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AN APPROACH FOR CONDUCTING SYSTEMATIC GENDER DATA ANALYSIS

An Example from Mali

This publication was prepared by Sandra Duvall and Sara Pappa of the Health Policy Project.

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ABBREVIATIONS

CIDA	Canadian International Development Agency
DHS	Demographic and Health Survey
FGM	female genital mutilation
FP	family planning
GBV	gender-based violence
HCF	healthcare facility
HPP	Health Policy Project
HPV	human papilloma virus
MHO	mutual health organization
MICS	National Multiple Indicator Cluster Survey
MPFEF	Ministry for the Promotion of Women, Children, and Family
PPFP	postpartum family planning
PRODESS	Mali National Health and Social Development Program
SRH	sexual and reproductive health
STI	sexually transmitted infection
USAID	United States Agency for International Development
WHO	World Health Organization

INTRODUCTION

In 2011, the USAID-funded Health Policy Project (HPP) provided technical assistance to support gender integration in the Mali National Health and Social Development Program (PRODESS). As part of this effort, HPP conducted a gender and health analysis using available data to inform PRODESS working groups. To facilitate the analysis, HPP developed a systematic gender data analysis process and identified data sources, including the Demographic and Health Survey (DHS) and the National Multiple Indicator Cluster Survey (MICS), to elucidate gender-specific cultural attitudes and practices and gender-related barriers with the potential to impact health outcomes for women and girls in Mali.

This document presents this secondary data analysis process, along with findings from Mali, to facilitate its possible application in other settings. We provide step-by-step procedures for using existing data sources to analyze key gender and health data and to illustrate the links between gender disparities and health outcomes. This process serves as a practical, easy-to-follow method for conducting a low-cost, data-informed gender analysis that can be used to provide concrete, quantifiable examples of the impact of gender on health and other development outcomes.

BACKGROUND

HPP began collaborating with the Ministry for the Promotion of Women, Children, and Family (MPFEF) in Mali and the Canadian International Development Agency (CIDA) in 2011 to identify opportunities to incorporate gender into the third Mali National Health and Social Development Program (PRODESS III), the implementation plan for the Mali National Health and Development Plan. Following discussions with USAID, MPFEF, and CIDA, HPP conducted a gender analysis using available health-related data to inform PRODESS III working groups. HPP first developed a process to map the gender analysis findings to PRODESS working group health themes and potential negative health consequences. HPP then conducted an online search and contacted in-country partners to collect reports with reliable data, which included the 2006 DHS, 2011 MICS, donor reports, and journal articles. Just after completing the secondary data analysis, the government of Mali was overthrown in a military coup, and the analysis was not used in-country.

This document provides policymakers, advocates, and gender experts with a six-step process for conducting secondary data analysis of gender disparities that impact health outcomes. Findings from the Mali analysis are included as an example to help users identify specific gender issues, related data, and health consequences that may be considered in conducting such an analysis in other contexts.

RATIONALE

The importance of identifying and addressing the impact of gender disparities on health outcomes has become increasingly recognized (WHO, 2009; Head et al., 2014). When designing, implementing, and monitoring health programs and policies, the impact of gender norms on the health-seeking behaviors and health outcomes of women, men, girls, and boys must be considered. Anecdotal evidence is not always enough to bring about policy and program changes at the country and local level. Data are needed to support advocacy efforts and enable effective monitoring and evaluation of policies and programs. Given the multiple barriers to collecting data (e.g., financial, logistical, etc.), secondary data analysis of reliable, open-source data is a cost-effective way to conduct gender analyses for advocacy, data-driven planning, and monitoring and evaluation. This document provides a relatively simple and cost-effective process for conducting a gender analysis using existing data.

SIX-STEP PROCESS FOR GENDER DATA ANALYSIS

The following six-step method uses existing open-source data to identify key gender-related issues and prioritize areas of focus.

