

**ERG Discussion Paper 05**

# **A gender lens to advance equity in immunization**

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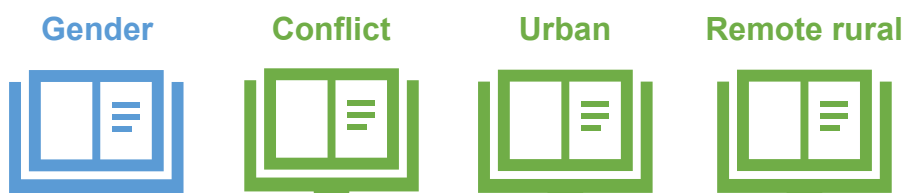
## A gender lens to advance equity in immunization

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UNICEF and the Bill and Melinda Gates Foundation have convened a high-level Equity Reference Group for Immunisation (ERG) to generate innovative ideas with a view to identifying new approaches and best practices to accelerate progress on equity in immunisation. Operating as an action-oriented ‘think tank,’ the group reviews evidence regarding what has worked across health programmes and other sectors, considers innovations that might work for immunisation, and makes recommendations for guidance, policies and programming to reduce inequities.

Members of the ERG are drawn from key partner organisations, academic experts in critical topics such as metrics, gender and health systems development, and senior leaders from ministries of health. Together the members work to ensure that diverse inputs and perspectives are shared to identify the best way forward.

The ERG has prioritised thematic areas of work centred around poor urban areas, conflict settings and remote/rural areas. The ERG has also begun exploring innovative approaches to measure and track immunisation equity, and successful approaches from outside of immunisation and health that can inform equity programming for immunization (e.g., human rights-based approaches, behavioural economics, social policies, etc.). During 2018 the group has conducted in-depth analyses across thematic areas such as gender and the priority geographic settings, will seek opportunities to provide actionable inputs to broader immunisation efforts, and will seek opportunities to test the innovative policies, practices and tools identified within country settings using implementation research methods.



This paper is part of a series produced by the Equity Reference Group for Immunization (ERG). The series focuses on defining key challenges in equitable immunization coverage and highlighting actionable recommendations that can help countries reach 100 percent coverage for routine immunizations. This is a working document. It has been prepared to facilitate the exchange of knowledge and to stimulate discussion. The text has not been edited to official publication standards.

The findings, interpretations and conclusions expressed in this paper are those of the authors and do not necessarily reflect the policies or views of the organisations to which Equity Reference Group members are affiliated. The designations in this publication do not imply an opinion on legal status of any country or territory, or of its authorities, or the delimitation of frontiers.

The authors would like to acknowledge numerous individuals for their contributions to this working paper, including those who gave their time to share experiences and information during key informant interviews. Each of these individuals is listed in Annex 2.

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## Executive Summary

Within the context of substantial investment in – and significant progress on – childhood immunization worldwide, important inequities remain across a range of societal disadvantages, including poverty, geographic remoteness, security, and gender inequities.

In this paper, we present an overview of gender-related inequities and barriers to immunization with the aim of stimulating further thinking and discussion around these problems. While the primary focus is on child immunization, we include additional information relevant to adolescent vaccination, in light of the widespread introduction of Human Papillomavirus (HPV) vaccination.

### ***Defining the problem and opportunity for impact***

We begin with a set of definitions as well as an overarching perspective on how gender inequities – across contexts – can influence both the demand for and supply of immunization. We make the case that it is critical to consider the ways in which gender interacts with other determinants to shape disparity and mediate immunization uptake. In addition, there are different pathways through which gender can influence implementation efforts and outcomes, which underlines the importance of comprehensively addressing gender inequity as part of health systems strengthening, through efforts at community level as well as in each tier of the health system. Further, policies may also amplify or temper gender inequity.

