participate in focus group discussions, have less free time to participate in research or privacy, and will often have more gatekeepers inhibiting their involvement. • Sampling may be skewed towards respondents who are the most visible subjects, without including the less visible gatekeepers or decision-makers that frame the contexts in which those subjects live and work.	• Implement an intentional strategy to identify and respectively access appropriate types of respondents and ensure that key respondents are not being excluded. • Ensure that participants are not being overburdened through participation in research. • Include gatekeepers and/or decision-makers within sample; ensure inclusion does not further disempower women and girls or other marginalized groups.
When data is collected and where	• Men/boys and women/girls have different responsibilities within and outside of the home, which affects when they will be available. • Context may affect the extent to which individuals have privacy. • Participants who have been affected by infectious diseases of poverty may experience increased stigma as a result of participation within research, which may be exacerbated by gender relations and the intersection with other social stratifiers.	• Schedule data collection at a time that does not inconvenience participants. • Where possible, ensure that interviews or surveys are conducted in a private setting. • Include participants in a confidential manner; where participation might increase stigma, ensure data is collected in a neutral location.

Who is present during data collection	• Power relations between and among respondents can affect the quality and accuracy of data collected, e.g. women may respond differently in the presence of men and may remain silent, even if they disagree or if inaccurate information is given.	• If conducting focus group discussions, conduct separate discussions for men and women, boys and girls. • Consider the power dynamics that may exist between participants and structure focus group discussions or other data collection methods accordingly, i.e. disaggregate participations by age, occupation, etc.
Who collects and analyses data	• Positionality of the researcher may influence respondents' responses or ability and/or willingness to participate, e.g. in some contexts it may be important for respondents to be interviewed by a researcher of the same sex. • The sex of the researcher may affect the ability to get access to collect data; for example, in many contexts only data collectors who are women will be allowed to enter homes or will be allowed to collect anthropometric measurements of women and children. • Researchers will have gender biases that influence the data collection and analysis process.	• Where possible, use data collectors that are the same sex as the respondents. • Use local data collectors where relevant. • Ensure that all data collectors receive training and supervision to become aware of their own gender or other biases and how they can address them. • As a research team, reflect on own power and positionality within the analysis process. Be prepared to challenge each other's assumptions and questions asked of the data. • Use joint reviews of transcripts and debriefing meetings among team members to identify potential bias and check assumptions.

6.3 Consider ways in which underlying gender power relations can be challenged and progressively changed during research process

Another important consideration within the research process is the ways in which underlying gender power relations can be challenged and/or progressively changed during the research process. For example, whether the research itself be used to empower participants and address inequities. This is inherently difficult to do, particularly in relation to more traditional forms of research methods. There is also the potential risk that through such efforts researchers or the research itself will exacerbate existing gender inequities and power dynamics.

Other innovative methods, including the use of different technologies such as mobile phones, cameras or video recorders, have been found to empower participants. For example, interventions can allow participants to receive real time results and, as a result, make informed choices regarding their treatment, as well as have control about who could access their data *(84)*.

Participatory video making in particular has been found to help empower marginalized communities to express their perceptions and views on health *(85)*.

Module 5 explores how participatory research methods can be used to transform inequitable gender relations and the considerations that need to be made throughout the research process.

Box 11: Case study - Socio-economic and Cultural Determinants of Human African Trypanosomiasis at the Kenya–Uganda Transboundary

Rutto JJ, Osano O, Thuranira EG, Kurgat RK, Odenyo VAO (2013) Socio-economic and Cultural Determinants of Human African Trypanosomiasis at the Kenya – Uganda Transboundary. *PLoS Negl Trop Dis* 7(4) : e2186. https://doi.org/10.1371/journal.pntd.0002186

This study assessed the demographic characteristics, tsetse and trypanosomiasis control practices, socio-economic and cultural risk factors influencing Trypanosoma brucei rhodesiense (T.b.r.) infection in Kenya and Uganda. A cross-sectional household survey was conducted. A structured questionnaire was administered to 384 randomly selected household heads or their representatives in each country. The percentage of respondents giving a specific answer was reported.

Findings - gender risk and predisposing socio-economic and behavioural factors

In both countries, it was generally reported that the adult men (28.4%) were at higher risk of contracting the disease than adult women (22.9%). The socio-economic activities that contributed to the resident's exposure to HAT vectors in Kenya were herding (51.8%), bathing at the river (14.2%), fishing (10.6%) and other activities had combined contribution of less than 10%. In Uganda, the important activities that exposed individuals to HAT risk were herding (31.1%), location of homestead in bushy area (12.6%) and bathing in the river (10.3%).

The study found that men were considerably more predisposed than the women in all age groups, and HAT risk increased with age. Men, who engaged more in circumcision and cleansing rituals, and herding of animals, which are performed in tsetse conducive habitats and for long durations, were more at risk. Children had lower risks for the same reason.

Methodological considerations impacting findings

While it is clear from the findings that gender norms, roles and relations, and their intersection with age influenced vulnerability to disease, applying an intersectional gender lens to data collection and analysis may have led to a more robust analysis of vulnerability to infection.

In many contexts, heads of households are typically men. In some instances, women would not be able to speak on behalf of men (who were the head of household) without permission. In addition, women heads of households may experience greater vulnerability due to challenging traditional gender norms and roles. The gender of the data collectors may have also impacted data collection. For example, women may not be able to speak to data collectors who are men if a family representative who was also a man was not present. As a result, validity and quality of data collected may have been impacted.

Many findings are not disaggregated by sex or gender identity. While the study reported socio-economic activities that contributed to an individual's exposure to HAT vectors, in many instances there was no indication of who predominately undertook these activities. An intersectional gender analysis of activities inside and outside the household, including who engages in what activities and why, would have allowed for a more in-depth understanding of women and men's vulnerability to infection. Even when no difference between men/boys and women/ girls is found, this should be clearly stated.

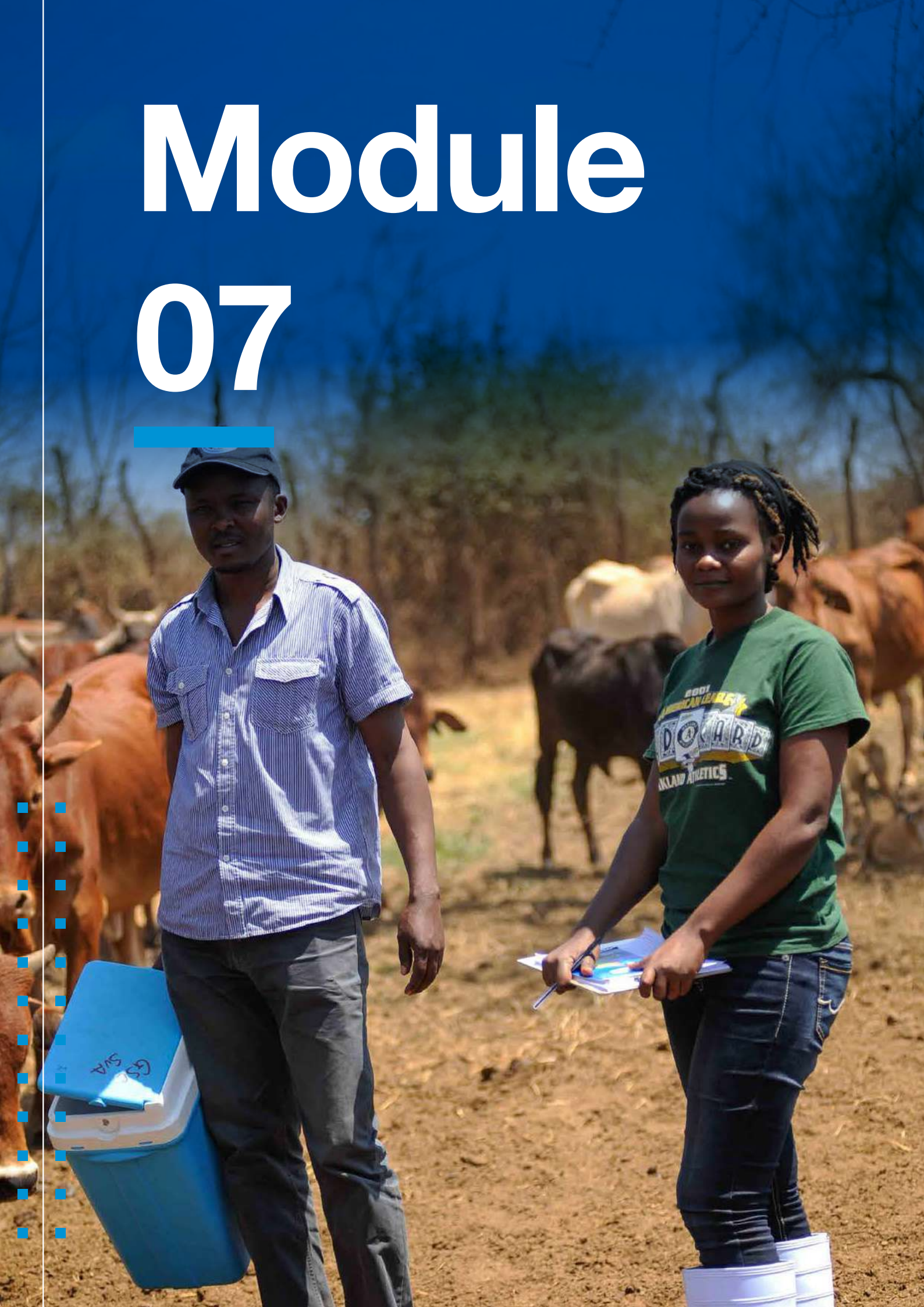
Key resources

- Hunt, J. (2004) 'Introduction to gender analysis concepts and steps', Development Bulletin, 64, pp. 100–106.
- Morgan, R. et al. (2016) 'How to do (or not to do)… gender analysis in health systems research', Health Policy and Planning, 31(8), pp. 1069–1078.