Step 1: Identify Health Areas

The initial step involves determining the overall health areas of interest (Table 1, Column 1). Selection criteria can be based on health ministry departments or policy development working groups (as with the Mali PRODESS example); national health policy and/or program components; or specific health areas of interest identified by the community (using a participatory process), project, donor, or research team. Common health areas impacted by gender include sexual and reproductive health (SRH), family planning (FP), HIV, nutrition, malaria, maternal and child health, substance abuse, mental health, disability, gender-based violence (GBV), and chronic disease.

A thorough gender analysis can also include nonhealth sectors and policy areas that impact access to health services. These may include, but are not limited to, education, employment, income, violence, legal rights/status, immigration, and public budgeting and financing.

The overarching health areas selected for the Mali analysis corresponded to PRODESS working group themes: reproductive health, nutrition, malaria, and alternative health financing. HIV was not one of the PRODESS working group thematic areas, and, as such, it was not included in HPP's Mali analysis. However, because gender disparities in HIV prevalence and access to HIV services are well documented, they should generally be included in a comprehensive health sector gender analysis.

Step 2: Identify Related Gender Issues, Disparities, and Constraints

Column 2 (see Table 1) identifies gender-related factors that often contribute to poor health outcomes or that prevent access to health services within each identified health area. These factors can be identified using reliable references on gender and health, such as the World Health Organization's *Gender, Women and Health Report* (2009), USAID's *Women's Lives and Challenges: Equality and Empowerment since 2000* (2014), and *A Framework to Identify Gender Indicators for Reproductive Health and Nutrition Programming* (Yinger et al., 2002), or based on areas of concern in the region or to key stakeholders, donors, or researchers.

In the areas of reproductive health and HIV, for example, research shows that gender-related power dynamics within the household can dictate health-seeking behaviors and decisions around access to services. For women, intimate partner approval can be linked to the ability to obtain contraception (Mohammed et al., 2014; Rahnama et al., 2010) or use maternal and child health services (Allendorf, 2007; Shroff et al., 2011; Haque et al., 2012). Cultural practices surrounding early marriage and childbearing can also be detrimental to the health of young women and girls. Married adolescent girls often lack essential knowledge and awareness regarding reproductive health and face restrictions on mobility and access to resources. As a result, they are less likely to access vital health services (Pande et al., 2006; Plan International and International Center for Research on Women, 2013).

For the gender analysis in Mali, HPP began identifying these issues by conducting a literature review of previous gender analyses and grey literature (i.e., research pulled from organizations outside of academic journals) on gender and health issues identified in Mali, as well as more widely throughout West Africa. HPP then mapped common themes found in Mali and other parts of West Africa to the PRODESS working group health areas (see Step 1). Common gender-related reproductive health themes in the literature include family planning, child/youth marriage, intergenerational sex/marriage, female genital

mutilation (FGM), intimate partner violence, and fistula (Van de Walle, 2011; Gomez and Speizer, 2010; IRIN, 2007; Nour, 2006; U.S. Department of State, 2001; Tembeley et al., 2009; Maiga et al., 2007; Traore et al., 2010).

Limited information was available about the gender issues associated with the PRODESS working group health areas of nutrition, malaria, and alternative health financing in either Mali or West Africa (WHO, 2007; PNLP et al., 2010; CPS/MS et al., 2006; Mwangome et al., 2010: Franco et al., 2008). As demonstrated by the Mali example, Step 2 will not necessarily produce an exhaustive list for each health area. Secondary data analysis under Step 3 may illuminate additional gender issues or disparities to be included in Column 2.

Step 3: Identify Available Data Sources to Complete Country-specific Gender Data

Step 3 begins with a desk review of existing data sources for the country analysis, including the DHS, MICS, World Development Indicators, donor reports, and journal articles. To complete this step, review available data in these reports for quantitative data at the country level or lower (e.g., regional, district, or healthcare facility) that reflect gender disparities or gender-related concerns identified under Step 2 (Table 1, Column 2). Insert all country-specific data under Column 3 in the table. For example, if the identified health area is sexual and reproductive health (Column 1) and the related gender issue/disparity is child/youth marriage (Column 2), enter related country data such as average age at marriage and average age at first birth in Column 3. It is equally important to note missing or unavailable data.

