What Works for Gender and Health in the Global South

Review of Evidence

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2021

Research, evaluation and learning are core components of Co-Impact's work. As we embark on a concerted effort to contribute to achieving gender equality at scale in the global south, we need to learn about and build on the existing evidence and knowledge. As part of our broader learning effort, we commissioned a series of rapid reviews of literature by area experts to help us understand major trends as well as new directions about what we know works - and doesn't work - to achieve gender-equitable outcomes at scale in the global south. While these reviews serve as a core component of our evolving thinking, they do not represent official opinions of Co-Impact.

Given that these reviews are focused on critical evidence of initiatives that have been evaluated at scale, we understand there are experiences and knowledge that may not be captured in these documents. We hope to invest in additional reviews in the future to cover other areas of inquiry, and also to build on a wider spectrum of evidence and perspectives.

This important work underpins the development of our own research and learning strategy, in which we will prioritize the questions and needs of practitioners working to achieve gender equitable outcomes, and also to amplify the voices and experiences of women, girls, and other marginalized groups. We hope that this evidence and knowledge, in turn, will contribute to building the global evidence base.

Malhotra, Anju. 2021. "What Works for Gender and Health in the Global South: Review of Evidence." Co-Impact Research Working Paper.

l. Introduction

This review assesses evidence from 2000-2020 on the effectiveness of select interventions and outcomes on women's health to provide guidance to Co-Impact on the type of systems change efforts that can be supported to advance women's health and gender equality in the Global South. It begins with an overview of women's health and the current positioning of gender issues in health research and action. It then presents a conceptual framework for considering the gendered dimensions of both health systems and community-based factors in influencing three key drivers of women's health care utilization and outcomes: accessibility, affordability, and quality. This framing positions issues of women's agency, choice and respectful care not just as elements of healthcare quality, but also its accessibility and affordability. Moreover, it is argued that for systemic, sustainable change, these barriers need to be synergistically addressed both on the supply side--at the health systems level--and on the demand side—at the woman, family, and community levels.

The next section outlines the limitations of gender relevant data and research in the health field and prioritizes sexual and reproductive health (SRHR) as the most promising area for reviewing evidence and gathering insights on successful and sustainable approaches for enhancing women's health and gender equality. In particular, the scope and limitations of the evidence on SRHR are discussed, pointing out the critical gaps in both action and evidence on structural interventions that could have substantially and meaningfully addressed gender inequalities inherent in health systems. Instead, most programmatic efforts have been piecemeal and biased more toward changing women, families and communities rather that fundamentally shifting health systems. With these gaps and limitations in mind, this section lays out the logic for focusing the evidence review on three subareas--maternal health, family planning, and safe abortion--as they present the greatest promise for relevant insights because of their inbuilt gender focus, leadership in forging feminist perspectives, as well as the potential for at-scale intervention options for assessing success.

The paper then elaborates the evidence on two key interventions within each of the three areas, assessing their intent and success in addressing gendered barriers to women's health care use in terms of accessibility, affordability and quality. Issues of agency, choice, and power are shown to intersect across all three drivers. As relevant, each analysis also incorporates the role of women's health activists in moving forward the specific agenda. The intervention approaches reviewed cover different dimensions of health systems (supply side) as well as community-based (demand side) approaches. They include: 1) Conditional cash transfers/subsidies and vouchers for advancing maternal health; 2) Community or mobile outreach and male engagement for advancing family planning; and 3) Medical abortion and task-shifting to lower-level providers and women themselves for safe abortion care.

The evidence review suggests that for systemic, sustainable change toward improved and more gender equitable health care outcomes for women, interventions need to address the three barriers through both health systems and community-based efforts, recognizing the interconnectedness of both these drivers. Although each of the approaches examined provides some examples of success, they also highlight a number of challenges related to scale and sustainability for longer term access and affordability. Most efforts also do not sufficiently address expansion in women's agency and choice as well as their right to quality, respectful care. Mobilization and advocacy by feminist health activists have played a critical role in keeping high level gender priorities on the health agenda, holding the health sector accountable for not progressing fast enough in key areas, and putting new issues on the agenda. The current environment in reaction to COVID-19, where the need for structural shifts in global health systems has become paramount, provides an urgency and opportunity to put forward fundamental gender inequalities as a critical element of systemic health sector reform.

II. Women's Health in the Global South: An Overview

Efforts to meaningfully integrate gender in health priorities have faced some successes and many challenges. The last two decades have shown significant gains in some women's health outcomes in the Global South, including on maternal, sexual, and reproductive health. At the same time, sex differentials and gender dynamics for many health outcomes--from tuberculosis or malaria prevention and treatment to COVID response--are poorly tracked and documented, making it difficult to assess progress from a gender perspective. Even as global and national commitments to both gender equality and health are now reflected in goals 3 and 5 of the Sustainable Development Goals (SDGs), there is only a tenuous and inconsistent connection between these two goals in both research and action. Most feminist research emphasizes that serious gender equitable investments and systemic reform efforts in the health sector having been lacking [1–7]. As George et al note, "gender inequality remains one of the most pervasive inequalities in health, and one of the most insidious, because it is one where backlash against progress retains legitimacy and actively contests progressive change."[2]

Women's health is a combination of health risks and disorders that they share with men as well as those that are biologically exclusive to women, both of which are strongly affected by the systems, structure, ideologies and politics of gender inequality. The interaction between biological differences and gender inequality means that on average, men live two to four years less than women, but women experience a higher burden of some morbidities. For example, higher depression rates among women, or higher HIV infection rates among adolescent girls are underpinned by both gender inequality and biology. [1,5,7–9] Even basic female experiences of pregnancy and maternity reflect the unequal socio-economic, political and gendered systems within which they take place, demonstrated perhaps most starkly evidenced by the fact that 95% of maternal deaths globally take place among the most disempowered and disadvantaged women in lowand middle income countries (LMICs) [5,10][5,6,9].

At the same time, women's health in LMICs is in transition due to shifting demographics, economies, disease burdens, and health systems. In many parts of the Global South, these shifts are resulting in the coexistence of disease burdens related to reproductive health, nutrition, and infectious diseases along with the emerging epidemic of chronic and non-communicable diseases (NCDs) that have been more commonly associated with richer countries. Even as the challenges of further progress on SRHR and infectious

diseases such as tuberculosis or HIV/AIDS remain, NCDs such as cardiovascular and mental health disorders, stroke, cancer, and diabetes are now also substantial causes of death and disability for women in the Global South. Thus, with the epidemiological and other transitions, it is increasingly becoming necessary to consider women's health across the life course rather than just during the reproductive years, with women in the Global South carrying the double burden of disease due to health complications during the reproductive years and then later in life by the growing incidence of NCDs [3,5,6,8,9].

In the political economy, moreover, it is increasingly evident that women must be recognized as both consumers and producers of health [5]. As national and global policy efforts look to integrated and Universal Health Care (UHC), the heavy and growing reliance of health systems on a female workforce and the disproportionate burden of caregiving carried by women in families has to be acknowledged and addressed. The family care burden for women in many LMICs is expanding as they cover both child and elder care. In particular, weak health systems not only rely and survive on family health care provision by women, but also on the unpaid and underpaid work of community and frontline female health workers [4–7,9,11]. The risk of poor health, the unpaid and paid burden of health care, and the resultant secondary deprivations, such as loss of livelihoods among women due to systematic gender inequality, has been especially evident as COVID has ravaged societies across the globe [12,13].

Recent experience with the disproportionate impact of crises such as COVID on women and gender equality reinforces and enhances the importance of the work by women's health activists in advocating for more gender responsive health policies and programs. Their voices will be critical in shifting health reform trajectories in response to the current crisis just as they have been influential in getting the health field to pay serious attention to otherwise neglected concerns such as gender-based violence. These activists have also been at the forefront in pointing out stalled progress at various times in key areas such as maternal health or the risk of HIV/AIDS among adolescent girls, spurring more concerted action and resource commitments globally. Broadening safe abortion access and the current attention to quality of care and health workforce issues is also due to unrelenting advocacy by feminist groups [2,4–7,14,15].

Similarly, emerging policy interventions in the health sector on health financing and workforce issues require constant prodding for gender relevance to be considered. For example, feminist research is pointing out that the growing call for employmentbased financing for universal health coverage would superimpose the existing gendered inequities in the labor force with gender inequities in health, making the situation more, rather than less problematic for women [6]. Another example is the only emerging attention to gender differentials in human resources for health, with recent evidence documenting a growing shortage of health workers and the power imbalance reflected in 70% of the health workforce being female, but 70% of the leadership being male: women deliver health while men lead. In many countries the growing understanding that community-based health services are the backbone of the health system has resulted in two contradictory consequences. On the one hand, by "task-shifting" higher skill medical services to the more numerous middle and lower-level service providers like Auxiliary Nurse Midwives (ANMs) or Traditional Birth Attendants (TBAs), many countries have expanded women's access to larger packages of basic health care. On the other hand, this growing and essential cadre of mostly female health professionals has expanded professional responsibilities and burdens without commensurate increases in professional standing or compensation, while also experiencing many workplace challenges such as sexual harassment and gender-based violence [5,6,9,16,17].

III. Gender Inequality and Drivers of Women's Health in the Global South

The ongoing underutilization and lack of relevant, respectful, and quality health care for women in the Global South has been well documented for some time without receiving the proportionate policy and resource attention. Poor women most often receive care from the most disenfranchised members of the health system. This perpetuates not just ill health, but also the relegation of poor and disadvantaged women's entitlement to quality care as a luxury rather than a right—both by service providers, and often, by women themselves. [1,9,18,19] There are increasing calls by gender and health advocates for mainstream public health policy to address existing and emerging challenges by more substantially investing in research and action to tackle endemic gender inequalities in health. Health sector reform is recognized as a priority in most countries in light of distorted financing mechanisms, growing health professional shortages, and recurrent global pandemics and crises. There is the need to concurrently address the persistent gender inequalities in health care provision and consumption in order for reconfigured health systems to be viable and effective for all of humanity [2,4–7,9,11,12].

A. Conceptual Framework

Figure 1 below provides a conceptual framing of the drivers of women's healthcare utilization and outcomes from a gender perspective. Women's ability to use health care and improve their well-being depends ultimately on three key factors: the accessibility, affordability, and quality of healthcare. Accessibility involves the consistent availability of services or treatment options that are suited to a woman's needs and that she has the knowledge, understanding, sense of entitlement, decision-making ability, and logistical means to realistically reach and use. Affordability typically involves financial costs for different levels and quality of services, extraneous costs associated with practical access--such as costs for travel, childcare, bundled treatments, bribes, bureaucratic requirements--and also opportunity costs in terms of time and income lost [5,7,9,11]. Quality has several dimensions, including a) the medical appropriateness, safety, timeliness, efficacy, and reliability of treatment--such as getting the right medicine or procedure, minimization of side effects, disinfected equipment, or adequate stock for a full regimen; b) the adequacy, cleanliness, convenience, efficiency of facilities and services--such as the availability of food, water and sanitation, acceptability of family accompaniment, or short lines and waiting times; and c) perhaps most importantly, the respect and dignity accorded a woman in her interactions with providers and the health system--such as privacy during care; accurate, complete and non-judgmental information and advice about all available options; sympathetic response and support for inquiries, physical and emotional suffering, and protection from exploitation, harassment or abuse [7,19-21].

There is a large literature documenting that a majority of women in the Global South– especially those who are poor, and/or from specific ethnic groups, castes, races, or living in rural areas, remote locations, or urban slums—face significant barriers on all three fronts [2,3,5–7,9,18]. The accessibility, affordability, and quality of health care for women is driven both by how the health system is structured and functions, as well as by the personal and relational situations of women in their families and communities. Both these factors are mediated by the space for and the level of advocacy or mobilization by the grassroots, activities, experts, and other champions. Of course, all these factors are embedded in the broader macro-level context as defined by the political economy and family and gender systems, including but not limited to national and local governance, economic growth, women's educational and economic opportunities, and their social and political status. Moreover, there is a two-way relationship as women's health utilization and outcomes influence each of the determining factors in turn [5–7].



Figure 1 Drivers of Women's Healthcare Utilization & Outcomes

The barriers related to accessibility, affordability, and quality in women's health care utilization are frequently due to an interplay between problems with the health system (supply side), and the intersectional dynamics women face in their personal, family, social and economic lives (demand side). Thus, systemic, sustainable change requires understanding and addressing the synergy between health systems and community-based drivers. For example, one of the well-documented, persistent barriers to access is simply the lack of adequate health infrastructure and services for the most disadvantaged populations of the Global South. Primary health care clinics either don't exist or are fictitious, frequently closed, or without providers or stock of medicines and supplies. Many are too far, and this is especially true of secondary or tertiary level clinics and

hospitals, and there are serious shortages of doctors and nurses with higher level or more specialized training. Even when available, health care services are often inconsistently resourced with experts and treatments, beset by corruption and unofficial costs, and are frequently disrespectful of poor women's needs and dignity [6,18,19,22,23].

These endemic problems with health care access due to systemic under- and poor qualitysupply may discourage demand among women, de-motivating them to use even the limited services that are available. Conversely, supply side constraints are exacerbated by gendered demand side constraints such as women's lack of financial resources, safe transportation or family and/or socially imposed restrictions and taboos that limit their physical access to and effective use of services. A heavy burden of domestic and/or work responsibilities may also constrain women from accessing health services which may not be available at times convenient for them. Moreover, providers may require spousal or parental consent for women to get specific services, and women may not have the decision-making power in the family, or even a personal sense of entitlement to seek them on their own [6,7,9,18].

Accessibility and affordability are closely related in determining if and what type of health care women get. Most countries have both public and private sector health care options, operating through formal and informal health care systems. Because of the poor access and quality of the free or subsidized public sector health care system in many locations of the Global South, most health care is accessed through the private sector which typically costs more. At the same time, a significant share of private sector health care is comprised of the informal health infrastructure, which is generally more accessible to women who learn about it through their social networks rather than through formal channels. However, informal health care systems typically consist of a mix of qualified and unqualified pharmacists, traditional birth attendants, doctors and nurses, alternative medicine options, herbal remedies and folklore cures, some of which can serve women well for certain health needs, but may also end up being expensive, exploitative and ineffective for many other needs [11,19].

Research indicates more limited knowledge and information about formal sector health care options among women as compared to men, and also more limited access to the media and mobile phone and internet technologies as sources for improved information and service access. Women may also be limited in their access to a range of health care options because of privacy and confidentiality concerns about partners, family members, or neighbors finding out about their most intimate problems, and about the potential stigma associated with specific infections and diseases, or with pre-marital or extramarital pregnancies, interest in contraception, abortion, or mental healthcare. There is documentation of public health systems in many low-income settings treating women with disrespect in providing them with basic healthcare as well as in addressing some of these more personal and social concerns. Private sector providers are often more discreet, but also more expensive, and for poorly informed women without partner, family or social support, they do not necessarily guarantee medically appropriate health solutions, cleaner or better equipped facilities, or considerate and respectful interactions [5,6,9,18,19,23].