### ***Challenge statements***

We present a core set of challenge statements that highlight the different pathways through which gender inequities can interact with implementation. These are:

1. Mothers and other women are typically the primary caregivers for their children, but their lower status in the household and community limits their capacity to act on their own and their child's behalf.
2. Women are acutely affected by physical and time barriers to accessing immunization services (e.g. distance to services, inconvenient times of services, long queues). These barriers may be amplified or mitigated by other elements of their social position, such as economic status, ethnicity, marital status, age, educational status, caste, and the socio-cultural context, including gender norms.
3. Recognizing that access to health literacy is – in many parts of the world – gendered, women lacking health literacy can have a limited understanding of immunization (such as knowing which diseases vaccines prevent, vaccine dosage and schedule), low motivation to vaccinate their child, and weak capacity to negotiate the health system.
4. Women's experience of quality of service - encompassing responsiveness of services; range of services available; provider attitudes, skills and behaviour; availability of female providers – may deter them from attending health services.

### ***What we know today***

While many of these challenges may be well known to country decision makers and programme implementers, less is known about the best metrics to use to identify the extent of these challenges, as well as the best strategies to use to address them. Further, while various operational guidance materials exist which encourage countries to use a gender lens within programming, many of these materials do not offer concrete guidance to countries on the interventions that may be required and/or the process of implementation.

Approaches to understand and address gender in health vary. An *integrationist* approach aims to reduce gender-related disadvantages in access to health services, quality of services and health

outcomes. A *transformatory* approach seeks to refocus the provision of health-related services and interventions, to ensure they address power relations and promote women's rights and interests equitably with men's. We highlight that it is critical to ensure that interventions do not exacerbate gender inequalities by reinforcing existing power differentials.

### ***Change agents***

Evidence suggests that a range of agents can play a fundamental role in addressing gender inequities in immunization. We outline some of the key change agents that can make a difference, and why they should be targeted and engaged.

### ***Promising approaches***

Drawing on interviews with multiple key informants, and a review of reports, articles, and other materials that were published or produced, we then present some of the promising approaches we identified that have been evaluated, designed based on formative research or a theory of change, or that have documented implementation experience and lessons learned. These approaches aimed to:

- Widen the audience for IEC; strengthening and sustaining social mobilization in under-immunized communities
- Encourage fathers' greater input into child care, and integrate their involvement in child health
- Make adjustments to service provision based on community perspectives of time, location, modality and quality
- Increase local support and promote a shared sense of purpose and accountability
- Use descriptive monitoring and improved targeting to identify those who are left behind

### ***Actionable recommendations***

Based on this analysis, we conclude the paper with a set of actionable recommendations for programming, which aim to address both demand-side and supply-side levers. We also outline some of the remaining questions that require additional research to better understand implementation of the various approaches. Given that measurement of gender inequalities and barriers to immunization can be quite challenging, we have included as an annex a sampling of metrics currently being used and recommended across global development organisations and research institutions. Additional discussion and review of these metrics is needed to identify those that might be feasible and helpful within specific country programmes aiming to reduce gender-related inequalities and barriers to immunization.

## Defining the problem and opportunity for impact

- **Sex** refers to a biological construct, whereby an individual is defined as being male or female according to genetics, anatomy and physiology [1].
- **Gender** broadly refers to the social construction of roles, behaviours, activities, and attributes that are ascribed to girls and boys, women and men and other genders; the meaning of gender is negotiated by individuals and societies and therefore varies over time and across contexts [2].
- **Gender inequality** can be described as measurable differences in experiences and outcomes across gender [3,4].
- **Gender inequity** captures differences in opportunity for men and women, boys and girls, which result in, for example, unequal life chances or access to health services. Inequality and equity are measurable quantities. Inequity and equity may be measurable; they are also value-based concepts in that they entail judgements of what is unfair and unjust [3,4,5].

The analysis of gender inequity in **childhood immunization** has tended to concentrate on i) sex differentials in coverage between boys and girls, and ii) how broader aspects of gender inequality – particularly mother’s education – affect child immunization for both sexes.