During this secondary data analysis, review all sex-disaggregated data, data specific to women/girls or men/boys, and, where available, data for sexual minorities (such as lesbian, gay, bisexual, and transgender persons). This review helps identify additional gender disparities or gender-related concerns not found during the literature review. These issues can then be categorized and mapped to overarching health areas.

To complete this step in Mali, HPP identified data sources through an online search and by contacting our country field team and other partners in the field. First, HPP analyzed the reports for data relevant to previously identified gender issues and disparities (e.g., child/youth marriage, intergenerational sex/marriage, etc.) and mapped the country-specific data (Table 1, Column 3) to the identified gender issue/disparity (Table 1, Column 2). During this step, HPP was unable to find data around fistula in Mali. Accordingly, the table explicitly points to this gap and highlights the need for data collection around this serious gender-related health concern, which is well documented in the gray literature.

Next, HPP reviewed reports for additional sex-disaggregated data and analyzed the data for significant differences in morbidity, mortality, access to services, and service uptake. HPP also identified data indicative of gender disparities and morbidity related to gender and gender norms that were not well addressed in the wider literature for the region. These included lower body mass index among widows than married women, risk factors for cervical cancer related to gender norms, and gender disparities in the use of mutual health organizations (MHOs), a form of health insurance membership common in Mali.

Step 4: Identify Potential Negative Health Consequences

After linking the gender-related issue/disparity and the associated country data, this step involves identifying actual or potential negative health consequences associated with these gender issues/disparities. These health consequences should be identified using the references identified in Step 2 (WHO, 2009; USAID, 2014; Yinger et al., 2002) and using an online key word search.

For example, GBV, which includes intimate partner violence, is deeply rooted in rigid gender norms and inequities, is linked to a range of adverse health outcomes, including low utilization of reproductive and maternal health services (Interagency Gender Working Group, 2014; Rahman et al., 2012a), poor child health outcomes (Silverman et al., 2011; Rahman et al., 2012b), and increased risk for sexually transmitted infections (STIs) and HIV (Silverman et al., 2008; Jewkes et al., 2010; Population Reference Bureau, 2010).

Female genital mutilation, another harmful traditional practice, is still common in the Middle East and Africa, where UNICEF estimates more than 125 million girls and women alive today have been cut (UNICEF, 2013). FGM is thoroughly entrenched in gender inequities and carries with it serious consequences for women and girls, including severe bleeding, fistula, infections, infertility, complications in childbirth, and an increased risk of newborn deaths (WHO, 2014).

HPP identified potential health consequences of early marriage and childbearing, which are common in Mali, using an online key word search (search terms included, for example, "early marriage," "child marriage," "early childbearing," "health effects," and "health outcomes") along with a review of reference literature on gender and health outcomes. Potential health consequences identified included increased maternal and infant mortality and morbidity, increased risk for human papilloma virus (HPV)/cervical cancer, and GBV.

Step 5: Identify Related Health System Subsectors

This step is optional and entails evaluating which health system subsectors or governance units (such as human resources, medical supplies, local health units, or health financing) should or can use the data and supplemental information to inform policy and programming. For example, 38 percent of women in Mali reported that distance to healthcare facilities prevented them from obtaining healthcare. While this country-specific finding is linked to the PRODESS health area of reproductive health—and could be linked to HIV, chronic illness, and other health areas—it also reveals policy and programming needs around human resources, such as initiatives to provide community health workers who make home visits, or distribution of medical supplies, such as ensuring long-term contraception is readily available, particularly to women in rural areas.

This step can also be used to identify nonhealth sectors where data from the gender analysis can inform policies and programs. This is particularly useful when working with policymakers to coordinate with other ministries or sectors.

Step 6: Present Findings and Examine the Implications

The findings from the gender analysis should be presented to and validated by key stakeholders. Meetings should also be held with key stakeholders to outline the implications of those findings and, where possible, to begin discussions around policy and program changes to address the negative impact on health outcomes. When in-country presentation and validation of data are not possible, a report of the results should be shared with policy and program decisionmakers in-country.

HPP was unable to complete Step 6 as a result of the coup in Mali before the final report was completed. However, the analysis demonstrates the impact gender norms have on health-seeking behaviors and access to services for women and children in Mali. The data identified during this process (see Table 1) can be used by decisionmakers in-country to inform future health and gender policy and program development and to support advocacy around policy and program development and implementation.