Reflection questions/action items

- How is the data collection process imbued with gender and other forms of power relations?
- How does gender intersect with other social stratifiers to create differential levels of power within the data collection process? How might this affect data collection?
- What are the key gender related considerations that need to be considered during the data collection process?
- How might you minimize the ways in which gender power relations might impact upon the quality, accuracy and validity of your data?

Module 07



Analysing research data using an intersectional gender lens

Activities included in module 7

- Incorporate intersectional gender dimensions into the analysis of data (i.e. through use of variables/ indicators and coding framework)

This module has the following objective:

- Provide guidance on how quantitative and qualitative data can be analysed using an intersectional gender lens using established data analysis practices

The following subsections respond to each of these objectives, leaving the reader with some key questions and literature sources to consider after reading this module.

7.1 Preparing research to analyse data through an intersectional gender lens

In order to effectively analyse data using an intersectional gender lens, the necessary preparatory work at the design and development stage of the research project must be conducted. This includes the disaggregation of data or sampling frameworks by sex and other social stratifiers, the use of gender frameworks and the incorporation of intersectional gender analysis questions into data collection tools, including the development of gender-sensitive indicators. Consideration also needs to be made in regard to who is included within the study and how.

Refer to modules 3 and 4 within this toolkit for further information.

It is possible to conduct an intersectional gender analysis on data from research that did not use an intersectional gender lens from the outset; however, it is likely that important information will be missed.

If gender analysis questions are not incorporated into data collection tools, you will not have the opportunity to carry out an in-depth exploration into the ways in which inequitable gender power relations affect exposure and vulnerability to a disease. If an intersectional gender analysis is conducted on data that did not use this lens from the outset, this must be noted within the research limitations.

Before analysing data, consider who is analysing the data and the potential gender biases they might hold. For example, is the person from the context in which the research was conducted or are they an outsider?

While an insider might be able to recognize the unique ways in which gender power relations manifest within that context, they might also hold contextually pervasive gender biases. At the same time, while an outsider might miss contextually specific gender power relations, they might be able to recognize different ways in which gender power relations manifest, which might be regarded as the norm within that context. (They will also hold their own gender biases and beliefs, which will influence the analysis of the data.)

This is particularly relevant for qualitative data analysis; however, it also holds true for the interpretation of quantitative results. Having multiple people analyse the data (both insiders and outsiders) will help to minimize any biases that might inform and influence data analysis.

As a research team, taking time to reflect on your own power and positionality within the analysis process is critical to ensure appropriate consideration of how this may impact on the analysis process. Being prepared to challenge each other's assumptions and questions you ask of the data set is critical, and working as a group or with supervisors can facilitate this.

7.2 Gender analysis of secondary quantitative data

It is possible to conduct a gender analysis on secondary quantitative data, such as demographic health surveys, population-based surveys or their own quantitative data sets.

As discussed above, if this data was not developed to be gender-sensitive, it is likely that important information will be missed. This analysis can be done prior to conducting a study in order to identify gaps, develop research questions and identify relevant gender analysis domains and questions for inclusion within data collection tools (discussed in module 4).

This type of gender analysis is sometimes called a gender assessment, i.e. exploring how intersectional gender inequalities/inequities within a particular context affect the research or intervention topic using pre-existing data. Such assessments are useful for researchers who want to compare prevalence of a disease between and across different groups (e.g. prevalence of TB between men and women), factoring in age or other social stratifiers. To conduct these types of analysis, sex-specific and/or sex-disaggregated indicators can be used. These can then be assessed against relevant gender-sensitive and/or equality indicators to explore the role of gender inequality in shaping such things as disease prevalence, incidence, mortality and morbidity.

As discussed in chapter 4, a gender-sensitive indicator is an indicator that helps to measure and assess gender inequality in a society and how it changes over time. Three types of gender-sensitive indicators are defined below (57). Research must include gender equality indicators in addition to sex-specific and sex-disaggregated indicators in order to be considered gender-sensitive.

Table 12: Gender-sensitive indicators.

Type of Indicator	Example	Example of intersectional indicator
Sex-specific indicator: a type of gender-sensitive indicator that pertains to only females or only males.	Proportion of females who are HIV positive.	Proportion of females who are HIV positive disaggregated by income, age, education, etc.
Sex-disaggregated indicator: a type of gender-sensitive indicator that measures differences between females and males in relation to a particular metric.	Proportion of females and men who are HIV positive.	Proportion of females and males who are HIV positive disaggregated by income, age, education, etc.
Gender equality indicator: a type of gender-sensitive indicator that measures gender equality directly or is a proxy for gender equality. Indicators that can act as a proxy for gender equality include indicators that explore the different domains included in a gender framework (see module 3). These may include access to resources, distribution of labour/roles, norms and values, and decision-making, and may be known risk factors for disease transmission (e.g. education, condom use, etc.).	Percentage of married women aged 15–49 who usually make a decision about their own health care either by themselves or jointly with their husbands. Percentage of women who are able to leave the house without permission. Percentage of women who have worked in the last seven days. Percentage of women who decide how their own income will be used.	Percentage of married women aged 15–49 who usually make a decision about their own health care either by themselves or jointly with their husbands disaggregated by income, age, education, etc. Percentage of women who are able to leave the house without permission disaggregated by income, age, education, etc. Percentage of women who have worked in the last seven days disaggregated by income, age, education, etc. Percentage of women who decide how their own income will be used disaggregated by income, age, education, etc.

Many secondary data sets will include relevant information to enable you to conduct sex-specific and sex-disaggregated analyses, which can be further disaggregated by age, income, education, rural/urban status, etc., depending on the socio-demographic information collected.

Conducting a gender analysis of a data set using gender equality indicators becomes more challenging if relevant questions were not included within the survey instruments. This does not preclude you from drawing relevant gender data from other sources, such as the demographic health survey, to help you interpret the results. If you are able to access raw data from such sources, you could explore the sex-specific and/or disaggregated indicators against relevant gender equality indicators.

For detailed information and step by step instructions about how to conduct a gender analysis of secondary data, see module 3 of 'A

tool for strengthening gender-sensitive national HIV and Sexual and Reproductive Health (SRH) monitoring and evaluation systems' *(57)*.

Researchers who want to ensure their research is designed and developed using an intersectional gender lens should refer to the steps and activities within this toolkit.

The next section explores how to conduct quantitative intersectional gender analysis, which can be used on primary or secondary data.

Key resources for conducting a gender analysis of secondary data

- WHO & UNAIDS (2016) A tool for strengthening gender-sensitive national HIV and Sexual and Reproductive Health (SRH) monitoring and evaluation systems. Available at: http://www.unaids.org/sites/default/files/media_asset/tool-SRH-monitoring-eval-systems_en.pdf

7.3 Analysing quantitative research data using an intersectional gender lens

Prior to analysing quantitative research data using an intersectional gender lens, data need to be disaggregated by relevant biological and social stratifiers. These may include sex, age, income status, disability, sexuality, geographical location, ethnicity, race, etc. This is true for research that is inter-categorical (e.g. analyses multiple social groups within and across categories) or intra-categorical (e.g. focuses on one social category at the intersection of multiple social identities in order to explain within-group differences and larger social structures influencing their lives).

In both approaches, the analysis focuses on the intersection of selected social stratifiers to understand how the stratifiers intersect to create different experiences of marginalization and discrimination, which in turn shape health outcomes related to infectious diseases.

Analysing quantitative research using an intersectional gender lens can involve multiple steps. These include conducting intersectional sex-disaggregated and/or sex-specific analyses and/or analysing outcomes against gender variables/gender equality indicators.

7.3.1 Conducting intersectional sex-disaggregated and/or sex-specific analyses

Below is a summary of the steps taken to conduct an intersectional sex-disaggregated and/or sex-specific analysis:

- Step 1: explore prevalence of disease between males and females (sex-disaggregated analysis).
- Step 2: explore prevalence of disease between and among different groups of males and females against different demographic variables (intersectional sex-disaggregated analysis).
- Step 3: explore within group differences among males and females using one demographic variable. For example, for all males who have TB, you disaggregate this data by age, education, geographical location, ethnicity/race, household earnings, etc. (intersectional sex-specific analysis).
- Step 4: explore within group differences among males and females using two demographic variables for those with a disease. This analysis is only conducted on the variables identified in step 1 that showed difference between groups. For example, if the highest prevalence of males who have TB are those with less than primary school, you take this sample and disaggregate it further by age, education, geographical location, ethnicity/race, household earnings, etc. (intersectional sex-specific analysis).

7.3.1.1 Step 1: Exploring prevalence of disease between males and females (sex-disaggregated analysis)

First, you will want to explore the prevalence of disease between males and females. Note that similar analyses can be conducted to explore risk factors/vulnerability for disease.

Table 13: Prevalence of infectious disease between males and females

Disease prevalence	Males	Females
TB	% (CI)	% (CI)
Malaria	% (CI)	% (CI)
Schistosomiasis	% (CI)	% (CI)
Leishmaniasis	% (CI)	% (CI)
Lymphatic filariasis	% (CI)	% (CI)

7.3.1.2 Step 2: Exploring prevalence of disease between and among different groups of males and females against different demographic variables (intersectional sex-disaggregated analysis)

Next, you will want to disaggregate your data even further by exploring differences between and among different groups of males and females related to disease prevalence. Different tables should be used for each demographic variable. (For example, there should be a different table related to age, education, geographical location, ethnicity/race, household earnings, etc.)

Table 14: Prevalence of infectious disease between and among males and females

Demographic variable	Males		Females	
	Prevalence with disease	Prevalence without disease	Prevalence with disease	Prevalence without disease
Age, education, geographical location, ethnicity/race, household earnings, etc.	% (CI)	% (CI)	% (CI)	% (CI)
	% (CI)	% (CI)	% (CI)	% (CI)
	% (CI)	% (CI)	% (CI)	% (CI)
	% (CI)	% (CI)	% (CI)	% (CI)
	% (CI)	% (CI)	% (CI)	% (CI)

To facilitate the intersectional analysis, you will want to conduct sex-specific analyses (meaning data for males and females is analysed and presented separately).