- Boys and girls have the same likelihood of being vaccinated in most low- and middle-income countries (LMICs) [6,7]. A few exceptions exist at sub-national levels within socio-economically and geographically marginalized populations, and are highly context-dependent, in that outcomes may favour boys in some contexts, and girls in others [7,8].
- Children of more educated mothers are significantly more likely to be immunized, and this is consistent across countries. Part of the relationship between mother’s education and childhood immunization coverage is explained by socio-economic status and contextual factors, since more educated mothers tend to live in more affluent households and in areas with better access to health care and services [9,10]. Furthermore, certain living conditions or characteristics compound to exacerbate vulnerability or advantage; for instance, children of younger mothers without education have compounded disadvantage, which can be exacerbated if they belong to a poor household [6].

While the primary focus of this paper is on child immunization, through this sidebar running along some of the sections, we attempt to stimulate further thinking and discussion around gender and equity in **adolescent vaccination**, in light of the widespread introduction of Human Papillomavirus (HPV) vaccination.

The WHO-recommended primary target population for HPV vaccination is girls aged 9-14 years, prior to sexual debut, i.e. before the first exposure to HPV infection (Human papillomavirus vaccines: WHO position paper, May 2017). Various delivery strategies can be combined, including health facility-based, outreach to community and/or schools, and campaigns (ib).

By June 2017, 46 LMICs had undertaken HPV vaccine demonstration or pilot projects to evaluate delivery strategies prior to national introduction [11]. As of February 2019, 11 Gavi-eligible countries have introduced HPV vaccination at scale, 11 more countries are preparing to do so by the end of 2019, and 3 additional countries have been approved for Gavi support and are in the process of planning for nationwide introduction in 2020. The successful rollout of HPV vaccination raises gender and equity considerations that may differ from those that have immunization of infants and children as their primary objective, and may require adaptive strategies since current efforts have not yet recognized adolescent health as a specific target for health programming at scale [12]<sup>1</sup>.

<sup>1</sup> Equity considerations may also differ in consideration of cross-protection or herd protection produced by HPV vaccination, which makes controlling HPV very different from controlling other vaccine-preventable infectious diseases. Notably, scientific data show substantial long-term reductions in HPV infections and related diseases in unimmunized women and men, as a result of HPV vaccination of women (Human papillomavirus vaccines: WHO position paper, May 2017).

The analysis of immunization uptake across a range of socio-economic, demographic and geographic characteristics can help to identify low coverage sub-groups, and suggest factors associated with low coverage. However, developing a full understanding of how gender inequity hinders children and adolescents from being immunized requires that we consider supply and demand-side issues such as:

1. The ways in which gender interacts with wealth, education, ethnicity/caste, religion, migration status, etc. to shape disparity and mediate immunization outcomes [1,13]. This perspective – related to the concept of intersectionality in the literature - has much to offer in supporting a more precise identification of inequalities, in developing intervention strategies that target underlying causes of marginalization, and ensuring results are relevant within specific communities [14].
2. The different pathways through which gender can influence implementation efforts and outcomes, through patterns of individual and collective decision-making, access to and control over resources for service use, and the quality of health care delivery and biases in service provision [7,8]. This underlines the importance of comprehensively addressing gender inequity as part of health systems strengthening, through efforts at community level as well as in each tier of the health system.

Gender interacts with other socio-economic determinants as well as with age and lifecycle [13]. Adolescence (the time period between 10 and 19 years of age) is marked by a transition of social roles in family, community, and school/employment [12]. As young girls grow into adolescence, cultural and societal norms start yielding greater importance and influence [15]. Recently, there has been an increased interest in younger adolescents (up to 14 years) and marginalized groups such as out-of-school adolescents. Developing a full understanding of these interactions and manifestations of gender inequity within this population group hinges on developing an evidence base on which analysis is conducted.

The availability and introduction of HPV and other new vaccines that go beyond the traditional EPI schedule requires a change of thinking beyond childhood, and alignment to a life course perspective or continuum-of-care approach to delivery [16]. Adolescence is an opportunity to reverse the prior life disadvantages to better health outcomes in the short term and into adulthood [17,18]. Just as women's Tetanus Toxoid (TT) vaccination during pregnancy has shown to be a consistent predictor of child vaccination [7], young girls' and women's cumulative exposure to vaccination from adolescence through childbearing age may create a virtuous cycle of acceptance, understanding of the importance of vaccination, and ultimately utilization – leading to increases in children's immunization.