For example, child/youth marriage data can be presented with international data demonstrating health outcomes to advocate for the development, dissemination, and implementation of laws to restrict the age

at which a woman/girl can legally marry and to penalize men, families, or local authorities that break the law. Key stakeholders can also use cervical cancer data to advocate for developing policies and allocating funding for HPV testing, referrals of HPV cases for treatment, and training health providers in HPV prevention, testing, and risk factors, as well as policies and programs that impact gender norms and women's ability to make decisions around sexual and reproductive health and health-seeking behaviors.

MALI GENDER AND HEALTH ANALYSIS RESULTS: SAMPLE APPLICATION

The table on the following pages provides data and findings from applying this secondary data analysis process in Mali. While this example focuses specifically on PRODESS working group health areas—reproductive health, nutrition, malaria, and alternative health financing—this table can serve as an adaptable tool for use in other contexts.

Table 1: Gender Data Analysis—Mali

Health Area (PRODESS Working Groups)	Related Gender Issues/ Disparities	Related Country Data	Negative Health Consequences	Related Health Systems Subsectors (Cross-linked with Other PRODESS Working Groups)
Reproductive Health	**Child/youth marriage**	• **23%** of women interviewed (15–49) were married by their **15th** birthday[1] • **23.5%** had first sexual encounter by **15**[1] • **66%** of women interviewed (15–49) were married by their **18th** birthday[1] • **83%** of women had first sexual encounter by age **20**[1] • Median age at birth of first child **18.9** years[1] • **36%** of women ages 15–19 at time of interview were pregnant for the first time (5%) or already had at least one child (31%)[1] • At least 10 girls in Kayes, Mali, (1/2005–5/2007) lost their lives because of complications on their wedding nights[6]	Child/youth marriage and early sexual debut coupled with low contraceptive use lead to child/youth pregnancy in Mali with increased risk for maternal/infant morbidity and mortality (including fistula, hemorrhage, pre-eclampsia, premature labor, obstructed labor) and consequences for birth outcomes (birthweight, infant mortality, etc.). Child/youth marriage is also associated with increased risk for HPV/cervical cancer.[8] Note: Child marriage (<15) is considered a form of GBV. Note: According to UNFPA, girls 15–19 are 2x as likely to die in childbirth and girls 10–14 are 5x as likely as women aged 20–34. Infants of mothers <18 have 60% greater chance of dying in first year of life than those born to mothers >19.[5]	• Strengthening the health system • Human resources • Statistics

Health Area (PRODESS Working Groups)	Related Gender Issues/ Disparities	Related Country Data	Negative Health Consequences	Related Health Systems Subsectors (Cross-linked with Other PRODESS Working Groups)
	Intergenerational sex/marriage	• Median age at first marriage is **18.1** for women and **28.2** for men[1]	Intergenerational sex/marriage can lead to differential power dynamics in the household due to age and gender (gender details below). Decreased capacity for women to negotiate contraceptive use, including condom use to prevent STIs and HIV and contraceptives for birth spacing/postpartum family planning (PPFP).	• Strengthening the health system • Human resources • Pharmacy and medication (stock types of contraceptives that women can use without partner consent/knowledge)
	Gender differences re FP decision making	• **19%** of women vs. **9%** of men report not wanting any more children[1] • Ideal # of children: **6.6** for women vs. **7.7** for men[1] • Desire for birth spacing roughly equal (**34%** vs. **33%**)[1] • **60.7%** of men in one study (N = 1004) believe decision to use contraceptives should be made by them alone[12]	Men want greater number of children. Effects on contraceptive use and birth spacing. Opportunity for birth spacing with portion of the population.	• Decentralization • Strengthening the health system • Human resources • Pharmacy and medication (stock types of contraceptives that women can use without partner consent/knowledge)

Health Area (PRODESS Working Groups)	Related Gender Issues/ Disparities	Related Country Data	Negative Health Consequences	Related Health Systems Subsectors (Cross-linked with Other PRODESS Working Groups)