The analysis below is sequential and includes two steps that build off the previous one to provide a more in-depth analysis of disease prevalence:

(1) exploring within group differences among males and females using one demographic variable

(2) exploring within group differences among males and females using two demographic variables

7.3.1.3 Step 3: Exploring differences in disease prevalence among males and females using one demographic variable

This section builds on the analysis above and disaggregates data further by relevant demographic variables. It includes information about males and females with a disease disaggregated by different demographic variables. You will want to conduct these analyses separately for males and females.

Table 15 includes data for those who have prevalence of the disease. Different tables should be used for each demographic variable (e.g. different tables related to age, education, geographical location, ethnicity/race, household earnings, etc.). For example, of all males who test positive for malaria, explore differences within this group in relation to age, education, geographical location, ethnicity/race, household earnings, etc.

Table 15: Prevalence of males/females with malaria disaggregated by demographic variable

Demographic variable	Prevalence
Age, education, geographical location, ethnicity/race, household earnings, etc.	% (CI)
	% (CI)
	% (CI)
	% (CI)
	% (CI)

Table 16: Example: males who have malaria disaggregated by education

Education (years spent at school and in full time study)	Prevalence
0	% (CI)
1-5	% (CI)
6-10	% (CI)
10-15	% (CI)
16-20	% (CI)
Refused	% (CI)

7.3.1.4 Step 4: Exploring differences in disease prevalence among males and females using two demographic variables

This section conducts further analysis on the groups with the highest prevalence of disease. For example, if you have identified that males with 1-5 years of education have the highest prevalence of malaria, this section explores whether among these males there are further differences by age, geographical location, ethnicity/race, household earnings, etc.

Note: as you add variables, the N will decrease and the confidence interval (CI) is likely to increase. This can affect whether the sample is large enough to determine significance. While the sample sizes will be smaller, these analyses are worthwhile as they ensure that males and females are not treated as homogenous groups and allow for more tailored gender-responsive interventions.

Table 17: Demographic variable 1 and disease prevalence disaggregated by demographic variable 2

Demographic variable 2 (e.g. age, education, household earnings)	Prevalence
Response 1	% (CI)
Response 2	% (CI)
Response 3	% (CI)
Response 4	% (CI)
Response 5	% (CI)

Table 18: Example: males with 1-5 years of education with malaria disaggregated by age

Age	Prevalence
15-19	% (CI)
20-29	% (CI)
30-39	% (CI)
40-49	% (CI)
50-59	% (CI)
60-69	% (CI)

To facilitate a gender analysis of the above sex-disaggregated and/or sex-specific data, the next section discusses how gender equality indicators and associated variables can be used. WHO & UNAIDS (2016) *A tool for strengthening gender-sensitive national HIV and Sexual and Reproductive Health (SRH) monitoring and evaluation systems also describes how to conduct a gender analysis using gender equality indicators.*

7.3.2 Using gender variables to conduct an intersectional gender analysis

Data cannot be disaggregated by gender in the same way data can be disaggregated by sex. Instead, relevant gender relations domains need to be included within data collection tools and interrogated separately; these are sometimes referred to as gender variables, and are used as proxies to understand gender relations.

Because it is difficult to ask about gender power relations directly, gender frameworks (see module 3) are used to break down the ways in which gender power relations manifest and develop proxies to analyse gender power relations against relevant health or other outcomes. While sex may be included as one variable within quantitative research, when using a gender lens, multiple gender variables will need to be included within data collection tools.

Examples of gender variables against a gender framework are presented in **Table 19**.

Table 19: Gender variables/proxies

Gender domains	Gender variables/proxies
Resources	Cash earnings. Ownership of a mobile phone. Education. Literacy.
Distribution of labour and everyday practices	Works outside the home/employment. Absence of GBV in a woman's lifetime and in the past year. Employment in the past 12 months. Time spent doing housework.
Norms, beliefs and values	Changes in attitudes on the part of men and women about when verbally or physically abusing a woman is socially acceptable. Stigma or laws related to criminalization.
Decision-making/autonomy	Decision-making about own health care. Decision-making on leaving the house/ability to visit a friend or relative without asking permission. Control over own earnings. Control over husband/partner's cash earnings. Decision-making about small and large purchases. Ability to refuse sex. Employment in the past 12 months.

Developing gender analysis questions through the creation of a gender analysis matrix (module 4) will help you identify relevant gender variables, indicators and questions for data collection tools. As discussed in modules 3 and 4, a gender framework can be used to develop gender analysis questions to be included within surveys and questionnaires.

Gender analysis questions might be related to access to different types of resources, distribution of labour and roles both within and outside the home, gender norms around what is or is not acceptable for a man or woman to do, and who holds decision-making power. The answers to these questions can then be interrogated against different social stratifiers and their intersections.

Table 20 presents gender analysis questions and their associated gender variables, gender equality indicator, data collection questions and source. Creating a similar table will assist you in the analysis of your quantitative data.

Table 20: Identifying gender variables, indicators and questions for data collection tools to facilitate analysis

Gender domain(s)	Gender analysis question	Gender variables	Gender equality indicator	Question within data collection tools	Source
Decision-making	To what extent are women able to make decisions about their own health care?	Decision-making about own health care	Percentage of married women aged 15–49 who usually make a decision about their own health care either by themselves or jointly with their husbands	Who usually makes decisions about health care for yourself: you, your husband/partner, you and your husband/partner jointly or someone else? Respondent Husband/partner Respondent and husband/partner jointly Other	DHS Women's questionnaire
Decision-making	To what extent are women able to leave the house without needing permission?	Ability to visit a friend or relative without asking permission	Percentage of women who are able to leave the house without permission	Are you usually permitted to go to the following places on your own, only if someone accompanies you or not at all? To the local market to buy things? To a local health centre or doctor? To the community centre or other nearby meeting place?	DHS women's status module

				To homes of friends in the neighbourhood? To a nearby shrine/mosque/temple/church? Just outside your house or compound?	
Access to resources **Decision-making**	To what extent do women have control of their own earnings?	To what extent do women have control of their own earnings? Control over own earnings	Percentage of women who decide how their own income will be used	Who usually decides how the money you earn will be used: you, your husband/ partner, or you and your husband/ partner jointly? Respondent Husband/partner Respondent and husband/partner jointly Other	DHS Women's questionnaire
Distribution of labour **Access to resources**	To what extent do women work outside the home?	Works outside the home	Percentage of women who have worked in the last seven days	Aside from your own housework, have you done any work in the last seven days? Yes No	DHS Women's questionnaire

7.3.3 Classifying respondents to facilitate intersectional gender analysis

When interrogating the responses to the gender analysis questions against different social stratifiers, consider how the data is organized. Quantitative data is not always organized in a way that easily facilitates intersectional analysis *(86,87)*. Data sets often collect data using one social stratifier at a time, i.e. sex or age, not sex and age together.

To explore the intersection of social stratifiers, you need to consider both sex and age together, for example, you need to know who a female and an adolescent is. The classification of respondents therefore becomes important, as well as including appropriate tracers within your data set to link participant classification.

Traditionally, demographic questions ask for a yes or no answer and are coded as 1 vs. 0 respectively *(88)*. Detailed classification is needed, however, to create numerous categories. In order to ensure detailed classification, researchers can check for differences across social identity variables, and create an intersectional identity matrix that uniquely classifies each relevant subgroup *(88)*.

For example, if you wanted to explore whether gender roles affect vulnerability to exposure to a vector-borne disease between males and females of different age categories, consider that differences exist between these groups. Four or more variables need to be distinguished and classified, as opposed to having separate variables for age and sex.

Table 21 below present four variables in which individuals are classified, combining age and sex into one variable. This ensures that throughout the analysis individual experiences are not lost, and analyses are more robust. Such an approach can be problematic when working with a limited sample size.

According to Rouhani (2014), a challenge remains in balancing number of categories and maintaining adequate statistical power. They suggest that researchers either increase the sample size to improve statistical power to account for the multiple categories or increasing the conventional alpha level from $p < 0.05$ to a higher cut off, such as $p<0.10$ in the analysis.

Table 21: Redefining variables to facilitate intersectional analysis

ID #	Age	Sex	Age + Sex
1	10-18	M*	Adolescent males
2	19-30	M	Young adult males
3	10-18	F**	Adolescent females
4	19-30	F	Young adult females

*M: male

**F: female

In the above example, in order to conduct an intersectional gender analysis, the variables adolescent male, young adult male, adolescent female and young adult female can be analysed against the responses to the gender analysis questions to look for differentiation across the different groups.

7.3.4 Analysing quantitative data through an intersectional gender lens

Within Intersectionality-informed Quantitative Research: A Primer, Rouhani (2014) discusses multiple approaches to intersectional analysis, including additive (unitary) and multiplicative.

According to Rouhani, traditional quantitative methods utilize an additive approach to examine individual effects of various factors on a given outcome when controlling for other variables.

Intersectionality-informed analysis uses an additive approach as initial 'baseline', upon which further analyses are applied using multiplicativity (e.g. regression coefficient) to account for effects of intersecting categories on health or social outcomes. This enables researchers "to determine whether two-way, three-way or four-way statistical interactions (i.e. intersections) between axes of inequity contribute to explaining variability in a given outcome above and beyond the additive approach" (Rouhani, 2014: 9).

For additional explanations of these approaches and examples of equations and analysis techniques, see Rouhani (2014).

7.3.5 Interpreting quantitative data through an intersectional gender lens

An intersectional gender analysis within quantitative research also comes into effect during the interpretation of results.

When interpreting data from an intersectional gender lens, the researcher needs to put the data and results into context, particularly in relation to the historical and contemporary structuring of inequalities within the wider society and among individuals in study.

During analysis and interpretation of the results, understanding the context allows researchers to better interpret and make sense of data, and understand the drivers and mechanisms of inequity and what might be done about it *(87)*. Results should be interpreted and understood against differential gender norms or roles, in addition to other social and structural inequities, including ageism, classism or racism.