It is worth noting that gender inequities cut across the rural-urban divide, and are often pronounced within geographically marginalized populations. Evidence shows a tendency for geographical clustering of disadvantaged subgroups [19]: new data from WHO and UNICEF (2018) indicate that approximately 40 percent of the world's unimmunized children live in countries that have fragile or humanitarian settings, or are affected by conflict [20]. In addition, a growing share live in middle-income countries, where inequity and marginalization, particularly among the urban poor, prevent many from getting immunized [20]. Further, poor children living in remote rural areas, although long identified as a priority target population for immunization programmes, continue to be underserved [20].<sup>2</sup> There are also other contexts with inequities and underserved children, including peri-urban areas, rural areas that are not necessarily remote, and urban areas. (For example, in India, there are other villages with socially marginalised groups who may not have access to services, as well as

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<sup>2</sup> Working Papers focusing on the priority thematic areas of children affected by conflict, children living in urban poor settings, and children living in remote rural areas are available on the ERG's website: <https://sites.google.com/view/erg4immunisation/discussion-papers>.

urban residential areas that have clusterings of support staff and/or domestic help with children who may be under-immunized.)

This paper provides an overarching perspective on gender inequities – cutting across contexts, while highlighting how the implications of gender and intersecting stratifiers are dependent on context.

## Challenge statements: the gendered facets of demand and supply side barriers to vaccination

This section highlights different pathways through which gender inequities interact with implementation – on both the demand and supply side – and can undermine immunization programmes' achievements. It also shows how gendered experiences and their connection with immunization are grounded in the interplay among individual, household, community and service levels – as are pathways of change and intervention impact.

Mothers and other female family members are typically the primary caregivers for their children, but their lower status in the household and community limits their capacity to act on their own and their child's behalf.

- In many societies, healthcare-related decision-making is negotiated within the household and extended family. In this collective process, mothers may be limited in their bargaining power in the gendered (vis-à-vis the male head) and generational (vis-à-vis elderly women) power dynamics of the household [21,22].
- Although immunization services are usually free of charge, health services entail indirect costs that are predominantly related to transportation, and may include informal charges. In low resourced settings, a mother needs to raise the necessary resources, or mobilize the necessary means of transport to take her child to vaccination [22]. Yet, in comparison to men women tend to have poorer access to, and control over, resources and income generating opportunities within households and communities [13]. This is particularly the case for single mothers, and those in low-income households. In the presence of conflicting needs, subsistence takes priority over health-related services in general, and preventive interventions like vaccination in particular [22].
- There is increasing evidence on the influence of community gatekeepers on utilization of immunization services. For young mothers, elderly women may be a more authoritative and reliable source of knowledge and information than health professionals [22]. Furthermore, key authority figures, religious institutions, civil society organizations, and

Adolescent girls<sup>3</sup> face barriers in access to free, reliable and confidential health information.

Girls are not passive recipients of the HPV vaccine. Their active engagement – which is acknowledged for instance through their direct targeting with information, education and communication (IEC) activities - is important not only for the uptake and continued impact of HPV vaccination in preventing cervical cancer. It is also important because a positive experience can lay the foundation for a lifetime of health-enhancing behaviors for herself, and for her future children.

However, compared to their older peers, young adolescents have less access to health workers for credible information, and less access to support on mobile phones – such as mobile platforms that enable girls to voice their opinions, questions, and concerns [12].

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<sup>3</sup> This age group is subject to all other drivers of inequity for childhood immunization - e.g. parents' socio-economic status and education, geographic location, migrant and refugee status, etc. – and nonetheless experience barriers that are specific to their relative age and school status. The focus here is on the latter.



local media outlets may formulate conflicting positions towards vaccination, which may gain currency in the respective settings [7,22]. Where resistance to vaccination is prevalent, this resistance is typically led by men and other authority figures in the community. Whether or not they agree with the view of these gatekeepers, women in these settings often feel considerable pressure not to vaccinate their child [7,22].