	Gender-related reasons for not obtaining healthcare when needed	• Lack of money (**53%**) – gender norms affect access to financial means to pay for healthcare[1]
		  o Widow/rural **80%**[3]
		  o Divorced/rural **70%**[3]
		• Distance to healthcare facility (HCF) (**38%**) – Gender-based division of labor and other gender norms can play a role, particularly for women who are unable to go out with or without husband/partner's permission[1]
		• Need for transportation (**36%**) – can be related to first two and gender norms regarding who has access to transportation[1]
		• **No permission to get care** (**18.2%** – higher for 15–19 year olds at 20.5%)[1]
		• **Not wanting to go alone** (**23.9%** – higher for 15–19 year olds at 30.5%)[1]
		• **Afraid provider will not be a woman** (**19.9%** – higher for 15–19 year olds at 25.1%)[1]
			Limits access to prenatal care (**70.4%** receive prenatal care[1]), births facilitated by trained birth attendant (**56%**[14]), and access to FP (**8%,**[14] current use of modern contraceptive method), including PPFP. This ultimately affects maternal and infant morbidity and mortality.	• Strengthening the health system
				• Human resources (including community health workers, increase female providers)
				• Alternative health financing
				• Pharmacy and medication (ensure continual supply of contraceptives, particularly long-lasting – women unable to easily return to HCF)

Health Area (PRODESS Working Groups)	Related Gender Issues/ Disparities	Related Country Data	Negative Health Consequences	Related Health Systems Subsectors (Cross-linked with Other PRODESS Working Groups)
	Other gender-related obstacles to women accessing healthcare	• Only **18%** of women in Mali report having input in decisions regarding their health (**12%** woman only, **6%** woman and partner together) with **11.8%** of women ages 15–19[1] • Husband/partner makes decisions regarding woman's health in **71.8%** of DHS respondents[1]	Limits access to prenatal care (**70.4%** attend at least 1 prenatal visit and **35.4%** attended 4+[1]), births facilitated by trained birth attendant (**56%**[14]), and access to FP (**8%,**[14] current use of modern contraceptive method), including PPFP. This ultimately affects maternal and infant morbidity and mortality.	• Decentralization plans • Strengthening the health system • Human resources • Pharmacy and medication (see previous) • Alternative health financing
	Gender-related obstacles specific to STI/HIV prevention and FP	• **23.6%** of women reported that there is no excuse for not having sex with partner[1] • Only **48%** agreed that a woman can refuse to have sex with her partner if he is known to have an STI[1] • Only **30.3%** agreed that a woman can refuse to have sex with her partner if he has sex with other women[1] • Only **59.4%** agreed that a woman can refuse to have sex with her partner if she just gave birth[1] • Only **53.9%** of respondents agreed that it was acceptable for a woman to propose using a condom to her male	SRH/FP consequences include inability to negotiate condom and contraceptive use for FP or STI/HIV prevention, obstacles to PPFP and overall FP, obstacles to STI/HIV prevention.	• Strengthening the health system • Human resources • Pharmacy and medications

Health Area (PRODESS Working Groups)	Related Gender Issues/ Disparities	Related Country Data	Negative Health Consequences	Related Health Systems Subsectors (Cross-linked with Other PRODESS Working Groups)
		partner if her partner is known to have an STI[1]		
	Female genital mutilation	• **85.2%** of women in Mali reported having been subjugated to some form of FGM[1] • **75.8%** had flesh removed from genital region[1] • **10.2%** had their vagina sewn closed[1] • **82%** of participants with daughters either intended or had already had FGM performed on their daughter(s) [1] • **28%** (1 in 3) of participant daughters subjugated to FGM had complications, including excessive bleeding, difficulty urinating, swelling in the genital region and infection with improper healing[1] • **63.6%** of women vs. **38.2%** of men believed FGM is required by their religion[1] • **44%** of women vs. **24.6%** of men believed FGM prevented sexual relations before marriage[1]	FGM is a form of GBV that can lead to painful intercourse, birth complications, and death. Note: FGM is not illegal in Mali.[10]	• Decentralization • Strengthening the health systems • Human resources • Statistics
	Intimate partner violence (including battery during pregnancy and rape)	• Limited/no data on intimate partner violence and rape	These data point to likelihood of widespread domestic abuse and spousal rape that go	• Decentralization • Strengthening the health system • Human resources • Statistics (data on intimate partner