Findings from a study exploring the prevalence and risk factors of schistosomiasis among Hausa communities in Kano State, Nigeria were presented in module 3.

- The study found that the prevalence of schistosomiasis was much higher among males (20.6%) than females (13.3%) in the sample (53).
- Disaggregation by age showed that prevalence was highest among the 11-20 age group (27.4%), followed by the 21-20 age group (14.4%).

While these stratifiers were explored separately, and one can surmise that prevalence is highest among males aged 11-20, an intersectional analysis would combine these categories to explore prevalence among males and females within different age groups, which would potentially tell a different story.

Applying an intersectional gender lens to this would help us understand why prevalence is highest among the 11-20 age group and among men/boys. In such settings, for example, adolescent boys or young adults often have much more freedom to swim in bodies of water, either due to having fewer domestic responsibilities or gender norms. This places them at higher risk of being exposed to schistosomiasis than women/girls of the same age.

While the results can be interpreted against different gender relations domains, including gender analysis questions related to gender roles and norms with the study tools would provide specific and robust evidence about the role of gender power relations in exposure to schistosomiasis. Follow-up qualitative studies would enable a more in-depth exploration into the role of gender relations and their intersection with different social stratifiers.

7.4 Analysing qualitative research data using an intersectional gender lens

The use of gender frameworks is also important within the analysis and interpretation of qualitative data. As discussed in modules 3 and 4, a gender framework can be used to develop intersectional gender analysis questions and related questions to include within data collection tools.

Gender frameworks can also be used to develop an *a priori* coding framework, which is discussed further, below. A priori coding frameworks, while useful, should also not be restrictive. Intersectional gender analysis relies on the research team to be flexible in exploring emergent issues from the data.

7.4.1 Designing the sample to facilitate intersectional gender analysis within qualitative research

Within qualitative research, researchers need to think about how the sample is designed to allow for in-depth understandings of the role of gender relations and their intersection with other social stratifiers *(50,87)*.

If the research is inter-categorical (e.g. analyses multiple social groups within and across categories, i.e. poor men vs poor women vs rich men vs rich women), the sample needs to be as "representative as possible with respect to a community or population of interest, while being heterogeneous enough to allow for inductive explorations (e.g. interrogating how various categories can intersect to differentially shape experience)" *(50)*.

If the research is intra-categorical (e.g. focusing on one social category at the intersection of multiple social identities in order to explain within-group differences and larger social structures influencing their lives, i.e. adolescent girls' vulnerability to disease exposure), then the sample will remain homogenous in nature. It will include only representatives from the community or population of interest and will explore how specific categories intersect and their relationship to the different gender relations domains to shape experience. Experience may be in relation to gender roles/norms that put adolescent girls at increased risk of being bitten by a mosquito that transmits a vector-borne disease.

7.4.2 Approaches to intersectional gender analysis within qualitative research

In order to facilitate intersectional gender analysis, multi-stage analysis is needed to enable moving from additive towards interactive analysis.

There are three main types of coding within qualitative analysis: open, axial and selective *(50).*

- **Open coding** (first level or substantive coding) involves analysis of data that codes a passage using multiple and overlapping codes, i.e. access to resources, gender norms, gender roles decision-making, age, increase risk of exposure, response to illness.

- **Axial coding** focuses on inductively refining each separate code into more distinct codes, e.g. a code for the intersections of gender roles with age, one for intersection of gender roles and poverty, etc. These codes often develop as a result of identified relationships and patterns that occurred during the open coding stage. Grouping open codes into different themes that help to explain what is going on help in the identification of axial codes.

- **Selective coding** is used to further refine codes in order to reflect a specific aspect of intersectional experience, i.e. how adolescent girls experience of domestic responsibilities increases their vulnerability to exposure to a vector-borne disease. These codes often link the intersections of different social stratifiers to experiences of advantage or disadvantage in relation to the infectious diseases of poverty research domain (i.e. vulnerability, exposure, treatment) of interest.

Gender frameworks can be used to develop coding frameworks that facilitate the analysis of qualitative data.

The example coding framework in table 22 below outlines codes that may be used for a study exploring vulnerability to being exposed to a vector-borne disease between women, men, boys and girls.

Table 22: Example codes to facilitate intersectional gender analysis in research on infectious diseases of poverty

Categories	Example of open codes	Example of axial codes	Example of selective codes
Gender relations domains	• Access to resources • Distribution of labour and roles • Gender norms • Decision-making	• Increased exposure to disease linked to domestic responsibilities • Gender norms prevent adolescent unmarried girls from swimming in open bodies of water	Questions that guide development of selective codes: • How do intersections increase or decrease exposure to disease? • How do intersections affect response to illness and/or treatment? • How does intersection of social stratifiers and their relations to gender relation domains affect experiences of marginalization or exclusion? • How do episodic impacts of some diseases shape how experience changes through space and time? Example codes: • Increased vulnerability of adolescent girls to exposure of vector-borne diseases as a result of domestic responsibilities • Decreased vulnerability of adolescent girls to exposure of waterborne diseases.
Infectious diseases of poverty domains	• Vulnerability to disease • Exposure to disease • Response to illness and/or treatment		
Social stratifiers	• Age • Unmarried/married • Income • Rural/urban • Disabled/able-bodied		
Intersection of stratifiers (these codes would emerge after initial coding of social stratifiers)		• Intersection of gender domain and age • Intersection of gender domain and poverty status • Intersection of gender domain and marital status • Intersection of age and marital status • Intersection of gender domain, age and marital status • Intersection of gender domain, age and poverty status • Etc.	
Experiences of marginalization/ inclusion	• Stigma • Discrimination • Advantage/benefit/ inclusion • Disadvantage/ detriment • Mistreatment (by partner, parent, health worker, other) • Barriers/enablers	Questions that guide development of axial codes: • How discriminated against? • How mistreated? • What does the advantage/ disadvantage look like?	

As well as the primary use of coding frameworks in intersectional gender analysis, it is important not to become bound by the need to chunk data into specific codes or categories.

The benefits of qualitative methods when considering the interactions of intersectionality with vulnerabilities linked to infectious diseases of poverty is that their unstructured nature allows participants to describe how their own experience is shaped through different places and times.

When completing intersectional analysis of qualitative data sets, we therefore have to be responsive to this fluidity in experience. One way to do this is to keep a separate document when completing your coding that allows you to describe how you interpret your participants account as a whole.

For example, after having coded a whole transcript, describe what the key issues that cut across the transcript were and how these interacted with broader discussion points. These could include questions such as how did gender intersect with disease experience and how did this change through time or through the discussion? Did the participant describe their experience linked to their gender as different within the household as oppose to within broader community interactions? Were there different points in disease experience where gender became more of an issue, for example around marriage or childbearing?

7.4.3 Going beneath the surface in qualitative analysis

Gender norms and roles are often internalized by both men and women and not regarded as something that may be inequitable. A person's gendered experiences, and how these intersect with other social stratifiers or systems of oppression and inequality, may not be explicit or overt.

For example, a woman may not see her childcare role and responsibilities as a gendered experience as it is something which is seen as innate, or the accepted status quo. At the same time, some experiences of marginalization or oppression may be much more obvious to a person, i.e. experiences of racism or being discriminated against because of having a disability. Individuals may not be able to identify or recognize how gender intersects with another social stratifier to influence their experiences of marginalization or discrimination, particularly when certain experiences are accepted as the norm, such as a women's responsibility to look after children or collect water.

When analysing data, you will therefore need to go beneath the surface of what is being said in order to understand how gender intersects with other social stratifiers to influence different experiences, relating this to the larger social, political and cultural context.

Theories related to gender and gender relations may help you to do this. Remember that what is not said may be just as important as what is said. This is particularly true in instances where a person's identity may be so normalized/ingrained, they may not see how their experiences are shaped by systems or structures of privilege and/or oppression resulting from that identity – it is up to you as the researcher to make these connections.

It is also up to the researcher to consider how systems or structures of privilege and oppression are not static and that a person who is oppressed in one context or circumstance may have more social mobility in another. The transient nature of experience through different spaces and places is central to intersectional analysis and should be a key consideration during interpretive analysis.

Note: analysis begins during data collection when researchers are gathering and reflecting iteratively on the data. As such, the above considerations need to be made throughout the research process.

7.5 Conducting mixed methods intersectional gender analysis

For quantitative researchers, incorporating qualitative analysis will help you explore the complex role of gender power relations in shaping outcomes. For qualitative researchers, incorporating intersectional sex-disaggregated and sex-specific analyses will help you identify where inequities may exist.

There are benefits to conducting either quantitative or qualitative research first. Qualitative research can occur after quantitative research to help explain the differences being observed. Qualitative research, however, can be used to help identify key gender variables or domains to be included within quantitative survey tools. The order in which research is conducted is up to the researchers and should be determined in relation to the overall purpose of the study.

Key resources

- Christoffersen, A. (2017) *Intersectional approaches to equality research and data*. Available at: http://www.ecu.ac.uk/wp-content/uploads/2017/04/Research_and_data_briefing_2_Intersectional_approaches_to_equality_research_and_data.pdf
- Morgan, R. et al. (2016) 'How to do (or not to do)… gender analysis in health systems research', *Health Policy and Planning*, 31(8), pp. 1069–1078.
- Rouhani, S. (2014) Intersectionality-informed Quantitative Research: A Primer. Available at: https://pdfs.semanticscholar.org/d56a/9eba2da-23ab70bfadd9ca2e076af 4a3a62cc.pdf
- Rouhani, Bauer, G.R. (2014). Incorporating intersectionality theory into population health research methodology: Challenges and potential to advance health equity. Social Science and Medicine, 110 pp10-17.
- Grace, D. Mixed Methods Research: A primer for Intersectionality-informed Mixed Methods Research: A Primer. Vancouver: Institute for Intersectionality Research and Policy. 2014.
- Hankivsky, O. & Grace, D. Understanding and Emphasizing Difference and Intersectionality in Multimethod and Mixed Methods Research. In Hesse-Biber and Johnson, eds. The Oxford Handbook of Multimethod and Mixed Research Inquiry. 2015

Reflection questions/action items

- What are the key most important considerations when completing an intersectional gender analysis?
- What frameworks or questions can you use within your study to ensure that your analysis allows for the interlinked exploration of different social stratifiers?
- For quantitative studies, how will you incorporate gender equality indicators into your study?
- For quantitative studies, which social stratifiers will you use to further disaggregate your sex-specific and/or sex-disaggregated analyses?
- How will you allow for qualitative analysis that documents how experience changes in different spaces and places?
- For mixed methods studies, which type of research will you conduct first and why?