It is important to note that women's right to respectful and relevant healthcare—in particular their agency and choice in making their own decisions commensurate with their healthcare needs—can be undermined by barriers related to not only quality of care, but also its accessibility and affordability. Moreover, the restrictions on women's agency and choice are perpetuated by gendered power dynamics and norms embedded not only in their personal, family, and community contexts, but also in the health infrastructure and systems.

B. Assessing How Barriers Have Been Addressed and With What Success

Advocates for equity in health and for women's rights have been key in bringing growing attention to many of these barriers [1,6]. For systemic change to occur and be sustainable over the long term, the constraints women face need to be addressed on both the supply side--at the health systems level, and also on the demand side-at the community, family and personal level [7,22]. The issue of accessibility due to a basic lack of services has been on the agenda for decades but continues to be a challenge despite national and global efforts to expand health infrastructures and capacity. With the increasing recognition of the financial challenges women face and the importance of private and informal sector health options since the 1990's, affordability issues have been on the table, especially through expansion in social protection, insurance, and subsidy schemes, and social franchising models of health service delivery but there are few ideal or model solutions to replicate from the experience of LMICS. Quality of care, respect for women's needs, choices, and dignity were at the heart of the International Conference on Population and Development (ICPD) in 1994 and the Beijing declaration in 1995. However, the execution of many of the commitments made at that time has been slow and contentious, and recent reviews of progress indicate repeated efforts to raise gender related quality concerns higher on the policy and program agenda. With the adoption of the SDGs, many related structures and frameworks-such as for the Global Financing Facility, Universal Health Coverage, or Every Woman Every Child-are being pressured to more proactively address quality concerns, but the resulting prioritization and impact has yet to be seen [4-7].

There are two key challenges and limitations in assessing the success of health systems or community-based interventions as the two proximate drivers of gendered barriers to women's accessibility, affordability, and quality of health care. The first challenge is the paucity of data and evidence on gender relevant outcomes and approaches in health areas other than sexual and reproductive health and rights (SRHR). Second, even within SRHR, the evidence on interventions that have addressed gender barriers systematically, successfully, sustainably, and at scale is very limited.

1. Data and Research Limitations

For most areas of health, acknowledgement of gender barriers is a recent and emerging phenomenon while the failure to recognize and track sex differentials in specific health outcomes has been a point of longstanding neglect. For example, despite repeated calls for sex disaggregation of data on all health outcomes and the ubiquitous articulation of this mantra in the gender policies and strategies of institutions such as WHO, UNICEF, GAVI, or most national health policies, even pervasive and basic health areas such as immunization or malaria do not routinely report data separately for males and female [5–7,9,24]. Thus, it is difficult to determine the gendered implications of interventions in most large-scale government or international health initiatives on these issues. In fact, even though the overall guidance on tracking the Sustainable Development Goals (SDGs) recommends that all indicators be gender disaggregated, maternal health and family planning are the only two targets (3.1 and 3.7 respectively) with women specific indicators out of the 7 targets for SDG goal 3 on health. Even for target 3.3 encompassing AIDS, tuberculosis, malaria, and neglected tropical and other communicable diseases," the SDGs specify sex disaggregation only for measuring prevention of new HIV infections [25].

Gender biases in health research funding and clinical trials also limit the range of health issues for which existing research can be a guide on addressing gender related barriers. [26] For example, research funding for coronary artery disease in men is far greater than for women, yet it is the female population at risk from the disease that suffers higher morbidity and mortality. Bias in research stems from male dominance in science, publications, decision-making bodies, and research funding, as well as from a history of women's exclusion from clinical trials [27]. Remarkably, it was only in 2016 that the National Institutes of Health (NIH) in the United States mandated that clinical trials must either include both female and male research subjects or present a solid reason for excluding either sex. Reporting and use of clinical trial data by sex still remains a rare phenomenon [26]. Even on something as prominent as the coronavirus vaccine for which both male and female subjects were included in clinical trials, reporting and deliberation of results for policy and rollout do not point to findings or implications by sex [28].

A related area with limited gender data but potentially huge implications for women's accessibility, affordability, and quality with regard to healthcare is biomedical development. Research on male erectile function gets 10-15 times more funding than research on premenstrual syndrome (PMS), and research on dysmenorrhea has not moved forward in decades, even though significant majorities of women across the world suffer monthly pain and disability in relation to their periods [29–31]. Clinical trials assessing the safety and effectiveness of the HIV pre-exposure prophylaxis (PrEP) for cisgender women have considerably lagged those for men and transgender women, even though in sub-Saharan Africa—the region with the most significant burden of HIV/AIDS—the risk of infection is higher among women, especially those in the 15-24 age group [32].

This deficit in data and research is further compounded by poorly resourced, inadequate information management systems in the Global South [19] [11]. As a result, evidence on women's health in the Global South on many areas with large burdens of disease and disability – including infectious diseases such as tuberculosis, malaria, or most NCDs--is very weak and presents considerable challenges for assessing a critical mass of findings to guide policy, programmatic or funding priorities [6,27].

Thus, the vast majority of the evidence available for guiding action on women's health comes from the area of sexual and reproductive health and rights as it has been explicitly associated with women's and gender concerns. The literature on SRHR is broad, covering

the subareas of family planning, abortion, maternal and child health (MCH), adolescent sexual and reproductive health (ASRH), HIV/AIDS, sexually transmitted diseases (STIs), and gender-based violence (GBV). Of these, the largest body of the available evidence base is on family planning, HIV/AIDS, and MCH, areas with several decades of research history. Research in the other SRHR areas--especially ASRH and GBV—has also grown over the last two decades. Although not fully representative of the health field more broadly, SRHR is nevertheless a critical area for assessing successful approaches to improve women's health due to its inbuilt gender focus: sexuality and reproduction are at the heart of gendered power imbalances, women's life choices, decisions, and wellbeing. Moreover, SRHR policies, research, programming, and advocacy have led the health field in forging feminist perspectives. As such, there are many evidence-based lessons from SRHR that could be transferrable to other areas for advancing women's health [5–7,9].

2. The Scope and Limitations of the Evidence Base on SRHR Interventions

The main focus in this review will be to consolidate learning on SRHR from interventions within the domain of the two "proximate" drivers of gender barriers to healthcare depicted in Figure 1: health systems and community-family-personal factors, while acknowledging that in order to be effective and sustainable, programs in these two domains need to be responsive to the possibilities and challenges presented by the broader macro-level context.

The evidence base on what has worked for women's health through SRHR interventions offers important insights but also highlights substantial limitations. The most important reason for current gaps is that despite the growing rhetoric around gender as a focus in global health efforts, most policies and programs have not attempted fundamental reforms toward more gender equitable health care delivery systems, but rather limited themselves to partial, stopgap, and less far-reaching measures. As such, available research on SRHR points to mixed outcomes and limited success for most evaluated interventions in addressing the gender barriers outlined above, and the evidence of resounding, consistent, and sustained success, especially at scale and over time, is very much lacking. In particular, there is a paucity of evidence on effective gender-relevant approaches within the six "building blocks" of the health infrastructure: service delivery, workforce, information systems, medical products and technologies, financing, and leadership and governance [2,5–7,19]. In many ways, this lacuna illustrates the limitation of the space gender issues have been able to forge within the broader health sector-even in an area as fundamentally gendered as SRHR--where they continue to be addressed at the periphery rather than at the core through structural change in health systems.

Given that the SRHR literature is vast, identifying the relevant evidence base on what has worked for women's health required mapping systematic reviews and evaluations that not only explicitly state a gender focus, but also the most promising evaluations where gender is a more implicit consideration. This dual-targeted search process was especially necessary as in the explicitly gender-focused evaluation literature there is a strong bias toward interventions that aim to change women, men, families and communities rather than health systems. The vast majority of these programs have focused on women and their personal/social environments to impart more empowering knowledge, attitudes,

negotiating or practical skills and options, or to encourage more supportive male partners, families, and social environments [33,34]. For example, In a comprehensive analysis of 41 systematic reviews published between 2000-2020 on gender-focused SRHR interventions that the UN University International Institute of Global Health (UNU-IIGH) is currently undertaking, the preliminary findings indicate that 95% of the programs took a demand side approach involving some type of information, education, consultation, and/or mobilization activity to change hearts and minds, empower women, and/or change norms. About 10-20% also imparted training on life skills or vocational skills or formed microfinance or microenterprise groups. Only 5-10% of the interventions targeted community-based health providers in an effort to shift their skills and attitudes in improving their interaction with or services for women, and less than 2% targeted the larger health system in terms of leadership, supply chains, technology, financing, workforce, information systems, etc.

While well-intentioned and even partially successful, the overwhelming bias toward this approach in the explicitly gender focused SRHR interventions and evaluations has been a contributory factor in limiting fundamental shifts toward better health care for women, and in keeping gender issues at the periphery rather than center of health sector priorities. Most such programs are NGO implemented, donor-funded, complex, multicomponent, small scale efforts, and so, they have few pathways to the government buy-in, financing, infrastructure, or capacity required to go to scale and be sustainable in the long run. Nor are they able to maintain fidelity to the quality and complexity of the intervention without the highly committed NGO staff even in the rare cases when such a path is possible [6]. The small share of what are labeled "structural" interventions, such as life skills or micro-finance [5], face even more implementation and scale-up challenges since they are not within the core competency or scope of the health sector. The complexity and multicomponent elements of such programs also present challenges in setting up robust evaluation designs and consistent outcomes across studies [34,35], often yielding results that are short term, mixed and inconclusive, and thus, not so compelling for uptake.

Another consequence of this focus on women and community-based demand side interventions in the health field has been the disassociation of gendered approaches from supply side interventions. While the narrative of gender approaches "going beyond service delivery" is very valid and important, it has also left service delivery neglected as an explicit gendered program priority [33,34]. The result is that even for women who benefit from the empowerment or norm change initiatives of many gender-focused interventions, the exercise of agency often remains constrained to limited and undesirable options. Consider, for example, a woman who wants to delay her next birth and has acquired better knowledge and negotiating ability, or even the support of her partner through a gender norm change intervention. It is hard to argue that she has meaningful control and choice over her childbearing if her only contraceptive options are either one brand of oral pills with unpleasant side effects--and provided periodically and unreliably by the community health worker--or a trip to the clinic to be sterilized.

Thus, in order to incorporate a broader range of potentially successful interventions in this review—especially on both the supply and demand sides and at scale--it was also necessary to identify from the broader SRHR literature, evaluation studies that do not

explicitly specify a gender focus, but nevertheless address gender related barriers more implicitly. Given the vast scope of SRHR evaluation literature possibly incorporating gender concerns implicitly, this portion of the search was limited to 1) three specific SRHR subareas: maternal health, family planning, and safe abortion; 2) a select number of intervention areas potentially at scale and with a critical mass of evidence; and 3) studies specifically assessing outcomes on women's health or their access to and utilization of care (and to the extent available, measures of quality, choice, affordability, which were generally very limited).

This two-pronged search process allowed for the inclusion of at least some at scale evidence and a more balanced review of both demand and supply side interventions in this paper, although the range of systems focused interventions is still limited. As an example, exploring evaluations of supply chain interventions to address contraceptive stockouts-- which have huge implications for women's choice and discontinuation of family planning methods -- did not yield many relevant studies. Evaluations of intervention to improve the supply chain generally do not take even an implicit gender perspective, and mostly measure improvements in contraceptive consumption rates at regional facilities in a country rather than in women's increased utilization of specific methods. [36,37] In other cases, supply side interventions that could have significant relevance for SRHR could not be included because they were evaluated, but only for their impact on non-SRHR outcomes. For example, a recent systematic review on clean water at health facilities assesses the (non-sex disaggregated) impact on infections prevented among the general population. [38] Even though such an intervention has considerable relevance for women's convenience, personal hygiene, and quality of care in maternal health services, those were not the evaluation's outcomes of interest.

Still, this expanded search yielded a significant constellation of studies and findings on important service delivery and technology focused approaches. These include studies on community based and mobile delivery of family planning methods as well as on improvements in abortion technology and the related task shifting and selfcare options for enhanced safe abortion access among women in different settings. On the demand side, a body of literature provides interesting insights on the more implicit, but still relevant, role of conditional cash transfers (CCTs) and vouchers in addressing affordability, access, and quality related barriers to maternal health care in different geographies. An analysis of these gender -implicit interventions is supplemented in the review with the analysis of "male engagement" as a demand-side family planning intervention, illustrating the more explicit gender-focused approaches which target women's relational and family dynamics, are typically small scale, and yield equivocal findings. Male engagement is included in the review because of its accumulated evidence-base and prominence in the SRHR gender literature over the last 20 years.

C. SRHR Issue Areas and Intervention Approaches Covered in Review

Based on the search and consolidation of evidence sources discussed above, and keeping in mind their limitations, this review focuses on three subareas of SRHR--maternal health, family planning, and safe abortion-- to examine a few key strategies

and their success in addressing gender barriers on the accessibility, affordability, and quality of women's health care. From a gender and health perspective, avoiding or terminating an unwanted pregnancy or completing one to deliver a child, are some of the most fundamental life experiences for women, and ones where their interactions with the health system have significant consequences. These three subareas of SRHR have a long program and research history, and so provide a constellation of studies to demonstrate the effectiveness of specific strategies, at least some at scale. They allow for the extraction of evidence from a large base of reports, narrative and systematic reviews, published between 2000-2020 and covering a range of settings among the LMICs in Africa, Asia, and Latin America. The specific intervention strategies provide some diversity in assessing how accessibility, affordability and quality of care are affected by different demand and supply approaches, and also in the role played by feminist activists in moving several of these efforts forward. They include:

Maternal Health: we examine the impact of two demand side strategies that are embedded in financing for health systems: 1) conditional cash transfers and subsidies (at scale); and 2) vouchers (mostly at scale). The main aim of both approaches was to improve affordability and access, but improved quality was also an aim for a subset of the interventions.

Family Planning: we examine the impact of one supply side strategy to expand service delivery options and one demand side community-based effort to increase partner support for women: 1) community and mobile outreach (mostly at scale); and 2) male engagement (not at scale). The primary aim of both approaches was to improve access, but quality in terms of reassurance for women was also an aim.

Safe Abortion: we examine the impact of two health systems interventions in terms of biomedical innovation and task shifting: 1) medical abortion (at scale); and 2) task-shifting to lower-level providers and selfcare by women (at scale). Both approaches were aimed at improving access and quality of care.

IV. Evidence on Maternal Health, Family Planning, and Safe Abortion

A. Maternal Health

Maternal mortality ratio (MMR)—or maternal death per 100,000 live births--is the global health indicator of greatest disparity between the global north and south as signified by an MMR of 546 for sub-Saharan Africa compared to only 12 for the global north. The SDG target for 2030 is to reduce the global MMR to 70 per 100,000 live births. The number of maternal deaths worldwide dropped from an estimated 451,000 in 2000 to 295,000 in 2017, a reduction of about 35%, with the most significant declines occurring since 2010. These deaths are increasingly concentrated in sub-Saharan Africa and South Asia where 86% of all maternal deaths occurred in 2017. Reductions in the MMR in the last two decades have been attributed to a combination of improvements in access to key maternal health services such as antenatal and skilled delivery care, increased family planning use, and social determinants such as girls' education, rising income levels, and

women's employment in some contexts. Such achievements are precarious, however, as only 35% of women living in low-income countries compared with 83% of women in high-income countries received early antenatal care, and especially with COVID-19, gains could easily be reversed [10,25,39,40].