- Women's opportunity to voice their concerns, and power to influence decisions and community programming, including many health initiatives, is often limited by socio-economically and culturally defined gender roles [23]. Family wealth, caste/ethnicity and religion affect how women can occupy a public space, or the community roles for which they are eligible [24]. These intersecting hierarchies create and reproduce systemic differences in the positioning of different groups of people within a community [23], and shape people's relationships to communities [24a]. For instance, women may be excluded from decision-making, and yet still expected to participate in or carry out activities they were not consulted about [25,26]

Women are acutely affected by physical and time barriers to accessing immunization services (e.g. distance to services, inconvenient times of services, long queues, unreliable vaccine supplies, unpredictability of health posts in areas with difficult access). These barriers may be amplified or mitigated by other elements of their social position, such as economic status, ethnicity, marital status, age, educational status, caste, and the socio-cultural context, including gender norms.

- Women's responsibility for routine domestic work (i.e. work required for the maintenance of the household – including cooking and cleaning, and fetching water and firewood - and the care of children and the sick) and livelihood activities, pose heavy demands on their time and may leave them with little time and opportunity for health seeking [7,22,27]. Time costs owing to poor infrastructure are greatest in remote areas, while increasing participation in the workforce is a major time barrier in urban areas. Living in insecurity creates additional emotional distress which can shift mothers' focus to higher priority needs, rather than considering preventive interventions like vaccination [22].
- Women may experience lack of mobility due either to gender norms that restrict female mobility in public, or lack of transportation [22,25]. Mobility may also be restricted by safety and security concerns— exacerbated in conflict settings, and an increasing concern in poor urban contexts where violence and informal drinking establishments for

Young adolescents tend to have fewer contacts with health services than younger children and older adolescents.

The setting for adolescent health care varies across countries: some provide services primarily through health facilities, while others additionally provide health care through the school system or community agencies. Overall however, across LMICs, services targeting adolescents are highly fragmented, poorly coordinated and uneven in quality [31]. Significant numbers of adolescents – especially the most marginalized or vulnerable – are not adequately reached by interventions intended for them [32]. When the internal heterogeneity of this population is not addressed by targeted implementation strategies, more vulnerable adolescents (such as very young adolescents and adolescents living in rural areas), are less likely to benefit from interventions [33].

In low-resourced settings, adolescent girls face barriers in access to education, and challenges to regular attendance.

In Sub-Saharan Africa alone, 23% of girls of primary school age (about 6 to 11 years) and 36% of girls in lower-secondary school age (about 12 to 14 years) were not enrolled in school in 2014 [34]. Factors associated with poor school enrollment and completion – such as household low socio-economic status and rural residency, among others - coincide with the risk factors for missed childhood vaccinations as well as early marriage, age-discordant relationships, and

men, together with normalization of gender-based violence, can result in women's increased exposure to harassment [28].

Recognizing that access to health literacy is – in many parts of the world – gendered, women lacking health literacy can have a limited understanding of immunization (such as knowing which diseases vaccines prevent, vaccine dosage and schedule), low motivation to vaccinate their child, and weak capacity to negotiate the health system.

- A large body of evidence demonstrates the strong link between maternal education and child health. Spillovers in the community have also been documented, with positive externalities on childhood immunization, produced by the education of other local women [29]. Health literacy<sup>4</sup> has been shown to be an important mediator in the relationship between maternal education and child health outcomes [26]. Women who are more literate, regardless of their educational level, are more likely to vaccinate their children – in both urban and rural settings [26]. Other studies focusing on the impact of knowledge of vaccination and its benefits, confirm a strong effect on immunization outcomes, at each level of education [7,10]. Most importantly, as opposed to formal education, health literacy as well as health knowledge are modifiable and can be gained informally [10,26].
- Where education levels and health systems are particularly weak – such as in rural settings, even moderate levels of health literacy confer an advantage, leading to greater use of health services [26].

sexually transmitted infections including HPV [54].