Module 08

Incorporating an intersectional gender lens into implementation research on infectious diseases of poverty

This module has the following objectives:

- Understand the relevance of an intersectional gender lens in implementation research on infectious diseases of poverty
- Explore the role of community engagement within implementation research
- Explore how intersectional gender analysis questions can be used to inform implementation research and understand how gender relations can contribute to the implementation success or failure of an intervention

8.1 The importance of intersectional gender analysis within implementation research on infectious diseases of poverty

Implementation research focuses on identifying bottlenecks related to the roll-out of health interventions. It also focuses on developing and testing effective strategies designed to overcome those challenges and determining ways to introduce innovations into the health system and promote their sustainability and use *(89,90)*. (**Box 12** below)

Box 12: What does implementation research involve? (extracted from 'Implementation research Toolkit'. WHO/TDR) *(90)*.

What does implementation research involve?

- Identifying implementation problems that hinder access to interventions, the delivery of services, as well as usability of effective, evidence-based interventions and their main determinants
- Developing and testing practical solutions to address these problems, which are specific to particular health systems and environments or that address a problem common to a region
- Identifying how evidence-based interventions, tools and services should be modified or adapted to achieve sustained health impacts in real-world settings
- Determining the best way to introduce practical solutions into health systems and facilitating their full-scale implementation, evaluation and modification

Implementation research is an important approach in research on infectious diseases of poverty. It allows us to better understand and address barriers to effective implementation of health interventions, strategies and policies (91).

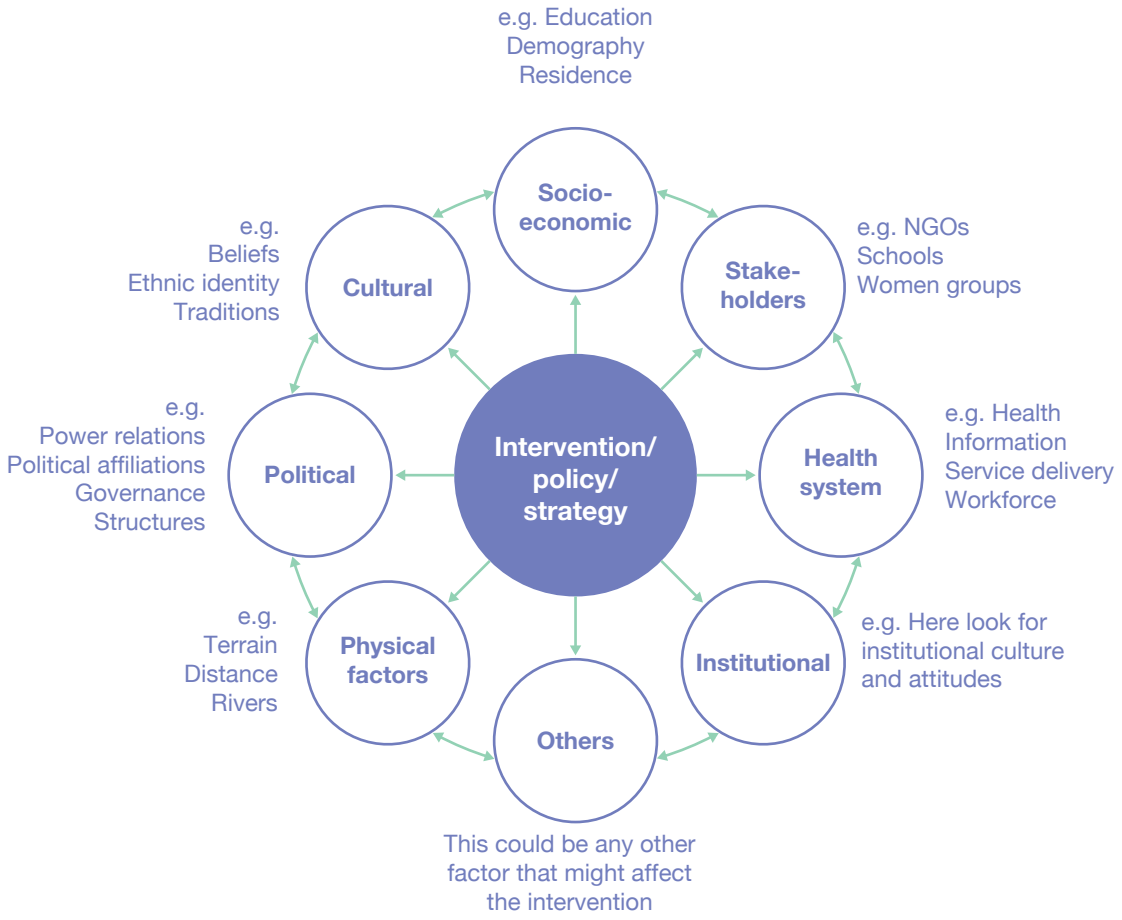
Understanding how gender intersects with other axes of inequality is essential in infectious disease prevention and control efforts, and can be essential at various points of the implementation research process.

Health programmes may operate differently within and across social stratifiers under various circumstances and contexts. Several factors associated with the socio-economic and cultural context (**Figure 12** below), which change over time, may influence and impact the delivery of an intervention.

Implementation research involves different stakeholders, including health care workers, policymakers and patients, identified at the inception stages of the research project. The research also needs to be done in and with the communities as this is where gender dynamics and other contextual factors tend to influence implementation.

Incorporating an intersectional gender analysis in infectious disease research informs implementation strategies to avoid ignoring gender-related dynamics and power relations that influence why, when, if and how an implementation strategy works *(46)*.

Figure 12: Contextual factors in implementation research (source: TDR IR toolkit, TDR/WHO *(91)*)



Gender analysis also helps understand the extent to which the research process itself progressively transforms or does not exacerbate gender power relations *(2).* When designing and implementing interventions, for example, it is often assumed it will be equally effective for all men, women and people with non-binary identities. In addition, implementers often "fail to recognize how gender power relations can affect how someone interacts with, accesses, uses or generally responds to an intervention" *(2,92)*. However, "sex and gender are important in decision-making, stakeholder engagement, communication and preferences for the uptake of interventions" and ignoring gender power relations may lead to unintended consequences *(46).*

By incorporating gender analysis questions into implementation research data collection and analysis processes, researchers can better understand how gender relations affect how users use, interact with and respond to an intervention *(93).*

Implementation research is not a single activity, but a stepwise, cyclical process, from identifying the intervention challenges that take place in a specific context (including gender related and other socio-economic factors) through the work with key stakeholders to generate research questions, to the development of the research proposal and implementation of research project (**Figure 13** below). Through this process, implementation research aims to bridge the gap between interventions that research has proven to be effective and their delivery to communities.

Figure 13: The six steps of the implementation research cycle (source: IR Toolkit workbook *(91)*).

8.2 Role and importance of community engagement within implementation research on infectious diseases of poverty

Community engagement is defined by Glandon et al *(94)* as the: "meaningful, respectful and fit for purpose involvement of community members in one or more aspects of implementation research projects, and may include involvement during the identification of the study, to defining its purpose and design, to stages of implementation, interpretation, and use of results".

Community engagement is particularly important when conducting implementation research in relation to infectious diseases of poverty as it allows us to be flexible and responsive to the contexts in which we are working. It also reduces the impetus to apply a 'one-size fits all' or 'blueprint' approach to the design and delivery of research studies. It often means that our research can become more nuanced and adaptations to existing health services, or the development of new interventions, are likely to have more traction in the environments in which we are working and, consequently, are more likely to see change in policy and practice *(94,95)*.

There are different levels of stakeholder who we need to engage within the research process, usually spanning the different levels of the health system. Prior to starting any research project, it is a good idea to think about mapping out the different stakeholders you might want to engage with. You also need to think about how they could influence the research process in positive and negative ways. You may also want to think about how gender and other socio-cultural factors may shape the engagement of these individuals and add this to your stakeholder analysis. (This is particularly considered in **Module 5**.)

Guidance on how to engage with community level stakeholders in implementation research is scarce. The level of community engagement required by your research project is often shaped by your research questions. For example, in relation to infectious diseases of poverty, if we were trying to transform community gender norms to increase access to health services for women/men/people with non-binary identities, we would require high levels of community engagement at every stage within the research process (see **Module 4**). Conversely, if we were testing a new clinical algorithm for the diagnosis of TB for use with specially trained medical professionals, the importance of lower level community engagement may be less essential.

In specific relation to implementation research, Glandon et al *(94)* highlight in their key resource '10 best resources for community engagement in implementation research' how community engagement can be useful at each stage within the implementation research pathway, as shown in box 13 below. They also present a synthesis of core tools that can be useful in shaping community engagement activities. We discussed more methods for transformative community engagement in **Module 4**.

Box 13: The role of community engagement at different points along the implementation research pathway

This table is taken from Glandon et al (2017) and presents the role of community engagement at different points along the implementation research pathway.