Three key indicators are used to assess women's utilization of maternal healthcare 1) during pregnancy--antenatal care; 2) during childbirth--skilled birth attendance; and 3) after delivery--post-natal care. The adequacy of ante- and post-natal care is measured by WHO set standards regarding the number and types of checkups by a qualified provider, such as checking blood pressure, iron levels, nutritional intake, bleeding, or getting a tetanus toxoid shot, etc. The measure of skilled birth attendance has been incorporated to track programmatic and global progress on the quality of care during delivery since 2000 at the insistence of feminist health advocates. Women receiving skilled care during delivery has become a more important variable for maternal health as a higher proportion get at least basic prenatal care; most of maternal deaths are now due to lack of emergency obstetric care during delivery because of problems such as hemorrhaging or need for a caesarian section. Accelerated efforts especially since 2010 have increased global skilled birth attendance from 67.2 percent of deliveries in 2010 to 79.4 per cent in 2017. Again, however, coverage in sub-Saharan Africa lags at 57.8 per cent, with health centers not having facilities for emergency obstetric care, low availability of referral centers, and transport challenges posing the biggest barriers [10,25,39,41,42].

Quality as a global concern in maternal health care has begun gaining traction only recently, with WHO issuing guidelines and standards in 2016 in conjunction with the SDGs [43]. Measuring quality adequately is a challenge, but while some observational methods have been very effective in documenting the problems across all the various dimensions of quality, these are yet to be standardized in routinely tracking it as an indicator of maternal care. Most LMICs are poorly positioned to equip health facilities with the necessary safe and effective treatments and are not set up to regularly monitor these deficiencies [19,23,44,45]. For example, a recent study in Uganda assessed that only one in ten facilities for maternal delivery have the equipment and medicines for emergency obstetric care. [46] Client satisfaction surveys, which are most often used by studies to assess the more subjective aspects of quality of care, generally cannot capture treatment safety or adequacy since the women receiving care have little idea of the technical requirements of safety and adequacy. Women also tend to over-report satisfaction with even poor quality of care in part because of the power dynamics involved in their responding to such queries at a facility. Such surveys also do not capture the views of women who did not avail the services. Population based surveys suggest that for women, timeliness and respect are the most important concerns in receiving maternal care [5,19,23].

In 2000, the MDGs set a target for reductions in maternal deaths by three-fourths by 2015. By 2005-2006, however, there was significant concern among advocates that progress had stagnated, and the global community would fall considerably short of the target. Especially as "maternal and child health" are generally addressed as a package in the health field, women's health advocates worried that the "M" in MCH was being neglected even as there was progress in improving child survival and health [39,42,45]. These concerns motivated the 2007 Women Deliver conference which served as a major

evidence and advocacy push for catalyzing more concerted action and investment on maternal health [41]. Spurred by a US government convened summit in 2012 and growing interest in health financing strategies directly linking money spent with results generated, a number of systematic reviews were generated between 2013-2017 on various financial mechanisms as strategies for reductions in maternal mortality [42,44,45,47–49].

Although financial incentives of various types, and especially cash transfers have been around for a long time, and their impact on all types of outcomes—from child nutrition, survival, school retention—has been measured and demonstrated, their role in improving maternal health care related outcomes was not prioritized in financial mechanism designs or in the numerous randomized and quasi-experimental evaluations of such programs until gender and health advocates made a concerted push on the issue. In particular, for the more government driven, at scale conditional cash transfers which had been largely targeting child related outcomes, maternal care is generally the only women-focused SRHR outcome that has now become a common component. For example, targeting of family planning use by CCTs has been a rare exception (e.g. Mexico being one of the few countries using CCTs for family planning). In contrast, voucher programs have a longer history in the SRHR field, originating with family planning programs and extending to also targeting maternal health care in the last two decades [42,44,45,48].

Once the push was made, studies began articulating the causal chain between incentives and maternal care. On the demand side, women and their families may be financially prevented from seeking and reaching care services due to lack of resources to pay the service fees, transportation costs, opportunity costs of time-off from work, and logistical costs associated with childcare. Inadequate knowledge, low levels of perceived need, social norms and taboos, and lack of prioritization of women's health and well-being may also be factors preventing efforts to seek care. Demand side incentives such as cash transfers, subsidies, vouchers, and user-fee reduction aim to first and foremost minimize financial barriers to seeking and accessing services. But many propose that the financial benefit may also make the woman and family prioritize her health and help to overcome reluctance caused by norms, lack of knowledge, or gendered power relations, and that to the extent that cash or subsidies go directly into women's hands, women may be personally more empowered to act on their own behalf. There is also the argument that if demand side incentives are undertaken in conjunction with service improvements, they may also increase access to and quality of care [42,44,45,47,48,50,51].

The evidence indicates that at least some financial incentives can increase women's access to and affordability of maternal health services, even as the evidence for improved quality and choice, ultimate health outcomes, as well as on sustainability is more questionable.

1. Evidence on Maternal Health and Conditional Cash Transfers or Subsidies

Governments in different settings have been able to use conditional cash transfer programs and subsidies to improve women's accessibility and affordability on several aspects of maternal care. However, this path was adopted later than for most other health outcomes, and only following a push by maternal health champions. A number of fairly robust studies from several large-scale government programs at the national level show a positive impact of CCTs on antenatal care and skilled delivery, whereas the

evidence of the impact on postnatal care, improved quality and choice of care is more tenuous. The scope of the programs has ranged from national level to the state or provincial level in a number of countries across Latin America, Asia, and Africa, including but not limited to El Salvador, Guatemala, Honduras, India, Indonesia, Mexico, Nepal, Nicaragua, Nigeria, Uganda, and Uruguay [42,44,45,48,49,51–57].

This evidence base also presents some important points of caution, the most important being that the provision of quality services is an essential pre-condition for implementing cash transfers, and indeed, any demand side program. Unfortunately, this pre-condition was not met in a number of settings, including in parts of India and Africa, where cash transfers did little to shift the power imbalance between service providers and women, and services remained inadequate and poor quality [44,45,47,48,54,57-60]. Countries in Latin America with a better infrastructure to deliver quality maternal care services in combination with longer term CCTs that put cash in women's hand and conveyed a sense of entitlement to them, were more successful in supporting women to exercise agency in accessing quality maternal care [5,45,50,51]. In contrast, countries that provided only partial one-time subsidies and neglected concurrent improvements in service delivery ended up not conveying women's entitlement to respectful, quality care, and achieved inferior results. Programs also faced challenges in adequately targeting poor women and in preventing corruption and leakage of benefits [44,45,53,54]. Moreover, the evidence for expanded care seeking by women translating into improved maternal health outcomes is mixed at best. In many countries, studies document that even as there are generally positive findings on neonatal outcomes, the impact on maternal mortality and morbidity is questionable, in part due to limited service and quality improvements, and in part due to the limited number of studies that have assessed impact level outcomes [44,45,52,55,57,61,62].

The most extensive evidence is from Mexico and India, with multiple studies documenting long term and fairly consistent effectiveness of national programs in improving access to maternal care. The programs themselves also present two very different designs and implementation modalities. Mexico's Oportunidades program is a longstanding social protection program centrally implemented by the Mexican government since the 1990's, with multiple health and education components and benefits provided directly to women and over the long term. The program has the multiple goals of improving the human capital of those living in poverty and also empowering women. Improving maternal health care, therefore, is only one element of these broader goals [45,51]. In contrast, India's Janani Suraksha Yojana (JSY) was launched in 2005 by the Indian government specifically to reduce maternal and neonatal deaths, and it is administered by state governments which provide varying levels of shorter term cash payments to women or their families for using antenatal care, postnatal care, and skilled delivery care or for delivering in facilities, once service utilization is verified [42,45,52,53,61]. Both programs are significant in that they are largely domestically resourced and have served (especially Oportunidades) as models for other countries to follow [42,44,45].

Pregnant women's utilization of antenatal care services was evaluated in almost every country studied, with positive effects of the cash transfer found in all countries except El Salvador and Nepal. Increases in study communities ranged from 8-12%. In most studies, the outcome examined was multiple visits ranging between 3-5 during the

pregnancy, in the range of WHO recommended guidelines of 4 visits [42,44,45,50,55]. In the two African settings—Nigeria and Uganda—antenatal care utilization was the primary and only positive outcome from the cash transfers, whereas the other outcome tested—skilled delivery—showed no improvement [44,54,56]. In India, long term tracking showed improvements in antenatal care ranging between 4% to 11%, which while good, was lower than the more substantial increases in skilled delivery or even postnatal care [44,52,61].

Skilled birth delivery—at home or in facilities--showed an improvement in five of the six Asian and Latin American contexts it was tested as an outcome of the conditional cash transfers. The only country that did not show a positive result was Uruguay. Effect sizes ranged from 4% in Guatemala, 11% in El Salvador to 37% in India [42,44]. In India, where delivery in facilities was very specifically and heavily targeted, the results varied by state, but were often large and showed annual growth (for example 18.1%, 3.6% and 5% in the state of Orissa after the initial year of implementation). Lim et al estimate that the scheme has an especially strong impact on poor, rural, ethnic minority women [50,52,53,61].

There have, however, been several critiques that the JSY in India did not improve services sufficiently so that the quality remained both inadequate and poor. Moreover, the implementation and targeting did not necessarily reach eligible beneficiaries, and in many cases, women were short-changed financially. In Orissa, for example, Gopalan et al indicate that the cash incentive provided only partial financial risk-protection for women, covering only 25.5% of the maternal healthcare cost of the beneficiaries in rural areas and 14.3% in urban areas. As such, the incentive actually induced fresh out-of-pocket spending for some mothers. Despite the efforts of the health ministry and medical professionals in designing the program, the financial incentives could not prevent women's incurring costs for tonics, vitamins, medicines, delivery supplies which were sometimes encumbered on them unnecessarily by public sector providers, and at other times resulted from their own choice to either seek supplements or use private sector services. Importantly, some of the population based analyses show little relationship between increased skilled birth deliveries and reductions in maternal mortality rates [42,45,52,53,57,61,62].

The program structure was also unable to shift power relations between women and providers to inculcate a culture of respectful care or prevent abuse and exploitation of women during their deliveries. For example, it could not prevent corruption where auxiliary nurse midwives (ANMs) or community health workers (called ASHAs in India) sometimes took a cut from the patients even though the scheme provided separate incentives to them for delivering services within the program. While intended as a quality assurance mechanism, the incorporation of accreditation for eligible facilities in some cases resulted in exorbitant transport costs for women who then had to forgo the option of nearby facilities because they were not accredited. Most importantly, the subsidy did not convey women's entitlement and right to quality care, and the imbalance of power and authority remained with the health facilities and providers, reinforcing inappropriate, disrespectful, and abusive treatment [44,48,53,60].

In fact, for the programs in Asia and Africa overall, poor quality service in many cases remains a persistent issue [42,44,48,58]. For India, even as they note the strong positive outcomes on antenatal care and skilled deliveries, most studies emphasize the need to improve the quality of obstetric care in health facilities for sustainable impact on maternal health outcomes [52,57,61,62]. Similarly, Triyana et al report for Indonesia that the CCT program improved ANC coverage for women, but midwives did not improve ANC quality [55]. The two studies in Africa also cite the quality issue as a factor in women not considering delivery in a facility as an alternative to the established norm of delivering at home. In these settings, CCTs worked as a patchwork to hide rather than overcome the fundamental weaknesses in the quality of the health infrastructure which did not receive the necessary concurrent investments [44,45]. Moreover, on their own and without deliberate mechanisms to ensure that women received both the money and specific information on their right to care, the one-time limited subsidies were not sufficient or designed to position women as entitled consumers who could command respectful care from providers [44,53,54,60].

In contrast, some of the studies in Latin America document that not only direct government investment in service delivery, but also enhanced utilization from the CCT itself frequently propelled improvements in service quality. For example, studies in both Mexico and El Salvador indicate that women received better quality care due to the programs in large part because the programs had a goal of empowering poor women by giving cash in their hands, improving their decision-making power, and making them more active, informed consumers who were in the position to demand higher quality care and accountability from providers [5,45,50]. In their study on Mexico, Barber et al specifically measured quality of care in three domains and found public sector services to score higher on all three domains compared with private alternatives. Based also on their qualitative research, they attribute this to the increased self-confidence and freedom of movement reported by women beneficiaries, consequent to receiving both information and cash from the CCT program. Providers in their study indicated that beneficiary patients were more skilled at negotiating better care, and "were more demanding."[51]

This points to important differences between Asia and Latin America in the structure and nature of the CCTs. In Latin America, maternal health care has been incorporated into existing large scale social protection programs that provide ongoing support to women (in particular) and families, but with specific conditions. Some countries such as Mexico also built-in measures on quality in maternal reports of prenatal care procedures received to correspond with very specific clinical guidelines [51]. The Asian programs on the other hand are single, event based, short term subsidies which have the potential for much less longer term normative or structural impact, and which have not been tracking service availability or quality in a systematic manner [42,45,52,53,57,60,61].

The programs in Africa are more nascent, and both the studies from Nigeria and Uganda were evaluations of pilot efforts published in 2014 and 2015. These two programs largely followed the Asian model, but interestingly, did not have an impact on skilled delivery which was generally the most substantial outcome in countries like India. To some extent African programs have yet to evolve through trial and error [45,54,58]. For example, the cash given to women in the Uganda pilot was very small, and while it may

have incentivized the less costly antenatal visits, skilled delivery might still have been too expensive an option for women to consider [56]. In contrast, in the Asian programs, women received larger subsidies separately for each of the three parts of the pregnancy care continuum [42,45]. The African context also has more of a history with unconditional cash transfer programs which aimed at addressing extreme poverty, often in conjunction with the HIV/AIDS epidemic. In general, the evaluations of these programs have not found a link between unconditional cash transfers and maternal health care utilization, with only two studies examining this relationship and finding no effect [48,59,63].

A number of studies note lessons learned about broader pre-requisites and implementation priorities in order to achieve successful maternal care outcomes from conditional cash transfer or subsidy programs. There is considerable consensus that the contextual pre-requisites for CCTs are macro-economic stability, good infrastructure, strong information systems, and targeting mechanisms. At the policy level, successful programs require strategic alignment between maternal health and economic expertise in the design, implementation, and assessment of financial incentive schemes for maternal health. At the operational level, studies noted almost universally that service availability and quality are the most essential pre-requisites, but also an element that is frequently not addressed in the design or evaluation of such programs [42,44,47,48,53,54,57,58,61]. Several of the analyses indicate that in contexts where supply side efforts to improve skilled care and emergency care facilities were undertaken in conjunction with the CCT–such as in Mexico, Honduras, Nicaragua, Nepal, and some of the states in India—the impact was more substantial [45,48,50–52].