Furthermore, for girls who are enrolled in school, regular attendance may be deterred by responsibilities for household chores, long distances, insecure travel routes, inadequate facilities to manage menstruation [35,36], as well as having a male teacher [37]. Even in countries with comparatively high enrollment rates, school absenteeism was the primary reason for not being vaccinated in school-based HPV vaccine demonstration programmes [38].

Adolescents living in slums, remote rural areas or conflict-affected zones are typically among the poorest and most vulnerable. Potentially, they have the most to gain from education, yet they live in areas with the most limited basic services [39].

Vulnerable girls are less likely to access preventive cervical screening services later in life.

HPV vaccination is a primary preventive intervention and does not completely eliminate the need for cervical screening later in life, since the existing vaccines do not protect against all high-risk HPV types (Human papillomavirus vaccines: WHO position paper, May 2017). It could be argued that characteristics that lead to being out-of-school

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<sup>4</sup> Health literacy can be broadly defined as “capacity to obtain, process and understand basic health information and services needed to make basic health decisions” [30].

Women's experience of quality of service - encompassing responsiveness of services; range of services available; provider attitudes, skills and behaviour; and availability of female providers – may deter them from attending health services.

- Mother-provider interactions at the health facility are underpinned by socio-economic and gendered differentials (e.g. poor women have to interact with higher-status vaccinators – who may be men, and also higher-status mothers) [8]. The social distance between user and provider – i.e. the gaps with respect to gender, education, socio-economic status, ethnicity/caste, and other social stratification - are important in shaping the interaction, which is an important marker of quality of care [13]. Furthermore, lack of privacy and confidentiality in health facilities can result in mother-provider interactions being shared publicly, and exposes disadvantaged women to public scrutiny or stigma [8,22].
- In areas where female seclusion and/or gender segregation are prevalent – e.g. where socio-cultural and/or religious norms and practices restrict social and physical contact between men and women - women may not seek care for themselves or even for their children unless they have access to a female provider [40].
- Women's roles as health providers, both within the formal health system and as informal providers, and the gendered dimensions of their work are increasingly recognized as crucial elements in the gap between health policy and implementation [40]. Female providers, particularly those providing direct services, face gender biases and discrimination themselves in the context in which they work [25,40]. Furthermore, female community health workers may be of higher status within their communities, which can result in exclusion from service for children from low status community groups. However, they are often considered to be low status within the health system and are too often under-recognized, underpaid, and under-supported [41].
- As immunization services target mothers as the primary caretakers of children, they are typically gendered in the way they are presented, the kind of information they provide, how they are organized and managed [7]. The current health system context may discourage fathers to share responsibility for accessing healthcare for their children [22].

(poverty, marginalization, conflict) will also likely affect access and/or uptake of screening services.

## What we know today

### State of knowledge

Decision-makers are increasingly under public pressure to consider the effects of programmes and policies on equity, and be responsive to the unjust distribution of health and health care resources [42,43]. Evidence on which interventions can reduce the inequity gaps is thus critically important. However, while there is much research evaluating effects of some implemented interventions on improving immunization outcomes, there is a dearth of work analyzing whether these interventions have helped or hampered reducing inequities – and this work primarily addresses economic disparities [43,44]. This state of knowledge is mirrored in the limited capacity of country decision makers and programme implementers to identify gender inequities and strategies to address them, in the context of immunization programmes. Internal analysis of the Health System Strengthening (HSS) Proposals submitted to Gavi in 2016 found an inadequate understanding of the distinction between gender-related barriers and sex-discrepancies in vaccination coverage, and noted that equity considerations focused on economic determinants [45]. Furthermore, capacity for providing a contextual analysis of gender-related barriers to immunization, an analysis of gender equity gaps, and measures to address them was considered adequate in only 11 of the 37 Proposals for Vaccine Support that were submitted between November 2016 and June 2017 [45].