Table 1. Potential roles for community engagement by phase in the IR cycle

Phase in the IR cycle	Potential roles for community engagement
1. Problem identification	Input on key problems or issues to be addressed; understanding context, conceptualizing key issues; indentifying key stakeholders to involve; conducting stakeholder mapping and analysis
2. Design and planning	Shaping key research aims, questions to meet local objectives, input into methodology, especilly contextually appropriate approaches for data collection; review of research documents and tools (e.g., protocol, consent forms, instruments)
3. Implementation	Generating awareness and ownership of research project; potential involvement in an intervention beign studied, pilot testing of instruments; participating as data collectors or respondents; formal partnership and collaboration with community groups
4. Analysis and interpretation	Interpreting findings; discussing implications; adding contextual depth and nuance to recommendations
5. Knowledge translation	Discussing implications of findings; issue prioritization, planning and implementation of follow-up action; tailoring evidence to enhance community voice
6. Interation and adaptation	Establishing ongoing community participatory M&E, social accountability mechanisms to increase transparency of key service delivery outcomes

Key resources community engagement:

- Glandon D, et al. 10 Best resources for community engagement in implementation research. *Health Policy Plan*. 2017. 32: 1457-1465.
- Peters, D. H., Tran, N. T. and Adam, T. (2013) *Implementation Research in Health: A Practical Guide*. World Health Organization: Geneva. Available at: http://www.who.int/alliance-hpsr/resources/implementationresearchguide/en/

8.3 Incorporating a gender lens into implementation research on infectious diseases of poverty

Incorporating a gender lens into implementation research on infectious diseases of poverty is similar to incorporating a gender lens into other forms of qualitative and quantitative research. The steps discussed in **Modules 3** to **7** and **Module 9** are all relevant for implementation research on infectious diseases of poverty and are outlined again below.

All of the activities included within this toolkit can also be applied to implementation research for infectious diseases of poverty. The key difference is in the development of gender analysis questions, which is discussed in greater detail below.

8.3.1 Incorporating gender analysis questions into implementation research on infectious diseases of poverty

This section provides an example of how gender analysis questions can be used to inform implementation research and understand how gender relations can contribute to the implementation success or failure of an intervention.

To develop gender analysis questions for implementation research, you want to use recognized implementation outcome variables through which you develop gender analysis questions against. Peters et al. *(95)* have devised a number of 'implementation outcome variables' that act as indicators of how well the intervention is working. The variables are acceptability, adoption, appropriateness, feasibility, fidelity, implementation cost, coverage and sustainability (see **Table 23** below).

Researchers may choose not to explore all outcome variables within their data collection as the relative importance of each variable is dependent on the intervention being delivered.

Table 23 provides illustrative gender analysis questions informed by the gender framework presented in **Module 3**, mapped against the implementation outcome variables. As Morgan et al. *(2)* state: "factors that influence gender and power are difficult to contain within neat discrete categories, and hence there are some overlaps between the factors in the gender power relations domain. As it may not always be possible to address all the questions laid out below, researchers should start by identifying important gender analysis questions that are relevant to their implementation research."

The following intersectional questions should be applied to facilitate the construction of intersectional gender analysis questions for data collection and analysis: how does this differ between different groups of men, women and non-binary people? That is, how does gender intersect with other social stratifiers to create differences between different groups of men, women and non-binary people?

Table 23: Illustrative gender analysis implementation research questions

Implementation outcome variable: acceptability – the perception among stakeholders that an intervention is agreeable	
Gender relations domain	**Gender variables/proxies**
Access to resources	To what extent do women's (frequent) lack of skills and resources (education, money, technology, employment) or autonomy affect whether or not others perceive their involvement in the intervention as acceptable?
Division of labour and roles	Does men's and women's work inside and outside the home affect whether or not others perceive their involvement in the intervention as acceptable?
Social norms	How do social and cultural gender norms affect whether or not the intervention is accepted by the community, e.g. do cultural beliefs about women as child bearers and mothers influence their involvement in a family planning intervention? How do the conditions at health facilities affect access? To what extent do health facilities provide services with appropriate conditions (such as functioning toilets, bathing areas for inpatient facilities, shelter from sun/rain in the waiting area) and confidential services? Can patients request to consult a health care provider of their choice if they prefer to?
Rules and decision-making	Who decides whether or not it is acceptable for someone to participate in an intervention? How do they decide this? Are women or other marginalized populations (transgender people, ethnic minorities, migrants, inhabitants of informal settlements, people employed in illegal occupations, etc.) excluded?
Implementation outcome variable: adoption - the intention, initial decision, or action to employ a new intervention (i.e. uptake)	
Gender power relations domain	**Illustrative gender analysis questions**
Access to resources	To what extent are marginalized populations able to access relevant information and care related to an intervention?
Division of labour and roles	How do women's social roles, such as childcare, infant feeding and other reproductive tasks, affect their access to and utilization of an intervention?
Social norms	How does stigma inhibit certain men, women and people with non-binary identities from accessing or using an intervention? Do interventions targeted at women, such as maternal and child health, and family planning services, exclude men?
Rules and decision-making	Who decides whether and how much household resources should be used to pay for health care services? How might this affect an intervention? Do women require the permission of a male partner or relative to use the intervention?

Implementation outcome variable: appropriateness - the perceived fit or relevance of the intervention in a particular setting or for a particular target audience or issue	
Gender power relations domain	**Illustrative gender analysis questons**
Access to resources	To what extent do women's (frequent) lack of skills and resources (education, money, technology, employment) affect whether or not others perceive their involvement in the intervention as relevant?
Division of labour and roles	To what extent are the intervention activities, such as health outreach visits or clinics, organized considering men's and women's agricultural, economic or caretaking activities in their communities? Does involvement in the intervention compromise any implementer's safety? Or bring additional tasks to certain groups that may be unpaid or unremunerated? (For example, do they rely on the labour of women volunteers who have to travel after dark?)
Social norms	How do women and men within households and communities prioritize individuals' involvement in an intervention? For example, is the intervention more likely to be seen as relevant for men due to their role as providers or for women because of its unpaid, low-prestige status? Does the implementation problem and design draw on health providers' (and others') tacit knowledge? Does it incorporate both men's and women's perspectives?
Rules and decision-making	Who decides whether or not someone can participate in an intervention? And at what level, i.e. within households, communities, institutions? And how is this decided?
Implementation outcome variable: feasibility - the extent to which an intervention can be carried out in a particular setting or organization	
Gender power relations domain	**Illustrative gender analysis questons**
Access to resources	To what extent do women and men (or other marginalized categories of people) have the same access to educational and training opportunities? To what extent do family support and roles help or limit opportunities for training by gender, marital status, age or other social stratifiers? How might this affect stakeholder engagement within an intervention? To what extent do women (or other marginalized categories) have sufficient literacy, autonomy and access to technology to effectively use an intervention? To what extent is protective health equipment and gear made available and does it fit bodies that are not the male standard?
Division of labour and roles	To what extent are women more or less likely to work in frontline service delivery in poorly compensated (including volunteer) or less-supported positions than men? How does this affect who implements an intervention and how?

	How do men's and women's roles and responsibilities affect the use of products used within the intervention (e.g. bed nets, vaccinations)? What are the challenges different groups of women and men might face in adhering to long-term treatment (e.g. for tuberculosis, HIV or diabetes)? Are they appropriately supported, or stigmatised within health systems and community-based structures?
Social norms	How do women and men within households and communities prioritise individuals' access to medical technologies or commodities used within an intervention, e.g. are boys or girls more likely be prioritised for oral rehydration therapy (ORT)? How do social norms and notions of masculinity and femininity influence men's and women's decisions to use the protective equipment required in an intervention?
Rules and decision-making	To what extent does regulation stand in the way of making services used within the intervention more widely accessible for women or marginalized groups, e.g. medical abortion, family planning? What is the effectiveness of regulatory mechanisms to ensure that medical products for women or other marginalized groups are not misused, e.g. oxytocin to augment labour?
Implementation outcome variable: fidelity - the degree to which an intervention was implemented as it was designed in an original protocol, plan or policy.	
Gender power relations domain	**Illustrative gender analysis questons**
Access to resources	To what extent have those in leadership positions received training in gender sensitivity or gender mainstreaming? To what extent does this training emphasis the need to proactively think about gender and power relations and how they may shape an intervention and exacerbate or minimize harm?
Division of labour and roles	How might participation in an intervention affect health workers' relationships within the home? Will participation in an intervention compromise their safety? To what extent are there differences by gender and other social markers in participation, decision-making and planning of interventions?
Social norms	Are health providers who are women or men recognized differently within an intervention? Do they have different needs? To what extent are providers who are women expected to provide more emotional support, or do more caring work than male providers? Are providers who are men expected to work in more dangerous contexts or travel longer distances?
Rules and decision-making	Has gender been mainstreamed into an intervention design and, if so, how and with what impact?

Implementation outcome variable: implementation cost - the incremental cost of the delivery strategy. The total cost of implementation also includes the costs of the intervention itself.	
Gender power relations domain	**Illustrative gender analysis questons**
Access to resources	Do implementers who are men or women receive the same level of pay? Do male and female volunteers receive similar incentives? Do performance-based incentives mean the same thing for health workers who are men and women across and within cadres? How might this affect an intervention? Are services or goods that would increase men's or women's involvement in the intervention included in the budget?
Division of labour and roles	Are opportunity costs appropriately documented from different perspectives in cost calculations, e.g. the opportunity costs of seeking care/accessing an intervention (and not being able to participate in paid/unpaid work)? From an implementers' perspective, how might costs of participating affect women and men differently?
Social norms	What are the social norms around negotiating for the prices of goods and services? Does having a negotiator who is a man or woman affect the cost?
Rules and decision-making	Who decides what to spend money on? How might this affect what is included within the budget?
Implementation outcome variable: coverage - the degree to which the population that is eligible to benefit from an intervention actually receives it.	
Gender power relations domain	**Illustrative gender analysis questons**
Access to resources	To what extent do user fees or the removal of user fees have an impact on women and other marginalized groups? Has disaggregated information on out-of-pocket expenditures on health for different groups been obtained? Does an intervention incur more out-of-pocket expenditures for men or women? And what is the impact of this on individuals and households? Who has access to the skills, devices and technology that transmits and processes health information? How do they use this information?
Division of labour and roles	How might men's or women's responsibilities both inside and outside the home affect their ability to participate in the intervention?
Social norms	Are health workers in public facilities more likely to respond to certain groups of clients based on perceived ability to pay, gender etc.? How might this affect an intervention?
Rules and decision-making	Are those with decision-making power included within the intervention? How might their lack of inclusion affect ability to access the target population?