Lessons Learned from CCTs on Maternal Health:

- 1. Governments in a wide range of countries of the Global South--covering Latin America, Asia, and Africa--have been able to implement CCTs and subsidy programs at scale to improve women's accessibility and affordability of antenatal care and skills delivery at birth. They did so by reducing financial barriers conditional on service use. However, the connection between CCTs and maternal health was made by governments later than most other health outcomes and was in part a response to strategic research and advocacy by maternal health champions.
- 2. Important pre-requisites for the success of CCTs programs have often not been place, undermining their potential for sustainability and a positive impact on women's maternal health outcomes. Conditions of macro-economic stability, good infrastructure and information systems, and strong alignment between maternal health and economic expertise on design and implementation have often not been met. Most importantly, studies note universally that the provision of quality services is the most essential, but frequently ignored, pre-condition for implementing cash transfer and subsidy programs aimed at motivating women and families financially to use maternal care. Besides the adequate availability of basic services, guidelines on quality, especially with regard to respectful care, have often not been effectively translated into program design, execution and monitoring. It is questionable whether in such cases program uptake translates into better maternal health outcomes.

- 3. Operationally as well, effective targeting is key to reaching the women most in need of the cash support, and in some settings, implementation was undermined by inadequate targeting of poor and disadvantaged women as beneficiaries, as well as by inadequate mechanisms to prevent corruption and monitor compliance with quality standards.
- 4. Some CCTs in Latin America structured with broader social protection and women's empowerment goals were able to more effectively integrate elements of women's agency and entitlement to quality maternal services. These included: specification of women as payees for regular, longer term (rather than single event) conditional cash payments; providing additional information and communication to women regarding the purpose and quality of services; and more deliberate monitoring of service quality per established standards. Services improved because as informed consumers, women demanded higher quality. This sense of entitlement and agency was generally absent in the programs in Asia and Africa, leaving in place existing power imbalances between service providers and women, and denying women respectful care.
- 5. The amount of cash women get in subsidy-based models has to be enough to motivate them and the conditions cannot result in a net loss to them. JSY subsidies in India at times meant higher out of pocket costs with new expenses added because of the conditionality. In Uganda, the amount of subsidy incentivized the cheaper antenatal care, but not the more expensive skilled delivery.

2. Evidence on Maternal Health and Vouchers

Vouchers as a financial incentive mechanism also show evidence of some success in improving antenatal care, skilled delivery, and postnatal care. Compared to the evidence on cash transfers, this evidence is based on fewer studies and somewhat less robust evaluation designs. The resources expended through vouchers to improve affordability are typically smaller than those expended through CCTs [44,49,64]. Moreover, the scope, scale, and funding of voucher programs varies. Many are small scale efforts implemented by NGOs while others are small or medium scale semi-private efforts run by social franchises like Marie Stopes International or Population Services international. This, in part, reflects the longer history of vouchers as a financial incentive emerging from family planning rather than maternal health programs. Voucher schemes, unlike government funded cash transfer programs, are also more likely to be donor supported [45,48,49,64,65]. These modalities put in question the sustainability of vouchers as a viable option for improving the affordability, access, and quality of maternal health in the long term. In combination with NGO or social franchise service delivery, they can play a role as an intermediary measure in settings when government services and financing mechanisms are especially weak [44,64]. They also have the potential to serve as a good model for coordinated SRHR incentivization and services [66–68]. However, to be sustainable, voucher schemes would require adaptation and scale-up by governments both on the service end, and on financing along the lines of some type of social insurance [44,45,64,68].

Health care vouchers are paper or electronic referral coupons, often distributed in a community setting, that clients can take to an accredited provider in exchange for services. They are intended as a service purchasing mechanism to improve equitable access and increase the use of services. As a "pay for performance mechanism, payment to service providers is only issued when the services have been delivered in accordance with the voucher program standards and guidelines. Thus, vouchers aim to address quality concerns as well since theoretically at least, providers need to meet quality standards in order to get paid [45,64,66,68]. However, while providers can be screened for a minimum set of quality standards initially, monitoring those standards on an ongoing basis presents a challenge, especially on intangible components such as respectful care [44,48,65,68].

Voucher programmes typically engage the private sector with a view to expanding both the availability of services and introducing greater competition and consumer choice in women's access to maternal care. They also frequently engage community organizations and community health workers to promote the program and distribute or sell vouchers to eligible, interested clients. Most voucher programs target poor, underserved and vulnerable populations [44,45,64,66]. The provision of a maternal care voucher is also intended to convey to a woman and her family a sense of entitlement to the care, and a confirmed pre-commitment and motivation to actually seeking care. Most reproductive health voucher programs offer either maternal health care packages, or family planning services, but sometimes both. Maternal care voucher entitlements typically include labor and birth care in a program-affiliated (often accredited) healthcare facility and a defined number of antenatal and postnatal care contacts [65,67,68].

In their 2014 review of the range of existing and emerging voucher programs, Grainger et al documented information on 40 voucher programs on reproductive health, 31 of which were in Asia. including 9 in India, 5 in Pakistan, 5 in Cambodia, and 4 in Bangladesh. About half of these programs had some government engagement. Three of the six large programs active at the time were in Cambodia, Kenya, and Uganda and were run by some combination of private sector, NGO, and social franchise entities. The other three large programs—in Armenia, India and Bangladesh were all government run, with the Armenia program national in scale, the Indian program being state-wide in Gujarat, and the Bangladesh program covering about 10% of the districts in the country [64].

In a 2017 systematic review, Hunter et al consolidated and updated findings from all systematic reviews published on vouchers and maternal care between 2010-2015 [44,49,65,68]. They cover 19 studies, relating to 9 programs in 6 countries: Bangladesh, Cambodia, India, Kenya, Pakistan, and Uganda. The studies were of medium quality and typically used controlled before-and-after approaches to compare intervention and comparison areas. In addition to presenting the findings of each study, the systematic review used albatross plots to calculate a standardized effect size across studies for each outcome [49].

The effect of vouchers on the uptake of antenatal care was examined by 11 studies. Positive impact on antenatal care was found in studies of programs in Bangladesh, Uganda, Kenya, and Pakistan, but not in India or Cambodia. The albatross plot mapping corresponds to a 5 percent increase in antenatal care, which the review classifies as a moderate effect. Five studies examined the effect of vouchers on birth with a skilled birth attendant. The findings--all in Bangladesh and Kenya—show strong positive effects in all

five studies, calculated by the reviewers as a standardized effect size of 12-13 percentage points, or a large effect. Most of the 13 studies assessing the impact on delivery in facilities also found positive effects, except interestingly, for the program in India where no improvement resulted from the vouchers even though the JSY cash transfer program had such a large impact on this outcome. Similarly, a positive impact on postnatal care was found among all studies but the one in India [44,49,66–68]. The reviewers classified both the facility care and postnatal care effects as modest, in the range of 5 percentage points [49].

Clearly, vouchers are emerging as a targeted financial mechanism for motivating maternal care for women in some African settings, where the larger public sector resources required for conditional cash transfers are not available and do not have the same history as Latin America or Asia [44,45]. They also seem to present an intermediary solution for channeling maternal health services through NGO or private sector franchises in contexts where the government health infrastructure does not have the capacity to offer the services it is encouraging women to access [64,66,68]. At the same, time, the evidence suggests a number of implementation and capacity challenges as well as the difficulty of tracking the delivery of quality services in line with intentions in systems that have overall weak infrastructures. The evidence on service accessibility and choice is mixed. In some cases, as for example in Cambodia, the enrolment and accreditation of private sector providers in vouchers programs expanded access and service options for women. In other cases, as for example in Pakistan, it led to public sector providers converting to private sector provision while also increasing corruption, and challenges for women in accessing services without additional or informal payments [44,48,65,67,68].

Two pilot programs in Kenya, aimed at increasing skilled delivery as well as quality and choice for women residing in Nairobi slums illustrate the potential as well as challenges of designing effective voucher programs in African settings where improving rates of skilled delivery care has been particularly difficult [49]. Several evaluations assess the impact of a program that used a poverty grading tool to target poor expectant mothers living in two Nairobi slums. The program reached about 120,000 women during this period, selling them vouchers at 200 Ksh (~US\$2.50) for use at a large number of accredited facilities for a package of maternal care including antenatal care visits, facility-based delivery including caesarean section and treatment of complications, and postnatal care. These services would be worth 6,000-20,000 Ksh, and so in some ways the voucher worked like a one-time maternal care insurance. The study showed a significant increase in attended deliveries after program implementation, especially among women delivering for the first time. However, it also showed that because of the cost of the voucher, the program only reached the "least poor" women, rather than the "most poor." [66,67,69]

In a different study also targeted at expectant mothers in Nairobi slums, Cohen et al tested the impact of a "nudge" effort with vouchers to help women afford delivery in the more expensive private sector, better equipped facilities [70]. The intervention aimed to increase both choice and a sense of entitlement to quality for women by having them commit in advance to deliver in their chosen facility and thus obtain the required funds. The study results show that the program was successful in increasing facility-based delivery and also achieved large reductions in women experiencing disrespect and abuse during delivery, a major concern globally in efforts to set and meet standards for maternal

quality of care. Interestingly, however, women chose facilities they perceived as higher quality in terms of interpersonal care, but these were also precisely the facilities that ranked low by the program's objective measures of technical quality (such as meeting obstetric care standards). The program results clearly highlight the value women place on being treated with dignity and respect. At the same time, they also raise concern about the voucher accreditation processes which should, but do not, ensure that women do not have to trade-off between high technical quality of services and respectful care [44,48].

While the results of some voucher programs show sustained effects over time, there is concern about the sustainability of the positive impact among several others where studies are examining results within 2-3 years after program introduction. There always has to be the concern about providers and clients reverting back to old behaviors when vouchers are discontinued. To go beyond vouchers as a temporary measure that does not necessarily set a new equilibrium, governments would have to build on these efforts to address the more inherent challenges of accessibility, affordability, and care with more enduring investments [44,45,48,68].

Lessons Learned on Vouchers:

- 1. Vouchers have operated as a relatively successful and only partially at scale approach to improving maternal care in several Asian countries (e.g. India, Bangladesh, Cambodia)—and have been an emerging strategy in African settings (e.g. Kenya, Uganda). In places with weak government service delivery capacity and financing, vouchers in combination with services through NGOs and social franchises may present a viable intermediary solution through public-private-civil society partnerships. However, the evidence does not specify the elements for a successful collaboration, especially for ensuring equity and sustainability.
- 2. For poor women who would otherwise not get maternal health services across the care continuum from antenatal care to skilled delivery to postnatal care, vouchers can provide financial reassurance by providing a full care package. As vouchers are not sustainable over the long run with donor funding alone, they could be a practical intermediary solution to improving affordability on the road to making public health insurance for maternity a wider entitlement. For the longer term, governments would have to build on these efforts to address the more inherent challenges of accessibility, affordability, and care with more enduring investments in order to build a new equilibrium that ensures both better maternal health outcomes and rights.
- 3. Vouchers can ease women's concerns about catastrophic costs in the case of caesarians or obstetric complications. However, as the Kenya case shows, even a small cost to obtain the voucher can prevent the most-poor women from benefitting, who are likely to have bigger affordability barriers. A better understanding of free versus purchased vouchers is also needed. Similarly, while in some settings vouchers have expanded available and affordable services for poor

women, in other cases they have drawn away services from the public to the private sector and led to corruption and increased informal costs for women in using maternal care.

4. Vouchers may allow women greater choice, especially in accessing more expensive private sector maternal care, but this may facilitate only a partial improvement in quality. As the Kenya case shows, women ended up choosing delivery facilities that measured better on interpersonal care, but not on objective measures of technical quality. This issue also highlights the urgent need to standardize and track measures on quality and respectful maternal health care.

B. Family Planning

The number of women in the Global South using modern contraception has risen by 200 million, from 513 million to 713 million between 2000 and 2020. Because of growth in the number of women in reproductive age, the proportional increase has been more modest, from 39% to 43%. Contraceptive use among women of reproductive age increased in Sub-Saharan Africa from 20% to 33%, Latin America and the Caribbean from 51% to 59%, Central and South Asia from 37% to 42% and Northwest Africa and Western Asia from 31% to 36%. Despite growth in the number of women 15-49, unmet need fell in all regions, ranging from 1-3% [71]. In terms of the health impact on women, the FP2020 program--which prioritizes 69 countries in the Global South for support on women's access to family planning--documents that in 2019, as a result of 314 million women and girls using contraceptives in these specific countries, more than 119 million unintended pregnancies, 21 million unsafe abortions, and 134,000 maternal deaths were prevented in that year alone [72].

At the same time, 153 million women in the Global South still have unmet need for contraception; that is, they don't want to get pregnant in the next two years, but are not using contraception. Moreover, SRHR advocates still struggle to ensure that women have safe and effective contraception through informed choice. In order to more closely reflect women's intentions and desires on contraceptive use rather than just its adoption, feminist voices were successful in defining the indicator for tracking progress on goal 3.7 of the SDGs on universal access to sexual and reproductive health services in terms of "the proportion of women of reproductive age (15-49) who have their need for family planning satisfied by modern methods of contraception." Historically, these two elements have been tracked separately through one indicator on the modern method contraceptive prevalence rate (mCPR) and another on unmet need. Programs, however, generally measure successful outcomes in terms of the use of contraception whereas method selection and choice for women is tracked less frequently [10,71,72]. Some studies track client satisfaction while others track quality of services in terms of method discontinuation for reasons other than wanting to get pregnant. Discontinuation for nonpermanent methods -- estimated globally at 38% -- is a major unsolved problem, especially in countries in the Global South, since women who want and need contraception end up discontinuing an adopted method due to undesirable side effects, or misconceptions, or ineffective use. An inadequate mix of modern methods available or offered to women as well as lack of appropriate information and guidance given during service provision are two key contributing factors to high discontinuation rates [73,74].

Below we review two strategies whose primary aim was to improve access to family planning for women. The first is community and mobile outreach services while the second is male engagement. Both approaches also aimed to improve quality by providing greater support and reassurance to women. As a supply-side effort, outreach services have addressed gender concerns implicitly by trying to facilitate women's access to long term methods, making contraceptive use more convenient and reliable, while male engagement is a demand side effort tried to explicitly addressed domestic constraints for women by improving husbands' understanding and cooperation. Community and mobile outreach interventions were generally at scale and successful in bringing family planning to women's doorstep, thus reducing distance, transportation and gendered barriers to mobility. It is less clear if they improved service quality [75–79]. Male engagement interventions were not at scale but are discussed here because of their prominence in the SRHR literature and significant evidence base; they were successful in changing knowledge and attitudes, but less successful in changing men's behavior or contraceptive prevalence.