Health Area (PRODESS Working Groups)	Related Gender Issues/ Disparities	Related Country Data	Negative Health Consequences	Related Health Systems Subsectors (Cross-linked with Other PRODESS Working Groups)
	Note: Spousal rape is not illegal in Mali.	• **75.2**% of women find it acceptable for a man to beat his partner/wife in at least one of presented circumstances[1]: o **56.8**% if she refuses to have sexual relations with him o **60.3**% if she goes out without telling him o Other reasons included burning food/meal, discussing her opinions with him and neglecting the children • Premarital first sex was more common among women from communities with a higher prevalence of intimate partner violence (**23.7%**) compared with women who had first sex in union from communities with lower prevalence (**20.6%)**[4] • **3.12%** of emergency room admissions at Gabriel Touré teaching hospital were related to sexual aggression with perpetrator known to patient in **63.67%** of cases[13]	unreported and/or do not receive attention from healthcare workers and law enforcement. In addition to other physical and psychological ramifications,[5] SRH/FP ramifications include maternal and infant morbidity and mortality related to domestic abuse during pregnancy, obstacles to obtaining healthcare including SRH/FP (cannot go out without spousal permission for fear of domestic abuse), obstacles to FP/PPFP (inability to refuse sexual relations with spouse).	violence, rape, and battery during pregnancy are currently unavailable – cases underreported and data for reported cases unavailable)

Health Area (PRODESS Working Groups)	Related Gender Issues/ Disparities	Related Country Data	Negative Health Consequences	Related Health Systems Subsectors (Cross-linked with Other PRODESS Working Groups)
	Fistula **Note**: There are no national data on fistula prevalence.	• Limited data on fistula prevalence • **16%** of women interviewed had heard of fistula[1] • Only **0.2%** reported suffering from or having suffered from fistula (could be related to stigma and participant selection bias) [1] • Medecins du Monde estimates 1000 new cases/year[15] • 200 obstetrical vesicovaginal fistula patients/year received at Point G Hospital in Bamako[11]	Although fistula does not appear to be widespread, this type of maternal morbidity exists in Mali, and the effects on women are significant.	• Strengthening the health system (referrals of high-risk pregnancies and for fistula treatment) • Human resources (healthcare provider training to prevent and treat fistula) • Statistics (collect national data on fistula)
	Cervical cancer	• Cervical cancer is the most common cancer in women in Mali (age standardized incidence rate of **24.4 per 100,000**)[7] • Second most common cause of death from cancer[7] • HPV detected in **97%** of cervical cancer study participants and **40%** of control participants (N=200) [7] • Risk factors identified were child marriage, high parity (>10 children),	Cervical cancer leads to death and is the second most common cause of death from cancer in Mali.[7] Note: HPV is an STI that can lead to cervical cancer.	• Strengthening the health system (HPV testing and referrals of HPV cases for treatment) • Human resources (training in HPV prevention, testing, and risk factors) • Statistics (collect statistics on HPV prevalence)

Health Area (PRODESS Working Groups)	Related Gender Issues/ Disparities	Related Country Data	Negative Health Consequences	Related Health Systems Subsectors (Cross-linked with Other PRODESS Working Groups)
		polygamous husbands (>2 wives), and poor genital hygiene (no tap water available and reuse of sanitary napkins)[7,8] o >10 children had nearly fivefold risk (OR=4.77, 95% CI: 1.54–14.7) of cervical cancer than women with 1–5 children[7] o 17-fold increase in risk of cervical cancer among women who do not force water or liquid soap in the vagina when washing genitals[7] o Risk of cervical cancer is 5.6 times greater among women who did not "take special care cleaning their genitals"[7] o Strong association (OR=46) between re-using sanitary napkins and cervical cancer[7] o Polygamy increased risk by twofold[7]		