Implementation outcome variable: sustainability - the extent to which an intervention is maintained or institutionalized in a given setting.	
Gender power relations domain	**Illustrative gender analysis questons**
Access to resources	Who is more likely to have higher literacy levels and access to social capital, enabling them to participate more effectively in health committees and other forms of health/intervention planning?
Division of labour and roles	To what extent are there differences by gender and other social markers in participation, decision-making and planning of interventions?
Social norms	Does an intervention encourage the participation of men in women's and children's health? If yes, how and on what terms? Does it rely on women's unpaid labour?
Rules and decision-making	To what extent do policies exist to ensure that women are represented on decision-making bodies related to an intervention?

* The table is copied from *(93)*; working definitions of implementation outcome variables from *(95)*.

The questions above can be used to inform overall study objectives, questions, indicators, and/or hypotheses, and/or data collection tools and analysis. These should be incorporated into existing tools, such as surveys or key information interview questionnaires to explore the role of gender power relations against relevant implementation outcome variables.

Key implementation research resources

- Morgan, R. et al. (2016) 'Chapter 11: Incorporating gender analysis into health systems implementation research', in A Practical Guide to Implementation Research on Health Systems. Institute of Development Studies. Available at: http://courses.arcade-project.org/course/view.php?id=9
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- WHO (2014) *Implementation Research Toolkit*. Available at: http://www.who.int/tdr/publications/year/2014/9789241506960_workbook_eng.pdf

Reflection questions/action items

- What is the relevance of using an intersectional gender lens within implementation research on infectious diseases of poverty?
- How are you going to engage the community within the research process?
- How will you incorporate gender analysis questions into your implementation research?

Module 09

Gender considerations within the dissemination and reporting of infectious disease research

Intersectional gender analysis activities included in module 9

- Include gender-sensitive evidence within reports and other dissemination material
- Ensure that research recommendations do not perpetuate existing gender inequities
- Engage relevant stakeholders within dissemination processes

This module has the following objective:

- Discuss how an intersectional gender lens can be incorporated into the reporting and dissemination of research findings, including how stakeholders can be engaged in this process.

The following subsections respond to each of these objectives, leaving the reader with some key questions and literature sources to consider after reading this module.

9.1 Thinking about gender and intersectionality after the research is completed

Research findings shape and inform the development of health systems and their associated programmes and policies. As such, gender-sensitive evidence must be included within research reports and other dissemination material. It will be difficult to include gender-sensitive evidence if the activities outlined in the previous modules have not been carried out throughout the research process. That being said, there are important activities that should be carried out during the writing and reporting of research findings, regardless of the extent to which a gender lens has been incorporated throughout the process.

A gender-sensitive study does not guarantee gender-sensitive reports ***(96)***. After data analysis, applying a gender lens while reporting study findings is the first step to ensure gender-sensitive reports. During the writing process, consider how men, women and people with non-binary identities are portrayed to ensure that harmful gendered stereotypes are not replicated *(2,47)*. Thinking about who is in your research team and each individual's positionality will also be critical in ensuring the way in which the work is shared and disseminated as it reflects multiple realities presented within the data, as opposed to the dominant interpreter or analyst. (See **Module 6** for further information.)

You may even consider involving your research subjects in the construction of reports and messaging. A participatory approach engaging community members for the development and dissemination of health messages can be used. For example, Madon and Sahay reported how an NGO in India engaged slum dwellers for gathering (using audio tapes to collect information and creating a slum profile of the dwellers) and circulating information (publishing a vernacular monthly newspaper by the slum dwellers) related to their rights and helped create channels of communication to engage with the government *(97)*.

Applying a gender lens during or after writing will help to ensure that *(96)*:

- Common pitfalls to conducting gender analysis that may bias research are avoided (with less validity and reliability as a result).
- Sex or gender differences are visualized in the tables, figures and conclusions.
- Whether men, women and people with non-binary identities will be differently affected by the results is considered.
- Results and conclusions about gender and sex outcomes are reported, even if they indicate there was no impact.

9.1.1 Avoiding common pitfalls when conducting gender analysis that may bias research results and reporting

When conducting gender analysis, common pitfalls that may bias research include overgeneralization, sex and gender insensitivity, replication of harmful gender stereotypes and norms, and double standards *(96,98)*.

Overgeneralization occurs when only one sex or gender (or majority one sex or gender) is included in the study but the findings/data is presented as if it has general applicability. For example, when the male body is accepted as a model for all, resulting in only men being included in randomized control trials.

Overgeneralization can be represented in the language used to discuss results; for example, when only the terms 'he' or 'man' are used when both sexes are meant. Within health reporting, generic terms are often used for all-women or all-men groups, such as patients, community members, community health workers or single parents, which masks any gender differences that might exist. Groups should always be distinguished by sex or gender, even when only one sex or gender is included within the sample.

Sex and gender insensitivity takes place when sex and gender are not addressed in the research, despite being related to the research content *(96)*. This can include:

- Failing to report the sex of the participants altogether
- Not making the sex of participants explicit within the title or abstract (which leads to over generalization)
- Collecting data from both sexes but not representing this within the analysis, i.e. disaggregated data becomes aggregated (which means that key differences may be missed)
- Not considering how the sex or gender or the researchers can affect interactions with study participants and hence the type of data collected

The replication of harmful gender stereotypes and norms occurs when, through the reporting of results, negative gendered stereotypes or harmful gendered norms are reproduced.

When reporting research findings, consider how men/boys and women/girls are portrayed so that harmful stereotypes or gender norms are not replicated, including reinforcing that it is a woman's job to care for children and/or collect firewood or water, or that men show weakness by visiting a health provider *(2)*.

An unintended consequence of research reports that are not gender-sensitive is that they negatively harm the communities or individuals represented in the study through, for example, reinforcing harmful gender norms or behaviours and/or presenting inaccurate information by not disaggregating results.

Double standards occur when similar behaviours, traits or reactions are experienced by men and women but are reported differently *(96)*. For example, instances where men and women report the same symptoms of a disease, but women's symptoms are attributed to emotional as opposed to physical causes.

Other forms of double standards that can occur during the research process and within reporting include:

- Using different requirements for inclusion within a study when it is not biologically or socially necessary
- Collecting demographic data vis-à-vis the position of a male/man (e.g. measuring socio-economic status of children against the education of the father)
- Coding identical responses from men and women differently
- Describing women in the passive mode and men in the active mode within reporting

Many of these pitfalls can be avoided if a gender-sensitive lens is incorporated into the study right from the beginning. If pitfalls occur during your sampling, recruitment or analysis, they will be represented within the reporting of results. Other pitfalls occur at later stages of the research process, such as the aggregation of disaggregated results, overgeneralization of findings, portraying negative gendered stereotypes and not reporting results from one sex or gender (and subgroups within) when they were included within the sample. By incorporating a gender lens into the reporting stage, these pitfalls can be prevented.

9.2 Creating gender-sensitive reports

Module 2 discussed the importance of doing no gender harm throughout the research process, and this extends to the reporting and dissemination of research findings. When writing reports based on research findings, avoid the common pitfalls described above throughout the research process, including the reporting of findings. The questions in Box 14 below can act as a guide for creating gender-sensitive reports *(96,99)*.

Box 14: Questions to consider to ensure the creation of gender-sensitive reports

- Is data reported in a gender-sensitive way, i.e. have you avoided overgeneralization, sex and gender insensitivity, double standards and the portrayal of harmful stereotypes?
- If the result of the research includes policy recommendations, have the outcomes been considered in relation to equal opportunity of men, women and people with non-binary identities?
- Are images of different genders projected within the reports or publications? Do these images reproduce stereotypical gender roles or harmful gender stereotypes and/or norms?
- Do the findings replicate harmful gender stereotypes and/or norms?
- How can people of different genders use the results in different ways?
- Are results and conclusions about gender and sex outcomes reported even if no differences were found?

Key resources for gender-sensitive reporting

- Linda Nieuwenhoven and Ineke Klinge, Scientific Excellence in Applying Sex- and Gender-Sensitive Methods in Biomedical and Health Research, Journal of Women's Health, Volume 19, Number 2, 2010

9.3 Ongoing dissemination, reporting and uptake of findings

Once the report is finalized, dissemination of the report is the next step in the research process. All forms of communication must avoid the reinforcement of gender stereotypes as well as harmful gender norms, roles and relations. Images and the type of media used to communicate health messages can and should be used to challenge gender-based stereotypes that may harm health *(44)*.

All information should be readily available to all and presented in a format that is easily understandable to a wide audience. This can include the use of inclusive communicative processes such as audio reports, braille and sign language during dissemination meetings. During the policy-making process, information should be presented to ensure decision-makers understand how the information impacts various populations and how they give rise to inequalities in health outcomes.

Recommendations could be as simple as promoting the inclusion of sex-disaggregated data at all levels of the health system to allow for ongoing gender and equity analysis.

- For example, in a study done by Theobald et al *(43)* on neglected tropical diseases, it was found that even though disaggregated data was collected at the community level; this disaggregation was then lost at national level. Generally, collation and aggregation of sex disaggregated data occurs at higher levels of the health system, which may mask gender inequity prevalent at local levels and specific to certain communities *(43)*.

- Likewise, Varkevisser et al. *(80)* conducted a comparative exploratory study in four countries to study the biological, socio-cultural/economic and service-related gender differences related to leprosy. Among other recommendations, they suggested the reintroduction of the entry ‘sex’ on patient cards and in national statistics in order to be able to assess the consequences of changes in policy on patients who are men/boys or women/girls.

9.4 Engaging stakeholders within the reporting and dissemination process

Ensuring that stakeholders are included throughout the research process, including within reporting a dissemination, is critical to shape research that is useful for communities and country-based decision-makers, as well as ensuring sustained engagement of stakeholders.