1. Evidence on Family Planning and Community and Mobile Outreach Services

Evidence indicates that community or mobile outreach services can successfully improve family planning use among women, particularly in areas where they have high unmet need for family planning, limited access to contraceptives and, and face geographic, economic, or social barriers to wanting, accessing, and/or using contraception. There is also evidence from some longitudinal experimental studies that outreach services can also contribute to impact level outcomes such as reducing unmet need, unwanted pregnancies, abortions, and regional or national fertility rates [75,78–80]. At the same time, these approaches have reinforced family planning delivery systems that leave the decision-making on contraceptive selection in the hands of policy-makers and providers rather than women themselves. For example, existing models of outreach services have primarily targeted only married women leaving a significant share of adolescent girls and young women in more fluid sexual relationships without the expanded access to contraception [76,79]. They also pre-determine the limited set of contraceptive options--short term methods through community outreach and long term methods through mobile outreach-that would be made available to women rather than providing them with a full menu of contraceptive choices [73].

The main aim of outreach services is to address the supply side barrier of limited access and choice by bringing health services at the doorstep of (mostly married) women who are underserved by the more established or "static" health or family planning centers. Outreach service delivery addresses access and cost barriers by bringing information, services, contraceptives, and supplies to women, generally free-of-charge or at a subsidized rate. They frequently target and reach women living in rural and remote areas, or in urban slums, where functional health care centers may be lacking due to infrastructure constraints or shortage of health professionals, supplies, storage facilities etc. Outreach services have been critical in addressing gender constraints in communities where women's mobility is restricted due to social norms, lack of transportation, and/or lack of finances [75,76,78–81]. In this section we discuss the evidence on two different types of outreach services that have evolved over time: community outreach, and mobile outreach.

The community outreach model involves door-to-door visits by trained female health workers (FHWs) in communities with poor services and restrictive gender norms, and it was a critical factor in the rapid uptake of family planning services in Asian countries like Bangladesh and India during their fertility and contraceptive revolutions in the 1990's and early 2000's [79]. In more recent years, "lady health workers" have been important in increasing women's access to contraception in countries like Pakistan and Afghanistan which lagged behind much of the rest of Asia on the adoption of family planning, in part due to poor infrastructure and poor governance, and in part due to conservative gender norms and restrictions [76,81]. Typically, FHWs provide women with only short-term family planning methods such as pills, condoms, or injections, since as lower level workers they are not qualified under most countries' health policies to insert IUDs or implants [80]. Thus, access to longer term methods from a different service outlet remains a challenge for women served by FHWs, and high discontinuation rates for short term contraceptives remains a major challenge for this delivery model [75,78].

Door to door community outreach efforts have been primarily government initiated and managed as CHWs frequently undertake a number of different health service delivery responsibilities as part of the governments broader health policy efforts. At the same time, evidence is limited on what task expansion means for local health workers workload, job responsibilities, professional standing etc. A range of models have been used--from using such workers in a voluntary capacity to paying nominal incentives or compensation, to a regular wage. One of the biggest challenges facing health system reform is that while community health is the backbone of good healthcare, few countries have fully integrated (mostly female)community health workers as paid regular professionals in the health workforce [17,82].

In their 2011 systematic review of 63 studies covering the broad evidence base on the success of family planning interventions, Mwaikambo et al were able to include six studies on the impact of community outreach interventions in Bangladesh and Ghana, all of them showing positive results [79]. At the time, Bangladesh provided the largest and most definitive evidence-base on the positive impact of outreach by trained community health workers who visited women every 2 weeks to provide counselling about family planning services and to deliver injectables, pills, and condoms at the doorstop. Longitudinal surveillance data from the very large Matlab experimental project showed that by the 1990's, contraceptive use in treatment villages was 68% compared to 47% in control sites, and that women in treatment areas felt more supported and more assured of ongoing, quality services. Remarkably, unmet need was down to 11% in treatment areas, and the abortion rate was only 2.3 per 1000 women compared to an unmet need of 27% and abortion rate of 6.8 per 1000 women in control areas [83]. As poor women facing multiple constraints increasingly saw family planning access and fewer children as the essential step to upward economic mobility for themselves and their families, fertility rates in treatment areas even by 1990 were showing a 14% decline over a woman's life course [79].

A similar high quality surveillance study on family planning adoption from Navrongo, Ghana, also shows that knowledge of a range of methods increased as a result of exposure to project activities, and that the deployment of community health paramedics (who were called but not trained as "nurses")was associated with the emergence of preferences to limit childbearing. Moreover, data from both Matlab and Navrongo demonstrated that community outreach efforts were even more effective when combined with diffusion of information and ideas through women's and men's social networks in the community [79]. In Navrongo, for example, the combination of community mobilization and outreach in the initial three years of project exposure reduced the total fertility rate by one birth, comprising a 15 percent fertility decline relative to fertility levels in comparison communities [84,85]. Interestingly, both surveillance projects were launched through donor interest and support. However, while the Matlab initiative has become a sustained institution in Bangladesh with local capacity and resources, the infrastructure and outcomes from the Navrongo project in Ghana dissipated once the donor investment and project ended [84].

More recently, the multi-donor FP2020 initiative launched in 2013 has aimed at reducing unmet need for family planning among 120 million women in 69 countries in partnership with national governments and civil society. Research from this effort has especially focused on strategies that have worked across sub-Saharan Africa, where in many societies women's high fertility continues to be a hallmark of their value in marriage and society, but at the same time significant proportions of women are interested in having fewer children [78]. A number of studies have documented the impact of mobile outreach (clinics) in expanding contraceptive access and choice among women in Africa as well as in other regions that have severe supply side constraints in terms of the availability and quality of health services [75]. A consortium of a broad range of organizations that regularly consolidates practice and research on family planning—including WHO, UNFPA, FP2020, USAID, multiple NGO's, donors and research institutes--now includes mobile outreach as a "High Impact Practice." [80]

Mobile outreach services to underserved communities are often implemented by NGOs or social franchises in collaboration with local public health authorities. Moreover, mobile outreach is increasingly being used as a strategy to provide access to longacting reversible contraceptives (LARCs) and permanent methods (PMs) to overcome the constraints and challenges faced by women in having to rely on traditional (rhythm, withdrawal), or short-term modern methods (the pill, condoms, injectables) [75,80]. For example, traditional methods have low reliability and require the cooperation of male partners as does the use of condoms, a situation that gives many women little control over pregnancy (or disease) prevention. Short term hormonal methods such as the pill are highly reliable and controlled by women, but the need for regular use and replenishment can be a challenge for women who have limited privacy because of oversight by husbands or other family members, and/or due to overcrowded living conditions. Analysis of DHS data from 21 countries shows that discontinuation rates are particularly high for short-term methods, including pills and injectables: more than 20% of users of each of these methods who still did not want to get pregnant stopped use within 12 months as compared to less than 10% of users for IUDs or implants [73].

However, 2012-13 data showed that while nearly 25% of women in developed

countries relied on LARCs and permanent methods, less than 5% of women in the least developed countries did so. An underlying reason has been that LARCs and PMs are typically unavailable in most rural or hard-to-reach areas due to lack of skilled providers, commodities, and equipment [80]. Concern about the potential side effects has also been a factor in the low distribution and uptake of IUDs. Evolving contraceptive technology has partially addressed concerns about side effects associated with not only IUDs but also hormonal methods such as the pill or injectables, but health systems in many parts of the world—and especially in low-income settings—remain poorly equipped to fully address women's concerns about side effects in their adoption or discontinuation of various family planning methods [73,74].

It can be argued that women's option to choose from among family planning methods is increasing with the expansion of access to LARCs and permanent methods, with mobile outreach being a key strategy in delivering this option to women in underserved locations. Mobile outreach services especially cater to women who are accessing family planning for the first time. For example, 41% of mobile outreach clients in sub-Saharan Africa, 36% in South Asia and the Middle East, 47% in Pacific Asia, and 23% in Latin America were new adopters of family planning [80]. Ngo et al's evaluation of Marie Stopes International's (MSI) mobile outreach programs in 14 sub-Saharan African countries (Burkina Faso, Ethiopia, Ghana, Kenya, Madagascar, Malawi, Mali, Nigeria, Senegal, Sierra Leone, Tanzania, Uganda, Zambia and Zimbabwe) shows that during 2008-2014, annual LARC service distribution increased 1037%, from reaching 149,881 women to reaching over 1.7 million women. Data also show that about half of the women adopting or switching to these methods accessed them through mobile outreach, and most were highly satisfied with the service. The initiative was especially effective in reaching a high proportion of younger women (15-24), an age group that is often disempowered in accessing effective contraceptives due to provider biases and limited say in the family [78].

Like the studies on community outreach, the emerging evidence from multiple African countries also confirms that mobile outreach efforts are most effective when accompanied by community-based mobilization and demand generation [80]. From a gender perspective, adequate information and counseling for women to manage side effects, especially in light of only periodic access to a health provider, is perhaps the most important challenge presented by this approach [75]. There is significant documentation in the family planning literature that rural, poor women in particular have high rates of method discontinuation, and the major reason—other than the desire to get pregnant is side effects. For example, the evaluation of MSI's mobile outreach effort in Ethiopia, Myanmar, Pakistan, Sierra Leone and Viet Nam shows that while method discontinuation rates were somewhat lower than in control sites, the experience of and lack of care for side effects remained high [75]. Many of these studies implemented client satisfaction surveys to assess quality and choice which generally show high scores [77,78,80]. However, positive bias in such surveys in poor and advantaged settings is common; women with a history of deprivation on services and entitlements tend to express satisfaction with whatever they get [19,77]. As most studies are not using impartial observation to track the nature and quality of interchange between mobile providers and women at the time of LARC adoption, improving and monitoring guidance on side effects and meaningful method choice remains a challenge [73].

Perhaps the two biggest challenges with the mobile outreach approach are the continuation of bifurcated and limited choice of contraceptives for women, and the donor-dependent nature of these initiatives. The split between short term methods being provided through community health workers and longer-term methods through mobile outreach of more trained providers often leaves women in an either-or situation, depending on which approach is utilized in their area. What they really need is a reliable and easily accessible one-stop shop where all methods options are available for them to make their own choice rather than to be geared toward whatever the service provider chose to offer them. Additionally, to the extent that mobile outreach services are not domestically financed, their expansion to all women in need and sustainability over the long run remains in question.

Lessons Learned on Community and Mobile Outreach for Family Planning

- Community and mobile outreach services have been an important element of health service delivery to women in countries struggling with reaching the most disadvantaged in the context of severe health infrastructure, supply, and capacity constraints. For family planning outreach there is demonstrated success across Asia (Bangladesh, Pakistan, India) and Africa (Ethiopia, Ghana, Kenya, Malawi, Nigeria, Senegal, Tanzania, Uganda, Zambia) among other settings.
- 2. Government engagement and domestic resourcing are important factors in sustaining outreach services as demonstrated by the continuation and scale of the Bangladesh effort compared to a similar effort in Ghana. Donor subsidized mobile outreach efforts run by NGOs and social franchises in many African countries also raise the question of longer term sustainability without supported and/or resourcing by governments.
- 3. Community and mobile outreach efforts are most effective in family planning uptake when accompanied by community-based mobilization that supports the desire for and acceptability of contraceptive use among women, their partners, families and communities. Currently we also lack better assessment of what the deployment of community health workers on expanded tasks means for their workload, professional position and pay.
- 4. From a gender perspective, outreach services have addressed many distance, transportation, and gendered-related mobility barriers that women face in different contexts, from constraints on women's presence in public spaces in countries like Bangladesh, Pakistan or India, to remote locations and poor transportation for women in places like Senegal, Ghana or Uganda. In Africa, mobile outreach is also helping to reduce gender barriers around maintaining privacy, seeking partner cooperation or permission, or constantly replenishing temporary methods by providing long acting and permanent contraceptive method options.
- 5. However, these approaches still present significant challenges on enhancing women's access, choice and quality of services. Quality concerns remain an issue as programs are not tracking if women are getting adequate information and counseling to effectively choose long term methods and manage side effects in light of only periodic access to a trained health provider. Measurement of direct

approaches to address discontinuation rates, especially due to side effects are still lacking. Adolescent girls and young women end up still not being able to access contraception since they are not targeted by outreach approaches. And the bifurcation of method options offered through the two different outreach modalities still continues to prevent women's one stop shop access to a full menu of contraceptive options from which they, rather than the provider, can make an informed choice.

2. Evidence on Family Planning and Male Engagement

Male engagement emerged as an important gender integrative approach from the ICPD 1994 emphasis on gender equality being a concern for both men and women, and on the desirability of working with "men as partners" rather than adversaries [86–88]. Since then, a significant literature—including evaluated interventions—has emerged on the topic, although a large share of it addresses broader norm change and SRHR outcomes—especially GBV, HIV/AIDS and ASRH--rather than family planning per se [34,87,89]. Still, the intuitive appeal of the approach is great enough that despite the limited and equivocal evidence from mostly small scale interventions, male engagement is prominent enough to be considered a "high impact family planning practice" by the USAID led consortium of multiple influential organizations working in this field [90]. It is important to note that many of the broader norm change and SRHR interventions that "involve men and boys" (including those that target adolescent boys) have been documented as also not being at scale, with the evaluations showing high risk of bias, and limited positive outcomes, mostly on knowledge and attitudes rather than behavior [34,79,88,89,91,92].

Targeted mostly at married men, the general premise of engaging men in family planning programs is to help them understand the importance and options of family planning and to reduce fear, suspicion and relational barriers women may face in pregnancy prevention. Family planning programs engage men in three common ways: 1) increasing male participation as contraceptive users themselves through adoption of condoms or vasectomies; 2) encouraging their communication and engagement with female partners in contraceptive decision-making and choice, and 3) shifting men's adherence to narrow and constraining definitions of masculinity, positioning them to not only democratize gender relations in their own lives, but to serve as advocates of gender egalitarian norms, family planning, and women's health more broadly [87,89–91,93]. Male engagement programs emphasizing vasectomies are rare, while many of the condom use programs emerged from the HIV/AIDS field and are more common in settings with higher HIV incidence [88,91,93].

There is some debate in the literature about the extent to which the first two paths are just "gender accommodative" options that support women in getting family planning access, while the third is a more "gender transformative" approach that changes gender norms and promotes more equitable relationships [34,86–89]. For example, male involvement may be the most feasible option for supporting women's need for contraception in conservative societies where an attempt to change norms might result in a backlash that is even more restrictive of women's lives and their access to family planning or health services. Some research also questions whether male engagement

is necessarily supportive of women or encouraging of more equitable norms: women in problematic relations may prefer to practice contraception without their partner's/ husband's knowledge and may fear violence, suspicion, desertion or other negative consequences [87,89]. Similarly, a man accompanying his female partner to a family planning clinic, could signal his being a supportive or egalitarian partner [86], but it could also indicate reinforcement of gender norms that prohibit women's independent mobility or decision-making [88,89].

Systematic and other reviews of studies on male engagement in SRHR indicate that most intervention strategies aim at knowledge, attitudinal or behavior change among men and/or women, utilizing individual or couple information, education and counseling (IEC) efforts, as well as community mobilization and education campaigns [86,88,89,92,93]. These activities are generally led by NGO staff, but in many cases are delegated to community members as peer educators, counselors, etc [34,87,91]. Qualitative evidence suggests that in many settings, this can be an empowering experience for the many stakeholders, and one that places the agency for change in the hands of community members. In some programs, providers such as community health or social workers undertake the IEC effort [86,90,94].