Health Area (PRODESS Working Groups)	Related Gender Issues/ Disparities	Related Country Data	Negative Health Consequences	Related Health Systems Subsectors (Cross-linked with Other PRODESS Working Groups)
Nutrition	**Malnutrition**	Malnutrition is high in Mali: • **15%** of children <5 suffer from acute malnutrition (measured using weight by height)[1] • **34%** showed delayed growth measured using weight by age (down from 38%)[1] • **14%** of women ages 15–49 have low BMI (<18.5) with 23% of women 15–19[1] • **81.2%** of children were anemic[1] • **67.6%** of women were anemic[1] • No statistically significant differences between boys and girls <5 (none for breastfeeding either)[1]	Malnutrition in pregnant women affects birth outcomes, including maternal and infant morbidity and mortality, as well as child mortality Note: See gender-related decision making.	• Decentralization • Strengthening the health system • Pharmacy and medications • Statistics (need more gender-disaggregated data regarding access to food and nutrition at each stage of the life cycle [not just children <5]) • Alternative health financing
	Nutrition related to reproductive health/family planning	• Accessibility of nutritional supplements from HCF is limited due to limited access to prenatal care (**35.4%** had 4+ prenatal visits[1]), assisted birth (**56%**)[14] and postpartum care • Husband/partner makes healthcare decisions for **71.8%** of respondents, which can affect access to nutritional supplements for women and their children[1]	Poor nutritional status, particularly in adolescent/youth pregnancies, increases maternal and infant morbidity and mortality, including weight of newborns which is correlated to nutritional status of children 0–3 years.	• Strengthening the health system • Human resources • Pharmacy and medications

Health Area (PRODESS Working Groups)	Related Gender Issues/ Disparities	Related Country Data	Negative Health Consequences	Related Health Systems Subsectors (Cross-linked with Other PRODESS Working Groups)
		• **36%** of women ages 15–19 at time of interview were pregnant for the first time (5%) or already had at least one child (31%). Child/young mothers are more likely to experience malnutrition and have infants with low birthweight (17% of women <20 vs. 14% of women ages 15–49)[1] • **67.6%** of women were anemic at time of DHS (also related to malaria)[1]		
	Gender-related data regarding decision making that affects nutrition	• Mother's education is correlated with child <24 months vitamin A intake via fresh vegetables and fruit during previous week (28.8% no education, 37.6% primary school, 49.1% secondary school) – no gender differences among children[1] • Mother's education correlated with intake of vitamin A supplements postpartum – birth in previous 5 years (38% no education, 52.8% primary, 68.3% secondary or higher) and inversely correlated with iron intake – took no iron supplements (41.8% no	Gender inequities, particularly women's control of resources and access to healthcare, contribute to limited success of nutrition programs in reaching pregnant women and children and improving child nutritional status.	• Strengthening the health system • Human resources • Pharmacy and medications

Health Area (PRODESS Working Groups)	Related Gender Issues/ Disparities	Related Country Data	Negative Health Consequences	Related Health Systems Subsectors (Cross-linked with Other PRODESS Working Groups)
		education, 23.7% primary, 14.2% secondary or higher)[1] • Women prepare food and make choices regarding meals (see below)[1] • Husband/partner makes healthcare decisions for **71.8%** of respondents, which can affect access to nutritional supplements for women and their children[1] • **54.8%** of women have a say in the decision of what food to prepare each day (49.5% make the decision alone and 32.2% of husbands/ partners make the decision)[1] • **Only 27.5%** of women have input regarding daily needs of the family with 60.5% of husbands/partners making these decisions[1]		