### Global guidance

Encouraging countries to introduce a gender lens into their proposals and performance evaluation aspects, and calling for more sex-disaggregated immunization data have been important components of promoting a gender perspective across the implementation cycle, and enabling evidence-informed policy analysis [8]. Numerous gender frameworks, guidelines and tools have been developed by a variety of agencies and organizations, and differ in their assumptions of what needs to be analyzed and addressed [2]. Some of these are included in Annex 1. As these frameworks tend to be an expression of a donor or an agency's policies and systems for gender mainstreaming, they are often structured around planning and review cycles – from country assessments to conceptualization of programming to M&E. The WHO's innov8 approach, for instance, provides a framework to review “how national health programmes can better address equity, gender, human rights and social determinants of health in a way that reflects their overlapping and evolving relation to each other”. This review is to be aligned with, and feed into, existing national programme planning and review processes [46]. Gavi's HSS programming guidance provides examples of practical interventions that have been tried in countries and corresponding monitoring and evaluation indicators for consideration. It is part of a process that is complemented by in-depth discussions at country-level, for example, through joint appraisals. Overall, however, these frameworks do not offer comprehensive and concrete guidance to countries on the interventions that may be required and/or the process of implementation.

### Analytical approaches

There are different approaches to gender in health, which are concerned with different outcomes. Some introduce a gender perspective into policy processes but do not challenge existing policy paradigms, while other approaches involve

rethinking of programme goals and policy from a gender perspective [47]. In health, the former or *integrationist* approach aims to “reduce gender-related disadvantages in access to health services, quality of services and health outcomes” [47, p.1107]. The latter, or *transformatory* approach, seeks to “refocus the provision of health-related services and interventions, to ensure they address power relations and promote women’s rights and interests” [47, p.1107]. In this perspective, a number of interventions that may be helpful in the short and medium term may contribute – from a gender transformatory perspective - to exacerbating gender inequalities by reinforcing existing power differentials. This understanding is critical for assessing the potential for unintended consequences of possible approaches. A systematic review of the empirical evidence on changes in men and women’s interactions as a result of mHealth interventions well illustrates this concern. While mobile-based programmes geared towards women have shown to increase women’s autonomy in seeking health information and services, in some settings they have also contributed to rising conflict about who in the couple would ultimately own the mobile phone and how it would be used, or shifts in household spending due to increased airtime expenses [48]. Understanding the complexity of gender relations in any given context is paramount, so that interventions implemented do not harm women by reinforcing negative gender norms.

#### Lessons from gender literature

Gender integration has been strongest for health areas where there is a clear link between inequitable gender relations and health risks or vulnerability, such as HIV/AIDS, gender-based violence or family planning. There are also more initiatives with demonstrated results in these areas [35]. In contrast, there are fewer interventions addressing and evaluating the link between gender inequities and child health outcomes [35]. However, there is scope to build linkages to existing gender equity initiatives in areas of adult and adolescent health, to create synergistic benefits for children’s health [49]. It is also worth noting that the advantage conferred by more equitable gender dynamics is not specific to health. Many of the associations between promoting gender equity and improvements with a variety of health outcomes are cross-sectoral [40], in that many interventions that are either health enhancing or outside the health sector (e.g. in education, democracy and governance, infrastructure and other areas) can help achieve health and gender equity objectives as well.

#### Intersecting inequalities

Acknowledging the existence of multiple intersecting identities is an important step in understanding the complexities of health disparities for marginalized populations. Across countries, the women and girls who are excluded from vaccination programmes are those who experience multiple forms of marginalization, including based on their sex, age, (dis)ability, caste, ethno-religious identity or migration status. Identities and experiences of exclusion interact in multiple ways, leading to clustered deprivation where women and girls may be simultaneously disadvantaged in their access to health, quality education and decent work [50]. In India for instance, belonging to a Scheduled Caste or Tribe can increase a woman’s exposure to mortality by 14.6 years, in comparison to higher caste women. In Nigeria, primary school attendance is 66 per cent among girls overall but only 12 per cent among poor Hausa girls from rural areas [50]. This perspective highlights the diversity of women’s experiences, and the need for considering these diverse realities in the

formulation of strategies for achieving gender equity and sustainable development.