At the same time, other programs document that such efforts get uneven participation and influence by different community members, with upper class, caste, male, and older members exerting more authority and influence, and at times, modifying the messaging and information according to their own interpretation and needs [89,94]. In fewer programs, mass media and communication campaigns are used to convey male engagement and gender equitable messaging at larger scale [88,90]. Programs have rarely addressed or evaluated male engagement in terms of unequal power relations at the structural level in terms of policy implementation, social planning, service provision, or fiscal measures [34,88,92]. Similarly, most programs do not measure potential negative consequences [89].

One of the biggest challenges for measuring the success of gender integrated male engagement interventions is the wide range of outcome indicators used. A 2017 monitoring and evaluation report by the MEASURE Evaluation Project identified 103 output, outcome, and impact indicators currently used for measuring male engagement in family planning, of which only 18 would be considered high quality. As there is a lack of nationally or internationally agreed upon standard indicators of success, there is no compulsion for programs to use a core set of indicators that can track cumulative achievements or change across projects or timeframes [92,93]. For evaluation evidence as well, it becomes difficult to assess whether or not there is a critical mass of studies demonstrating success or failure on the same, commonly agreed upon outcomes [88,89,92].

Many gender programs tend to track shifts in attitudes and behavior, including measures such as: whether or not male partners participated in individual or joint counseling; showed up for some number of joint visits to a clinic or provider; communicated more frequently with their partners on sexual, contraceptive protection or similar issues; or if men (and sometimes women) were more likely to express gender egalitarian attitudes [34,86,88,93,94]. As most evaluations are one-time events, it is often difficult to assess whether these are short term changes or if they signal longer term, more sustained

shifts in norm change [91,92]. Family planning programs with male engagement as a strategy typically also track outcomes that are proximate to women's health, such as the uptake of specific family planning methods, and sometimes, even rates of pregnancies prevented. Collating from a number of systematic reviews, two points stand out: 1) the quality of many of the evaluations is not high; 2) the evidence is generally stronger with regard to a positive impact of male engagement on knowledge and attitudinal outcomes, than on behavioral outcomes related to family planning use or pregnancy prevention [34,86,88,89,94].

In their recent (2020) systematic review, Ruane McAteer consolidated findings on 8 evaluations of "gender transformative" male engagement and family planning programs in India, Guatemala, Malawi, Tanzania, Senegal, Ethiopia, Nigeria, and Zimbabwe. All 8 evaluations demonstrate positive outcomes on a diverse set of knowledge and attitudinal measures such as awareness of more contraceptive methods, more frequent spousal communication on pregnancy prevention and timing, more stated perception among women of their husbands' or partners' approval of family planning, etc. However, only 3 of the 8 programs demonstrated positive behavioral outcomes in terms of contraceptive uptake. In Tanzania and Guatemala, interactive workshops with groups of husbands and wives separately and together led to more positive gender attitudes among couples but did not lead to increased contraceptive use or service utilization in either country [88,94]. In contrast, male motivators from the community were successful in changing both attitudes and contraceptive acceptance among men in India, Nigeria, and Malawi, while a similar approach in Uganda led to no change in male attitudes on gender issues but did increase their use of services related to HIV testing and condom use [88,91].

These results and the small scale of programs which may or may not be sustained over time depending on donor support leaves us with equivocal findings from mixed quality studies. Moreover, it is currently difficult to tell from the existing evidence base precisely what contextual parameters lead to success in some settings and not in others.

Lessons Learned on Male Engagement in Family Planning

- 1. Most male engagement in family planning programs is implemented with a desire to foster more equitable gender relations, or at least support married women in accessing and affording contraceptive. It is important to also consider the potential negative trajectories of such programs, as for example greater constraints and interference for women in problematic relationships, and backlash for men who become models of more equitable relations. Most evaluations do not measure negative impacts.
- 2. Male engagement has resulted in positive change on knowledge and attitudes regarding family in most Asian, African, and Latin American settings for which we have evidence. However, it has been less consistently successful in behavioral change in terms of family planning use. A large number of varied indicators to measure mostly short-term knowledge and attitudinal change have hindered consolidated insights on the nature, depth, and duration of these changes, or on understanding why they do not result in behavioral change.

3. The community-based model of male engagement has been difficult to scale up as it relies on NGO capacity and resources.

C. Safe Abortion

Globally, roughly 121 million unintended pregnancies occurred each year between 2015 and 2019, and of these 61% ended in abortion, translating to 73 million abortions per year. Among these, 1 out of 3 or over 24 million abortions per year were carried out in the least safe or dangerous conditions, 97% of which were in the Global South. The WHO estimates that each year between 4.7% - 13.2% of maternal deaths can be attributed to unsafe abortion [95,96]. Abortion laws are generally much more restrictive in the Global South than in the North. Whereas 81% of the women of reproductive age in the Global North live in countries where abortion is available without restriction as to reason (with gestational age limitations), only 29% of women of reproductive age in the Global South do so. If we remove India and China from the latter mix as they have very large populations and liberal abortion laws, over 87% of women in the Global South live in countries where 81%.

Interestingly, however, abortions occur as frequently in countries where they are legally banned outright as in countries where they are allowed without restriction as to reason, at rates of 37 and 34 per 1,000 women, respectively [96,98]. The paths through which women get abortions-how clandestinely, through what providers, through what methods, through what processes—depends not just on the legal frameworks, but how these frameworks are communicated, enforced, translated into policy guidelines and procedures. For example, in some countries as in the United States, where abortion is legal at the national level, state imposed legal, provider and facility restrictions can significantly curb access to abortion services. In other countries like India, the vast majority of women do not know that abortion is legal, and therefore, they reach out to the informal sector for abortion services regardless of legality. Formal and informal health system procedures and the availability of a range of different providers is also a critical factor, as is the nature of cultural norms and stigma associated with abortion [14,99–101]. Abortion technology and its availability also play a large role [100,101]. Thus, while in Bangladesh and many Latin American countries abortion has been illegal for years and is culturally prohibited by religion, it has also been widely practiced, in large part due to the availability of medical abortion [97,102].

In fact, two innovations and trends in the last two decades continue to radically alter the national and global landscape around the accessibility, affordability, and quality of safe abortion care. The first of these is the innovation in biomedical technology with regard to abortion. The combination regimen of mifepristone and misoprostol has revolutionized medical abortion and offers a noninvasive, safe, and effective option for pregnancy termination [97,102–104]. The second is the formalization of "task shifting" from physicians to mid and lower-level providers in healthcare throughout the world, but especially in the area of sexual and reproductive health and in the Global South [102]. In fact, this trend that began decades ago in LMICS in Asia due to a combination of severe shortages of trained health professionals and the perception that women may be most comfortable getting intimate care from other women related to their communities, has now expanded to not only other parts of the Global South, but especially with regard to family planning and abortion care, is being adopted in the Global North as well [15,97,104].

The improvements in medical technology on abortion—medical abortion and vacuum aspiration--have led WHO to formalize guidelines on task shifting based on positive experiences in a number of countries which show that providing early medical abortion in primary care services is safe and feasible and can be effectively administered by mid-level providers. Mid-level providers are also considered appropriate for manual vacuum aspiration for abortion or postabortion care [97,102]. Moreover, with the challenges experienced in maintaining SRHR service access during COVID-19, there are growing efforts by women's health advocates for task shifting on safe abortion not just to mid- and lower-level providers, but to selfcare by women themselves. Emerging understanding of these trends has led abortion rights opponents and some health systems to find new ways of pushing back on these developments [15,101,105].

Bangladesh has the longest history of broadening the range of healthcare workers in the delivery of medical abortion; this is legally permitted until 12 week gestation because it is defined as menstrual regulation and part of the family planning program, even though abortion is technically restricted [97]. Ongoing government-level and health system support for the inclusion of a broader base of health workers contributed to implementation success and increased safe abortion for women. The delivery of abortion care has been shared between physicians, trained nurses, paramedics, and Family Welfare Visitors (FWV) since the late 1970s and can be provided on an outpatient basis [102]. Tunisia is another country where now 85% of abortions conducted in the public sector use medical methods. One of the only two countries in the Arab world to legalize abortion, services by physicians have been available throughout the country since 1973. But since the introduction of medical abortion in 2001, procedures have been simplified to expand the range of mid-level providers able to deliver abortion services [102].

In contrast, extremely restrictive laws in Latin America have meant that even when abortion is legal in limited situations, there is pushback by the legal and health system against task shifting and easing complex processes [100,101]. For example, in Mexico, where first trimester abortion has been permitted only in the capital city since 2007, the introduction of the mifepristone-misoprostol regimen for medical abortion to the Essential Drugs List for Mexico City in 2011 led to only modest simplification of task shifting and requirements. The guidelines were changed to allow general practitioners to deliver abortion care instead of the requirement for the services to be offered in hospitals and level three clinics, and only by surgeons. In Colombia, where abortion has been legal in very limited circumstances since 2006, despite guidelines that allow for a collaborative approach across cadres of healthcare professionals--and particularly the inclusion of nurses--specialist and non-specialist physicians are still considered the main providers [102].

In much of Latin America, medical abortion has emerged largely as a response option to widespread legal restrictions on abortion [101,104]. The recommended medical abortion regimen is a combination of mifepristone and misoprostol, but misoprostol alone can also be used to induce safe abortion. A recent review shows that globally, only 50 of 158 countries (32%) include mifepristone and/or combination mifepristone with misoprostol in their national essential medicine list (EML) or some other official list of authorized

drugs; 56% of these 50 countries are in Europe [99]. However, misoprostol is widely available in pharmacies in many countries as it is also used for treatment of gastric ulcers and postpartum hemorrhage. The availability of misoprostol in pharmacies and drug shops has been especially important for large proportions of women in Latin America for whom it has become the only viable method of abortion. As the formal health system is not involved, women have been self-administering medical abortion, supported largely by women's health activities who have developed information and communication channels to educate women on the availability and proper administration of the drug, as well as on emergency postabortion care, thus forgoing providers almost entirely [103,104].

In many countries where abortion is legal, actual access to medical abortion is restricted through established protocols such as a required medical consultation, an ultrasound and blood test, pill dispensation by a provider [15,101]. However, large proportions of women in a range of countries are getting medical abortion pills directly from pharmacies or their contacts, without prescriptions [100,103,104]. Given the COVID-19 related crisis of SRHR care, there is an acceleration in studies and analyses which demonstrate that the intervening tests and steps by providers do not add to the safety or efficacy of medical abortion [101,105]. In fact, research from many countries indicates that self-abortion can be safely and effectively supported via selfcare and community-based models [103]. In some contexts, this approach is gaining increased acceptance by the formal health sector as safe and appropriate. The use of telemedicine and helplines as supplemental support systems is also being proposed by activists [15]. The simplicity of such access becomes especially important to poor, young, unmarried, and disadvantaged women for whom the repeated interaction with the formal health system is a burden on many fronts. Some research also suggests that women like and prefer having the personal control that the ability to take a pill to induce abortion gives them, especially in being able to maintain privacy even from partners or family members when they so wish [101,104].

As abortion is such a political and cultural lightening rod, however, the movement toward task-shifting and selfcare faces a number of challenges. On the procedural and legal front, opponents are already reacting with additional encumbrances. For example, in the U.S. the fight against telemedicine for medical abortion has already begun [101]. Equally important is the concern about maintaining affordability and quality for women accessing medical abortion pills and information directly from pharmacies or informal channels [105]. Some of the existing research documents that in many situations, women pay large sums to get pills that are actually not mifepristone or misoprostol and may even be harmful. In many cases, women are not given either correct or sufficient information and guidance on following the protocol, and they do not have appropriate networks to get the needed information [97,100,104]. Further, a recent systematic review assessing the level and quality of pharmacy and drug shop provision of medical abortion in 16 LMICS finds that although there is widespread awareness and provision of medical abortion drugs, pharmacy workers and drug sellers had poor knowledge of effective regimens. Current efforts for educating them have been undertaken sporadically by NGOs and have not been high quality or effective [103]. Thus, even as the trend toward rapid adoption of medical abortion through task sharing and selfcare continues, these challenges will need to be addressed concurrently [15,105].

Lessons Learned on Safe Abortion

- 1. Legal, political, cultural, and health systems factors make the accessibility, affordability, and quality of safe abortion a complex process for women through much of the world, but especially in the Global South where legal and health systems constraints cover large populations.
- 2. Biomedical innovation through medical abortion and task-shifting down the health professional cadre due to capacity shortages have combined to make safe abortion more accessible, affordable and generally simpler for significant proportions of women across the Global South.
- 3. The success of task-shifting has in part been due to necessity and professional shortages, but also due to the willingness of health systems and policies to adapt to this modality for abortion provision. Authoritative recommendations and guidance from the WHO have also been instrumental.
- 4. Women's health activists have played a major role in most countries in not only fighting legal battles on abortion rights, but also in subverting restrictions, especially in supporting the widespread access to and safe use of medical abortion. They are now on the frontlines in advocating the shift toward selfcare, with a view to giving women greater autonomy and control over safe abortion.
- 5. The continued expansion of medical abortion, task-shifting and selfcare as viable options is not without backlash and challenges that will require creative solutions from advocates and experts.

V. Conclusion

The prioritization of women's health and the integration of gender inequality as a key concern in advancing health outcomes and systems in the Global South has faced many challenges and some successes. Pushback on feminist agendas and the lack of attention to gender inequality in health system building blocks has meant that often these concerns have operated at the margins of the health infrastructure. Moreover, persistent gender biases in biomedical and public health research and data have led to continued and considerable gaps in the available evidence to advise concerted action. Thus, although the range of health risks faced across their life course by women in the Global South has been expanding with shifting economies, demographics, and epidemiology, much of the available evidence on the effectiveness of interventions in advancing women's health comes from the area of sexual and reproductive health where women's own health is a clearly defined outcome, and the dynamics of gender inequality are undeniable.

In this review we were able to focus on three subareas of SRHR—maternal health, family planning and safe abortion--to consolidate findings regarding a few key strategies that have shown some success in improving outcomes across a range of contexts in the Global South. These included conditional cash transfer and voucher programs to enhance maternal health; mobile outreach services and male engagement to enhance family planning; and medical abortion and task shifting/self care to advance safe abortion.

Our analysis drew from a conceptual framing of health systems and community-based factors as interrelated drivers of three categories of barriers to women's health care: accessibility, affordability, and quality. Embedded across these barriers is women's ability to exercise choice and agency as well as command respect and dignity in their utilization of SRHR care services.