Note: stakeholders should be engaged early on within the research process. See module 1 for more information about stakeholder engagement throughout the research process, including during reporting and dissemination.

Reflection questions/action items

- What steps can you take to ensure that you are responsive to gender and other social stratifiers in the writing of project reports and their dissemination?
- Why is it necessary to engage stakeholders in dissemination of research findings?
- What practical things can you do to engage stakeholders in your dissemination activities?

10 Final remarks

This toolkit aimed to strengthen the capacity of researchers working on infectious diseases of poverty by incorporating an intersectional gender approach. The objectives of this document were to:

1. strengthen the research capacity of disease-affected countries in intersectional gender approaches

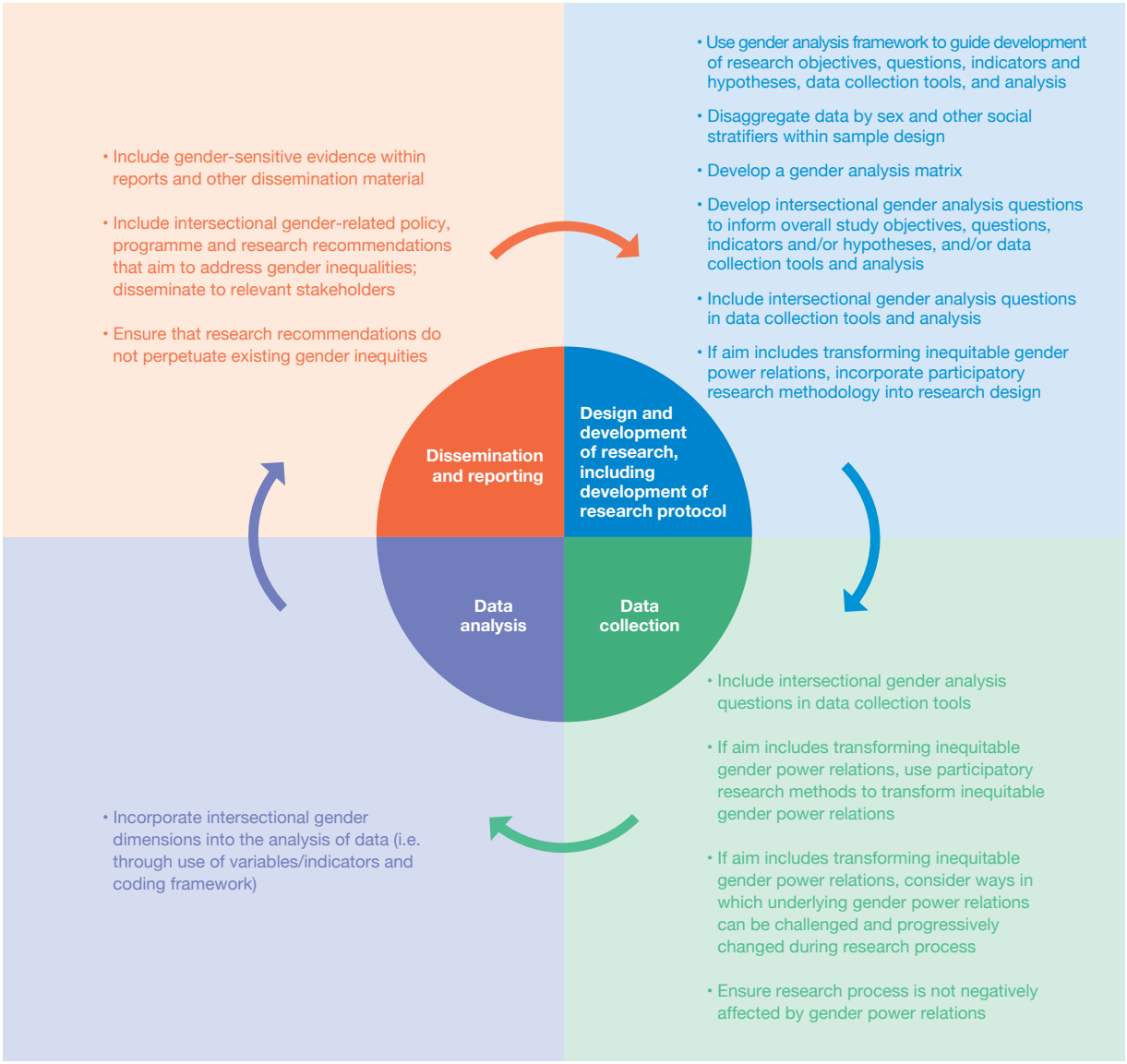
2. understand and address barriers to effective and quality implementation of health interventions oriented to prevent and control infectious diseases

3. explore solutions for equal access to quality health care

Below you will find an overview of the intersectional gender analysis activities for incorporation within your infectious diseases of poverty research as outlined within each module.

Incorporating these intersectional gender analysis activities into your research will help you to better understand the prevention and control of infectious diseases, including vulnerability to disease(s), exposures to disease(s), experiences of disease, health-related decision-making and responses to treatment. It will enable you to see how such things are experienced differently by different groups of men/boys, women/ girls and non-binary genders, and where these differences might be the result of inequities. Generating evidence about these differences will ensure that policies, services and programmes can be created to address them.

Intersectional gender analysis activities along the research path



The following can be used as a checklist during the design, development and implementation of your research. These activities can then be mapped along the gender assessment scale (below) to gauge the extent to which an intersectional gender lens has been incorporated into your research.

Design and development of research, including development of research protocol

- Used gender analysis framework to guide development of research objectives, questions, and hypotheses, data collection tools, and analysis
- Disaggregated data by sex and other social stratifiers within sample design
- Developed a gender analysis matrix
- Developed intersectional gender analysis questions to inform overall study objectives, questions, indicators, and/or hypotheses, and/or data collection tools and analysis
- Included intersectional gender analysis questions in data collection tools and analysis
- Incorporated participatory research methodology into research design (if aim includes transforming inequitable gender power relations)

Data collection

- Included intersectional gender analysis questions in data collection tools
- Used participatory research methods to transform inequitable gender power relations (if aim includes transforming inequitable gender power relations)
- Considered ways in which underlying gender power relations can be challenged and progressively changed during research process
- Ensured research process is not negatively affected by gender power relations

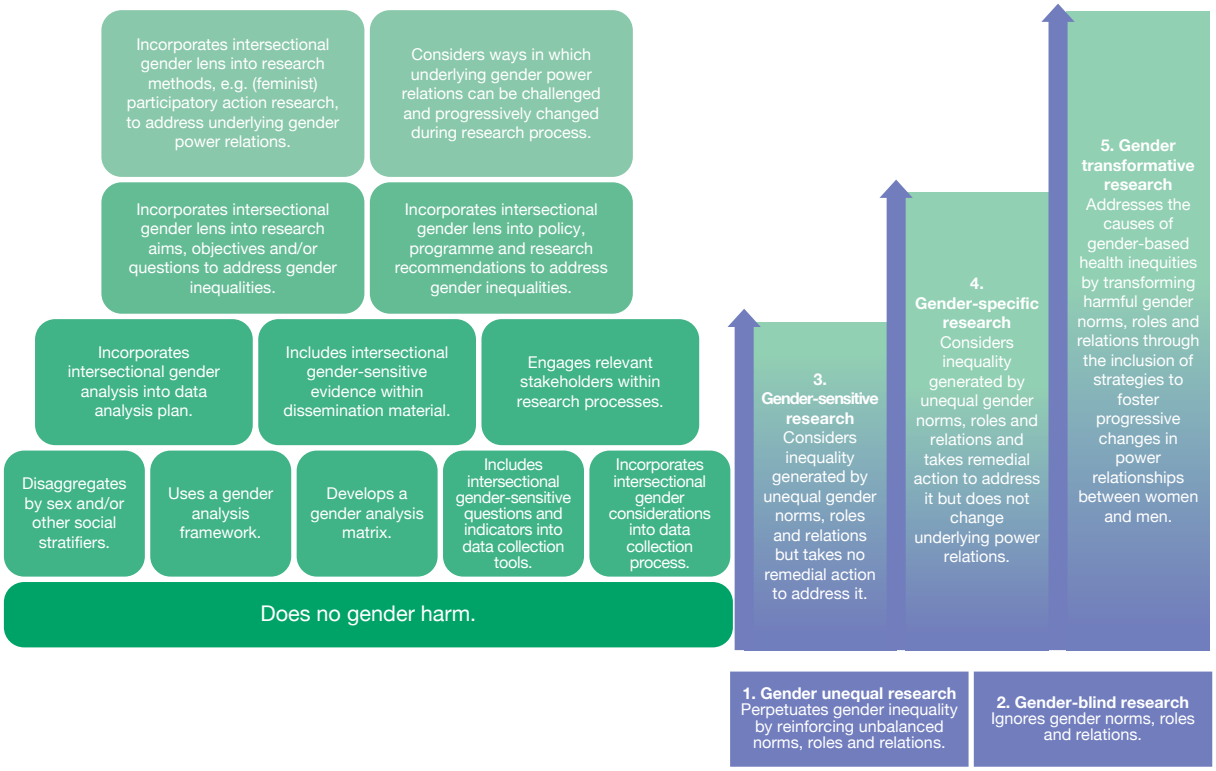
Data analysis

- Incorporated intersectional gender dimensions into the analysis of data (i.e. through use of variables/indicators and coding framework)

Dissemination and reporting

- Included gender-sensitive evidence within reports and other dissemination material
- Included intersectional gender-related policy, programme and research recommendations that aim to address gender inequalities and disseminated to relevant stakeholders
- Ensured that research recommendations do not perpetuate existing gender inequities

Incorporating gender analysis into research on infectious diseases of poverty: from gender unequal to gender transformative research



(RinGs 2016. Adapted from WHO Gender Responsive Assessment Scale: WHO. (2011). Gender mainstreaming for health managers: A practical approach. Geneva) *(44) (47)*

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