Health Area (PRODESS Working Groups)	Related Gender Issues/ Disparities	Related Country Data	Negative Health Consequences	Related Health Systems Subsectors (Cross-linked with Other PRODESS Working Groups)
	Widowhood/divorce	• Widows in rural Mali (even if remarried) between ages 20 and 40 have lower BMI than women who are currently married or divorced[3] • Cohabiting dependents of divorced women in their mid-20s to mid-30s in rural Mali have lower BMI than their counterparts[3]	Gender inequities, particularly women's control of resources and access to healthcare, contribute to limited success of nutrition programs in reaching pregnant women and children and improving child nutritional status.	• Human resources • Statistics (need more gender-disaggregated data regarding access to food and nutrition at each stage of the life cycle [not just children <5]) • Alternative health financing
Malaria	**Data do not reveal gender disparities among children < 5 years of age.**	• Gender-disaggregated DHS data do not show a statistically significant gender distinction between children <5 years of age sleeping under a bednet (MII or other) **82.2%** boys and **78.3%** girls[2] • Same for advice and treatment for fever (**61%** male, **57%** female)[2] • Same for those taking antimalarial medication (**35%, 34.6%**)[2]	N/A	N/A
	Gender disparities in care of adults	• Men who had an illness or injury in previous 30 days were more likely to seek care/treatment (**47.9**%) compared with women (**39**%)[1] • Husband/partner makes healthcare decisions for **71.8**% of respondents,	Indicates that women <u>may</u> be less likely to seek care for malaria-related fever and symptoms. One possible reason is that healthcare decisions regarding a woman's health are determined by husband/partner.	• Strengthening the health system • Human resources • Statistics

Health Area (PRODESS Working Groups)	Related Gender Issues/ Disparities	Related Country Data	Negative Health Consequences	Related Health Systems Subsectors (Cross-linked with Other PRODESS Working Groups)
		which can affect access to malaria treatment for woman[1]		
	Malaria disproportionately affects pregnant women and children.	• **85.2**% of children <5 tested in 2010 Malaria DHS were anemic (can be related to malaria and/or nutrition)[2] • **37.5**% of children <5 tested positive for malaria in laboratory test at the time of 2010 DHS data collection (no differences by gender)[2] • **67.6**% of women tested during 2006 DHS were anemic (can be related to malaria and/or nutrition)[1]	Malaria affects maternal and infant mortality and morbidity; pregnancy may complicate course of malaria; women can access malaria information and treatment during antenatal care (attendance low in Mali).	• Decentralization • Strengthening the health system • Human resources • Pharmacy and medications • Statistics • Alternative health financing
	Potential obstacles to care for women and/or their children	• Female-headed households spent more on transportation to HCFs in previous 30 days (**5,819 FCFA vs. 2,296 FCFA**) but less on medication and exams (8,281 FCFA vs. 13,956 FCFA) than men[1] • Barriers to access to healthcare reported by women were lack of money (**53%**), distance to HCF (**38%**), need for transportation (**36%**), not having permission to get care (**18.2%**), not wanting	Indicates that women are less likely to have their own means of transportation and have significant barriers to reaching HCF, which can affect access to malaria testing and treatment for themselves and their children. For most women in Mali, their male partner has the decision-making power in the relationship regarding health issues.	• Decentralization • Strengthening the health system • Human resources • Statistics • Alternative health financing

Health Area (PRODESS Working Groups)	Related Gender Issues/ Disparities	Related Country Data	Negative Health Consequences	Related Health Systems Subsectors (Cross-linked with Other PRODESS Working Groups)
		to go alone (**23.9%**) and fear that provider would not be a woman (**19.9%**)[1] • Only **18%** of women in Mali report having input in decisions regarding their health (12% woman only. 6% woman and partner together) with 11.8% of women ages 15–19[1] • Husband/partner makes decisions regarding woman's health in **71.8%** of DHS respondents[1]		
Alternative Health Financing	**Use of mutual health organizations (MHOs)**	• Female-headed households are **5x** more likely to join an MHO[9] • MHO members are more likely to receive prenatal care (**81%** at least 1 visit vs. 36% nonmembers) and **57%** 4+ visits vs. 36%)[9] • Pregnant MHO members are more likely to receive malaria prophylaxis (**79%** vs. 60% nonmembers)[9]		• SRH/FP • Malaria

Mali Data Sources (Table 1)

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For more information, contact:

Health Policy Project
Futures Group
1331 Pennsylvania Ave NW, Suite 600
Washington, DC 20004
Tel: (202) 775-9680
Fax: (202) 775-9694
Email: policyinfo@futuresgroup.com
www.healthpolicyproject.com