The evidence review suggests that despite the growing rhetoric around gender as a focus in global health efforts, most policies and programs have not attempted fundamental reforms toward more gender equitable health care delivery systems, but rather limited themselves to partial, stopgap, and less far-reaching measures. Thus, the review found little evidence of strategies with resounding, consistent, and sustained success, especially at scale and over time. Instead, the available research on SRHR points to mixed outcomes and limited success for most evaluated interventions in addressing the three key gender barriers. Mobilization and advocacy by feminist health activists have played a critical in keeping high level gender priorities (safe abortion and quality of care) on the health agenda, holding the health sector accountable for not progressing fast enough in key areas (maternal health, girls and HIV/AIDS), and putting new issues on the agenda (gender in universal health care, workforce equality, selfcare). Building on these efforts, some more specific insights from the review that can inform practical and strategic options for advancing gender equality and women's health across a range of health areas include:

Key insights:

- 1. It is important to consider interventions across the full spectrum of entry points within the health infrastructure and not be limited to only those with an explicit gender focus. In our review, male engagement and medical abortion were interventions that had an explicit gender focus, but cash transfers, vouchers, community/mobile outreach, and task-sharing initiatives were also found to have addressed access and affordability barriers at a minimum, and quality barriers to a lesser extent. While not all, but at least some of these programs were at scale and worked with governments and a range of other partners.
- 2. The provision of quality services is an essential, but often forgotten pre-requisite to any demand side intervention. This point was emphasized universally by studies and reviews of financial mechanisms that addressed cost barriers. Increasing such support will help only if quality services are there in the first place. Other essential infrastructural pre-requisites that emerge in the review are: 1) effective targeting of beneficiaries; 2) good costing and planning coordination between the health and finance ministries; 3) an effective system for accrediting and monitoring providers eligible to deliver services tied to the cash benefits; and 4) service improvements in not just treatment/equipment availability or technical quality, but on shifting power relations between providers and women to ensure women's right to respectful and dignified care.
- 3. Demand-side interventions to overcome financial barriers to women's access to maternal health services are also more effective when they deliberately incorporate gender responsive elements and consider community, family, and personal barriers. These include: 1) longer term, steady cash payments paid out specifically to

women; 2) Clearly enforced quality standards and information and communication to women clarifying their entitlement to quality services; 3) vouchers and subsidies in amounts to cover significant maternal care costs. The first two elements were important ingredients of some of the Latin American programs which were successful not just in improving women's access to maternal health care, but also in improving service quality because compliance with standards was monitored and women were empowered to demand more from providers. In contrast, serviceuse linked subsidies or vouchers without payee specification, quality monitoring, or adequate information to women improved access to care, but did not fully meet the affordability goal or improve service quality. Insufficient subsidies and lack of accredited local providers actually increased costs of delivering in a facility for some women in India; in Uganda the amount was too small to motivate women to consider skilled delivery as an option. Most importantly, women continued to be denied dignity and respect in accessing basic maternal care services in many parts of India and Africa.

- 4. Where women cannot get to services, it can help to bring services to them. Mobile and community outreach can be partially effective solutions to providing health care to women in contexts where health system shortages leave rural, remote or slum areas uncovered, and/or where distance, transportation or gendered-based barriers constrain women's mobility. This strategy has been successful in increasing women's access to family planning options across multiple countries in Asia and Africa and can be an effective channel for delivering an expanded suite of health services to them. The evidence on mobile outreach and vouchers, especially in Africa also suggests that as an intermediary, short term step, donor-funded NGO and social franchise efforts may be both necessary and effective in filling shortfalls in the government infrastructure and capacity to deliver maternal care and family planning. However, these efforts can only be considered stopgap as their long term sustainability and scale without domestic financing and investment is unlikely.
- 5. Meeting the barrier to better quality of care was a challenge for almost all interventions. The concepts of quality standards on maternal care and informed choice in family planning have been part of SRHR frameworks for some time, but they are not being utilized in intervention research to assess quality directly. This was in part because none of the interventions had clear measures for assessing quality other than occasionally client satisfaction which is a partial and potentially flawed measure. But it was also because interventions were not fully clear on how exactly they wanted to improve quality. The medical abortion intervention provides the most robust example of improved quality in that it was a technically effective and efficient intervention, but also less complex and more appealing to women.
- 6. Innovation in medical technology and in restructuring the health workforce present important pathways to more effectively integrating gender in the core functioning and priorities of the health sector. The experience from medical abortion shows how life and health options for millions of women can improve despite the constraints from legal, health, or cultural systems. Similarly, task shifting to lower-level providers or to women themselves provides access, affordability

and potentially quality to women on safe abortion, even under difficult or crises circumstances. The radical nature of these innovations is in part evident from the backlash building against them.

Finally, it is important to recognize that since gender inequality is complex and multidimensional, almost any intervention to address it is likely to produce both positive and negative outcomes. It is therefore important that the theory of change for a specific intervention not be devised only from a positivist perspective—as is generally the case—and that at least some of the potential negative outcomes be anticipated and tracked. Cash transfers and vouchers can improve affordability of care, but also create incentives for corruption and exploitation of beneficiaries. Mobile outreach and male engagement can support women in their pregnancy prevention efforts, but they may also be reinforcing norms of restricted mobility and dependence on men. Task shifting can expand service access under health system capacity constraints, but may further workforce gender inequalities. Medical abortion gives women a simpler, self-controlled option for pregnancy termination, but it may also expose them to expensive charlatans. Both unanticipated "side effects" as well anticipated backlash need to be acknowledged and addressed for sustainable change.

Bibliography

- 1. Buvinić M, Medici A, Fernández E, Torres AC. Gender differentials in health. 2nd ed. In: Jamison DT, Breman JG, Measham AR, Alleyne G, Claeson M, Evans DB, et al., editors. Disease control priorities in developing countries. 2nd ed. Washington (DC): World Bank; 2006.
- 2. George AS, Amin A, García-Moreno C, Sen G. Gender equality and health: laying the foundations for change. Lancet. 2019;393: 2369–2371. doi:10.1016/S0140-6736(19)30987-0
- 3. Hawkes S, Buse K. Gender and global health: evidence, policy, and inconvenient truths. Lancet. 2013;381: 1783–1787. doi:10.1016/S0140-6736(13)60253-6
- 4. Clark J, Horton R. A coming of age for gender in global health. Lancet. 2019;393: 2367–2369. doi:10.1016/S0140-6736(19)30986-9
- 5. Langer A, Meleis A, Knaul FM, Atun R, Aran M, Arreola-Ornelas H, et al. Women and Health: the key for sustainable development. Lancet. 2015;386: 1165–1210. doi:10.1016/S0140-6736(15)60497-4
- 6. Lopes C, Allotey P, Vijayasingham L, Ghani F, Ippolito A, Remme M. What Works in Gender and Health: Setting the Agenda. UNU-IIGH; 2019.
- 7. Sen G, Ostlin P, George A. Final Report to the WHO Commission on Social Determinants of Health. World Health Organization; 2007 Sep.
- 8. Cislaghi B, Weber AM, Gupta GR, Darmstadt GL. Gender equality and global health: intersecting political challenges. J Glob Health. 2020;10: 010701. doi:10.7189/jogh.10.010701
- 9. World Health Organization. Breaking Barriers; Towards More Gender-Responsive and Equitable Health Systems. World Health Organization; 2019.
- 10. Every Woman Every Child. PROTECT THE PROGRESS:2020 Progress Report on the Every Woman Every Child Global Strategyfor Women's, Children's and Adolescents' Health (2016–2030). WHO and UNICEF; 2020.
- 11. World Health Organization. Primary Health Care on the Road to Universal Health Coverage: 2019 Global Monitoring Report. WHO; 2019.
- 12. Krubiner C, O'Donnell M, Kaufman J, Bourgault S. Addressing the COVID-19 Crisis's Indirect Health Impacts for Women and Girls. Center For Global Development; 2021 Apr.
- 13. Simba H, Ngcobo S. Are Pandemics Gender Neutral? Women's Health and COVID-19. Front Glob Womens Health. 2020;1. doi:10.3389/fgwh.2020.570666
- 14. Culwell KR, Hurwitz M. Addressing barriers to safe abortion. Int J Gynaecol Obstet. 2013;121 Suppl 1: S16-9. doi:10.1016/j.ijgo.2013.02.003
- 15. Kumar M, Daly M, De Plecker E, Jamet C, McRae M, Markham A, et al. Now is the time: a call for increased access to contraception and safe abortion care during the COVID-19 pandemic. BMJ Glob Health. 2020;5. doi:10.1136/bmjgh-2020-003175
- 16. Boniol M, McIsaac M, Xu L, Wuliji T, Diallo K, Campbell J. Gender equity in the health workforce: An Analysis of 104 Countries. WHO; 2019.
- 17. WHO. Delivered by Women, Led by Men: A Gender and Equity Analysis of the Global Health and Social Workforce. WHO; 2019.
- 18. Global Financing Facility. The Global Financing Facility for Women, Children and Adolescents: Roadmap for Advancing Gender Equality. Global Financing Facility; 2020.
- Kruk ME, Gage AD, Arsenault C, Jordan K, Leslie HH, Roder-DeWan S, et al. High-quality health systems in the Sustainable Development Goals era: time for a revolution. Lancet Glob Health. 2018;6: e1196– e1252. doi:10.1016/S2214-109X(18)30386-3
- 20. Phillips E, Stoltzfus RJ, Michaud L, Pierre GLF, Vermeylen F, Pelletier D. Do mobile clinics provide highquality antenatal care? A comparison of care delivery, knowledge outcomes and perception of quality of care between fixed and mobile clinics in central Haiti. BMC Pregnancy Childbirth. 2017;17: 361. doi:10.1186/s12884-017-1546-7

- 21. Tessema GA, Streak Gomersall J, Mahmood MA, Laurence CO. Factors determining quality of care in family planning services in africa: A systematic review of mixed evidence. PLoS ONE. 2016;11: e0165627. doi:10.1371/journal.pone.0165627
- 22. Sacks E, Morrow M, Story WT, Shelley KD, Shanklin D, Rahimtoola M, et al. Beyond the building blocks: integrating community roles into health systems frameworks to achieve health for all. BMJ Glob Health. 2018;3: e001384. doi:10.1136/bmjgh-2018-001384
- 23. Sharma G, Penn-Kekana L, Halder K, Filippi V. An investigation into mistreatment of women during labour and childbirth in maternity care facilities in Uttar Pradesh, India: a mixed methods study. Reprod Health. 2019;16: 7. doi:10.1186/s12978-019-0668-y
- 24. Borumandnia N, Khadembashi N, Tabatabaei M, Alavi Majd H. The prevalence rate of sexual violence worldwide: a trend analysis. BMC Public Health. 2020;20: 1835. doi:10.1186/s12889-020-09926-5
- 25. UN DESA. Global indicator framework for the Sustainable Development Goals and targets of the 2030 Agenda for Sustainable Development. UN DESA; 2020.
- 26. Woitowich NC, Beery A, Woodruff T. A 10-year follow-up study of sex inclusion in the biological sciences. elife. 2020;9. doi:10.7554/eLife.56344
- 27. Holdcroft A. Gender bias in research: how does it affect evidence based medicine? J R Soc Med. 2007;100: 2–3. doi:10.1258/jrsm.100.1.2
- Vijayasingham L, Bischof E, Wolfe J, Gender and COVID-19 Research Agenda-setting Initiative. Sex-disaggregated data in COVID-19 vaccine trials. Lancet. 2021;397: 966–967. doi:10.1016/ S0140-6736(21)00384-6
- 29. CBC KF. There's a gender gap in medical data, and it's costing women their lives, says this author | CBC Radio. In: The Current [Internet]. Mar 2019 [cited 3 Jun 2021]. Available: https://www.cbc.ca/radio/thecurrent/the-current-for-march-11-2019-1.5049277/ there-s-a-gender-gap-in-medical-data-and-it-s-costing-women-their-lives-says-this-author-1.5049286
- 30. Criado-Perez Caroline. Invisible women: Data bias in a world designed for men. New York, NY: Abrams; 2019.
- 31. Bernardi M, Lazzeri L, Perelli F, Reis FM, Petraglia F. Dysmenorrhea and related disorders. [version 1; peer review: 3 approved]. F1000Res. 2017;6: 1645. doi:10.12688/f1000research.11682.1
- 32. Marill MC. The Dangers of Excluding Women From HIV Prevention Drug Tests . Wired. 6 Oct 2020. Available: https://www.wired.com/story/the-dangers-of-excluding-women-from-hiv-prevention-drugtests/. Accessed 25 Feb 2021.
- 33. Pederson A, Greaves L, Poole N. Gender-transformative health promotion for women: a framework for action. Health Promot Int. 2015;30: 140–150. doi:10.1093/heapro/dau083
- Muralidharan A, Fehringer J, Pappa S, Rottach E, Das M, Mandal M. Transforming Gender Norms, Roles, and Power Dynamics for Better Health: Evidence from a Systematic Review of Gender-integrated Health Programs in Low- and Middle- Income Countries. Washington, D.C.: Futures Group, Health Policy Project; 2015 Sep.
- 35. Mandal M, Muralidharan A, Pappa S. A review of measures of women's empowerment and related gender constructs in family planning and maternal health program evaluations in low- and middle-income countries. BMC Pregnancy Childbirth. 2017;17: 342. doi:10.1186/s12884-017-1500-8
- 36. Zuniga C, Wollum A, Grindlay K, Douglas-Durham E, Higgins S, Barr-Walker J, et al. The impacts of contraceptive stock-outs on users, providers, and facilities: A systematic literature review. Glob Public Health. 2020; 1–17. doi:10.1080/17441692.2020.1850829
- Hasselback L, Dicko M, Viadro C, Ndour S, Ndao O, Wesson J. Understanding and addressing contraceptive stockouts to increase family planning access and uptake in Senegal. BMC Health Serv Res. 2017;17: 373. doi:10.1186/s12913-017-2316-y
- Bouzid M, Cumming O, Hunter PR. What is the impact of water sanitation and hygiene in healthcare facilities on care seeking behaviour and patient satisfaction? A systematic review of the evidence from low-income and middle-income countries. BMJ Glob Health. 2018;3: e000648. doi:10.1136/ bmjgh-2017-000648

- 39. WHO. Trends in maternal mortality 2000 to 2017: estimates by WHO, UNICEF, UNFPA, World Bank Group and the United Nations Population Division: executive summary. . WHO; 2019.
- 40. Harvard Chan School of Public Health MHTF. The Sustainable Development Goals and Maternal Mortality. In: The Sustainable Development Goals and Maternal Mortality [Internet]. [cited 4 Feb 2021]. Available: https://www.mhtf.org/topics/the-sustainable-development-goals-and-maternal-mortality/
- 41. Gill K, Pande R, Malhotra A. Women deliver for development. Lancet. 2007;370: 1347–1357. doi:10.1016/S0140-6736(07)61577-3
- 42. Glassman A, Duran D, Fleisher L, Singer D, Sturke R, Angeles G, et al. Impact of Conditional Cash Transfers on Maternal and Newborn Health. Journal of Health, Population, and Nutrition. 2013.
- 43. WHO. Standards for improving quality of maternal and newborn care in health facilities. World Health Organization; 2016.
- 44. Murray SF, Hunter BM, Bisht R, Ensor T, Bick D. Effects of demand-side financing on utilisation, experiences and outcomes of maternity care in low- and middle-income countries: a systematic review. BMC Pregnancy Childbirth. 2014;14: 30. doi:10.1186/1471-2393-14-30
- 45. Morgan L, Stanton ME, Higgs ES, Balster RL, Bellows BW, Brandes N, et al. Financial Incentives and Maternal Health: Where Do We Go from Here? Journal of Health, Population, and Nutrition. 2013.
- Kruk ME, Vail D, Austin-Evelyn K, Atuyambe L, Greeson D, Grépin KA, et al. Evaluation of A maternal health program in uganda and zambia finds mixed results on quality of care and satisfaction. Health Aff (Millwood). 2016;35: 510–519. doi:10.1377/hlthaff.2015.0902
- 47. Murray SF, Hunter BM, Bisht R, Ensor T, Bick D. Demand-side financing measures to increase maternal health service utilisation and improve health outcomes: a systematic review of evidence from low- and middle-income countries. JBI Libr Syst Rev. 2012;10: 4165–4567. doi:10.11124/jbisrir-2012-408
- 48. Hunter BM, Murray SF. Demand-side financing for maternal and newborn health: what do we know about factors that affect implementation of cash transfers and voucher programmes? BMC Pregnancy Childbirth. 2017;17: 262. doi:10.1186/s12884-017-1445-y
- 49. Hunter BM, Harrison S, Portela A, Bick D. The effects of cash transfers and vouchers on the use and quality of maternity care services: A systematic review. PLoS ONE. 2017;12: e0173068. doi:10.1371/ journal.pone.0173068
- 50. de Brauw A, Peterman A. Can conditional cash transfers improve maternal health care? Evidence from El Salvador's Comunidades Solidarias Rurales program. Health Econ. 2020;29: 700–715. doi:10.1002/ hec.4012
- 51. Barber SL, Gertler PJ. Empowering women to obtain high quality care: evidence from an evaluation of Mexico's conditional cash transfer programme. Health Policy Plan. 2009;24: 18–25. doi:10.1093/ heapol/czn039
- 52. Lim SS, Dandona L, Hoisington JA, James SL, Hogan MC, Gakidou E. India's Janani Suraksha Yojana, a conditional cash transfer programme to increase births in health facilities: an impact evaluation. Lancet. 2010;375: 2009–2023. doi:10.1016/S0140-6736(10)60744-1
- Gopalan SS, Durairaj V. Addressing maternal healthcare through demand side financial incentives: experience of Janani Suraksha Yojana program in India. BMC Health Serv Res. 2012;12: 319. doi:10.1186/1472-6963-12-319
- Okoli U, Morris L, Oshin A, Pate MA, Aigbe C, Muhammad A. Conditional cash transfer schemes in Nigeria: potential gains for maternal and child health service uptake in a national pilot programme. BMC Pregnancy Childbirth. 2014;14: 408. doi:10.1186/s12884-014-0408-9
- 55. Triyana M, Shankar AH. The effects of a household conditional cash transfer programme on coverage and quality of antenatal care: a secondary analysis of Indonesia's pilot programme. BMJ Open. 2017;7: e014348. doi:10.1136/bmjopen-2016-014348
- 56. Kahn C, Iraguha M, Baganizi M, Kolenic GE, Paccione GA, Tejani N. Cash transfers to increase antenatal care utilization in kisoro, uganda: A pilot study. Afr J Reprod Health. 2015;19: 144–150.

- 57. Powell-Jackson T, Mazumdar S, Mills A. Financial incentives in health: New evidence from India's Janani Suraksha Yojana. J Health Econ. 2015;43: 154–169. doi:10.1016/j.jhealeco.2015.07.001
- 58. Samuels F, Jones N. Cash transfers for maternal health: design opportunities and challenges in low-resource settings. Overseas Development Institute; 2011.
- 59. Handa S, Peterman A, Seidenfeld D, Tembo G. Income Transfers and Maternal Health: Evidence from a National Randomized Social Cash Transfer Program in Zambia. Health Econ. 2016;25: 225–236. doi:10.1002/hec.3136
- 60. Chaturvedi S, De Costa A, Raven J. Does the Janani Suraksha Yojana cash transfer programme to promote facility births in India ensure skilled birth attendance? A qualitative study of intrapartum care in Madhya Pradesh. Glob Health Action. 2015;8: 27427. doi:10.3402/gha.v8.27427
- 61. Randive B, Diwan V, De Costa A. India's Conditional Cash Transfer Programme (the JSY) to Promote Institutional Birth: Is There an Association between Institutional Birth Proportion and Maternal Mortality? PLoS ONE. 2013;8: e67452. doi:10.1371/journal.pone.0067452
- 62. Ng M, Misra A, Diwan V, Agnani M, Levin-Rector A, De Costa A. An assessment of the impact of the JSY cash transfer program on maternal mortality reduction in Madhya Pradesh, India. Glob Health Action. 2014;7: 24939. doi:10.3402/gha.v7.24939
- 63. Owusu-Addo E, Renzaho AMN, Smith BJ. The impact of cash transfers on social determinants of health and health inequalities in sub-Saharan Africa: a systematic review. Health Policy Plan. 2018;33: 675– 696. doi:10.1093/heapol/czy020
- Grainger C, Gorter A, Okal J, Bellows B. Lessons from sexual and reproductive health voucher program design and function: a comprehensive review. Int J Equity Health. 2014;13: 33. doi:10.1186/1475-9276-13-33
- 65. Brody CM, Bellows N, Campbell M, Potts M. The impact of vouchers on the use and quality of health care in developing countries: a systematic review. Glob Public Health. 2013;8: 363–388. doi:10.1080/17 441692.2012.759254
- Janisch CP, Albrecht M, Wolfschuetz A, Kundu F, Klein S. Vouchers for health: A demand side outputbased aid approach to reproductive health services in Kenya. Glob Public Health. 2010;5: 578–594. doi:10.1080/17441690903436573
- Obare F, Warren C, Njuki R, Abuya T, Sunday J, Askew I, et al. Community-level impact of the reproductive health vouchers programme on service utilization in Kenya. Health Policy Plan. 2013;28: 165–175. doi:10.1093/heapol/czs033
- 68. Bellows NM, Bellows BW, Warren C. Systematic Review: the use of vouchers for reproductive health services in developing countries: systematic review. Trop Med Int Health. 2011;16: 84–96. doi:10.1111/j.1365-3156.2010.02667.x
- 69. Bellows B, Kyobutungi C, Mutua MK, Warren C, Ezeh A. Increase in facility-based deliveries associated with a maternal health voucher programme in informal settlements in Nairobi, Kenya. Health Policy Plan. 2013;28: 134–142. doi:10.1093/heapol/czs030
- Cohen J, Rothschild C, Golub G, Omondi GN, Kruk ME, McConnell M. Measuring the impact of cash transfers and behavioral "nudges" on maternity care in nairobi, kenya. Health Aff (Millwood). 2017;36: 1956–1964. doi:10.1377/hlthaff.2017.0537
- 71. UN DESA. World Family Planning Highlight 2020. UN DESA Population Division; 2020.
- 72. FP2020. FP2020 Women at the Center: 2018-2019. FP2020; 2020.
- 73. Castle S, Askew I. Contraceptive Discontinuation: Reason, Challenges, and Solutions. FP2020 and Population Council; 2015. Available: http://ec2-54-210-230-186.compute-1.amazonaws.com/wp-content/uploads/2015/12/FP2020_ContraceptiveDiscontinuation_SinglePage_Final_12.08.15.pdf
- 74. Jain AK, Obare F, RamaRao S, Askew I. Reducing unmet need by supporting women with met need. Int Perspect Sex Reprod Health. 2013;39: 133–141. doi:10.1363/3913313
- 75. Eva G, Ngo T. MSI Mobile Outreach Services: Retrospective evaluations from Ethiopia, Myanmar, Pakistan, Sierra Leone and Viet Nam. London: Marie Stopes International; 2010 Oct.

- 76. Sultan M, Cleland JG, Ali MM. Assessment of a new approach to family planning services in rural Pakistan. Am J Public Health. 2002;92: 1168–1172. doi:10.2105/ajph.92.7.1168
- 77. Jarvis L, Wickstrom J, Shannon C. Client perceptions of quality and choice at static, mobile outreach, and special family planning day services in 3 african countries. Glob Health Sci Pract. 2018;6: 439–455. doi:10.9745/GHSP-D-18-00047
- Ngo TD, Nuccio O, Pereira SK, Footman K, Reiss K. Evaluating a LARC Expansion Program in 14 Sub-Saharan African Countries: A Service Delivery Model for Meeting FP2020 Goals. Matern Child Health J. 2017;21: 1734–1743. doi:10.1007/s10995-016-2014-0
- 79. Mwaikambo L, Speizer IS, Schurmann A, Morgan G, Fikree F. What works in family planning interventions: a systematic review. Stud Fam Plann. 2011;42: 67–82. doi:10.1111/j.1728-4465.2011.00267.x
- 80. USAID. High-Impact Practices in Family Planning (HIPs). Mobile outreach services: expanding access to a full range of modern contraceptives. May 2014 [cited 6 Jun 2021]. Available: https://www.fphighimpactpractices.org/briefs/mobile-outreach-services/
- 81. Prata N, Vahidnia F, Potts M, Dries-Daffner I. Revisiting community-based distribution programs: are they still needed? Contraception. 2005;72: 402–407. doi:10.1016/j.contraception.2005.06.059
- 82. Zulu JM, Kinsman J, Michelo C, Hurtig A-K. Integrating national community-based health worker programmes into health systems: a systematic review identifying lessons learned from low-and middle-income countries. BMC Public Health. 2014;14: 987. doi:10.1186/1471-2458-14-987
- 83. Rahman M, DaVanzo J, Razzaque A. Do better family planning services reduce abortion in Bangladesh? Lancet. 2001;358: 1051–1056. doi:10.1016/S0140-6736(01)06182-7
- Phillips JF, Jackson EF, Bawah AA, MacLeod B, Adongo P, Baynes C, et al. The Long-Term Fertility Impact of the Navrongo Project in Northern Ghana. Stud Fam Plann. 2012;43: 175–190. doi:10.1111/j.1728-4465.2012.00316.x
- 85. Debpuur C, Phillips JF, Jackson EF, Nazzar A, Ngom P, Binka FN. The impact of the Navrongo Project on contraceptive knowledge and use, reproductive preferences, and fertility. Stud Fam Plann. 2002;33: 141–164. doi:10.1111/j.1728-4465.2002.00141.x
- 86. IRH. Male engagement: Reducing unmet need for family planning. Institute of Reproductive Health, Georgetown University; 2014.
- 87. Hook C, Miller A, Shand T, Stiefvater E. Getting to Equal: Engaging Men and Boys in Sexual and Reproductive Health and Rights and Gender Equality. Washington DC: Promundo-US; 2018.
- 88. Ruane-McAteer E, Gillespie K, Amin A, Aventin Á, Robinson M, Hanratty J, et al. Gender-transformative programming with men and boys to improve sexual and reproductive health and rights: a systematic review of intervention studies. BMJ Glob Health. 2020;5. doi:10.1136/bmjgh-2020-002997
- 89. Dworkin SL, Fleming PJ, Colvin CJ. The promises and limitations of gender-transformative health programming with men: critical reflections from the field. Cult Health Sex. 2015;17 Suppl 2: S128-43. do i:10.1080/13691058.2015.1035751
- 90. USAID. High-Impact Practices in Family Planning (HIPs). Engaging Men and Boys in Family Planning: A Strategic Planning Guide. USAID: Washington, DC; 2018 Jan.
- 91. Ghanotakis E, Hoke T, Wilcher R, Field S, Mercer S, Bobrow EA, et al. Evaluation of a male engagement intervention to transform gender norms and improve family planning and HIV service uptake in Kabale, Uganda. Glob Public Health. 2017;12: 1297–1314. doi:10.1080/17441692.2016.1168863
- 92. Levy JK, Darmstadt GL, Ashby C, Quandt M, Halsey E, Nagar A, et al. Characteristics of successful programmes targeting gender inequality and restrictive gender norms for the health and wellbeing of children, adolescents, and young adults: a systematic review. Lancet Glob Health. 2020;8: e225–e236. doi:10.1016/S2214-109X(19)30495-4
- 93. Adamou B, Iskarpatyoti B, Agala C, Mejia C. Male Engagement in Family Planning: Gaps in Monitoring and Evaluation. Measure Evaluation, University of North Carolina at Chapel Hill; 2017 Sep.

- 94. Schuler SR, Nanda G, Ramírez LF, Chen M. Interactive workshops to promote gender equity and family planning in rural communities of guatemala: results of a community randomized study. J Biosoc Sci. 2015;47: 667–686. doi:10.1017/S0021932014000418
- 95. WHO. Preventing unsafe abortion. World Health Organization; 2020 Sep.
- 96. Guttmacher Institute. Unintended Pregnancy and Abortion Worldwide. Guttmacher Institute; 2020 Jul.
- 97. Zhou J, Blaylock R, Harris M. Systematic review of early abortion services in low- and middle-income country primary care: potential for reverse innovation and application in the UK context. Global Health. 2020;16: 91. doi:10.1186/s12992-020-00613-z
- 98. Singh S, Remez L, Sedgh G, Kwok L, Onda T. Abortion worldwide 2017: uneven progress and unequal access. New York: Guttmacher Institute; 2018. doi:10.1363/2018.29199
- Lavelanet AF, Johnson BR, Ganatra B. Global Abortion Policies Database: A descriptive analysis of the regulatory and policy environment related to abortion. Best Pract Res Clin Obstet Gynaecol. 2020;62: 25–35. doi:10.1016/j.bpobgyn.2019.06.002
- 100. Chemlal S, Russo G. Why do they take the risk? A systematic review of the qualitative literature on informal sector abortions in settings where abortion is legal. BMC Womens Health. 2019;19: 55. doi:10.1186/s12905-019-0751-0
- 101.McGuinness S, Montgomery J. Legal determinants of health: regulating abortion care. Public Health Ethics. 2020;13: 34–40. doi:10.1093/phe/phaa014
- 102.Kim C, Sorhaindo A, Ganatra B. WHO guidelines and the role of the physician in task sharing in safe abortion care. Best Pract Res Clin Obstet Gynaecol. 2020;63: 56–66. doi:10.1016/j. bpobgyn.2019.07.007
- 103. Footman K, Keenan K, Reiss K, Reichwein B, Biswas P, Church K. Medical Abortion Provision by Pharmacies and Drug Sellers in Low- and Middle-Income Countries: A Systematic Review. Stud Fam Plann. 2018;49: 57–70. doi:10.1111/sifp.12049
- 104.Jelinska K, Yanow S. Putting abortion pills into women's hands: realizing the full potential of medical abortion. Contraception. 2018;97: 86–89. doi:10.1016/j.contraception.2017.05.019
- 105.SAIGE. Campaigning for Access to Medical Abortion in the Global South. September 28 Women's Global Network for Reproductive Rights; 2020.