#### The ecology of implementation

The effectiveness of interventions to change gender inequities is dependent on multilevel strategies, promoting change at the individual level and simultaneously shaping supportive structures at the household, community and health systems levels to encourage and support health-sustaining practices such as vaccination [51]. Policies may also amplify or temper gender inequity [52]. While the policy level is beyond the scope of this work, questions remain as to whether interventions can produce social change in the absence of an enabling policy environment [53].

There is a need for programmatic learning about how to most effectively address gender inequities in the context of immunization programmes. The next two sections outline the change agents and entry points for programming that might provide promising avenues for addressing gender-related barriers to immunization services.

## Change agents

Evidence suggests that different agents can play a fundamental role in addressing gender inequities in immunization. This section highlights how they can make a difference, and why they should be targeted and engaged as change agents.

### Men

- **As husbands or a parent:** Men's financial contributions to the household remain one of the most significant factors in determining child health [49]. Their involvement in decision-making around child care, and their participation in the care itself, can increase the likelihood that positive decisions are made to seek immunization services.
- **As clients:** It's important to recognize that men may also have social support needs requiring referral to external social support mechanisms, especially in challenging settings such as conflict areas and IDP camps, or urban slums. Engaging them in questions about their children's immunization might encourage them to participate in conversations about health.
- **As influencers** in the broader societal network (e.g. community facilitators, cultural leaders, religious or political leaders) who can have considerable influence in shaping normative values related to vaccine acceptance, and **allies** in women's empowerment initiatives. Programmes with the potential to shift gender roles by empowering women through improvements in knowledge, decision-making and economic gains, need to consider the roles and interests of men as potential partners in empowerment efforts [35,48].

**Peers** (i.e. HPV vaccine beneficiaries and more broadly adolescents in the same age group or slightly older)

- **As mobilizers:** they are well positioned to reach and positively influence their peers who are out-of-school or not regularly attending school [54].
- **As facilitators,** through contributing to disseminating information materials, or referring and accompanying adolescents to health centres [55].

### Teachers

- As credible **influencers:** they are trusted by their pupils and by the community.
- As **facilitators:** through the school health programme, they can ensure linkages with the health facility, and referrals for adolescents needing health services.

### Women's groups

- **For social cohesion or integration,** by providing a space for women's dialogue and collective empowerment. Studies have shown that some aspects of women's time poverty may be mitigated where mothers can share the burden of child care in the household with more available carers, and where the mother has female peers [56]. Women lacking assistance from family or the community may also lack the social support networks that could encourage health seeking, e.g. with financial assistance or help with chores [22]<sup>5</sup>.
- **For participation,** through encouraging mothers' voices in service planning and programmes, and gathering direct feedback and guidance for services to be responsive to local needs.
- **For capacitation,** through empowering women with knowledge, motivation and self-efficacy [57]. Evidence shows that improved maternal health literacy may have contributed to the beneficial effects of women participation in groups to improve maternal and neonatal health in LMICs [59].

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<sup>5</sup> Weak family support and community cohesion may be exacerbated in communities that are less well-established, or more fluid, with heterogeneous and transient rather than well-established populations - e.g. in many urban areas [57, 58].

## Elderly women

- Studies have highlighted the important role of elderly women whose authority in the household and community (“gatekeepers of social norms”) may help or hinder younger women’s negotiations over decisions and resources that affect their children [21,56,60]. Taking into account the roles played by household members other than the mother, and engaging alternative household decision makers, may provide the opportunity for improving child health outcomes.

## Female providers

- In some contexts, women are critical for accessing women. When women’s use of public space is structured by gender norms, female front-line workers have greater access to building relationships with mothers. Women on the front line communicate directly with female caregivers and indirectly with other women in the community, and can enable a larger capacity for trust.

## Promising approaches

This section draws on interviews with selected key informants, and a review of reports, articles, and other materials that were published or produced. As such, this is a preliminary exploration focusing on approaches that have been evaluated, or have been designed based on formative research or a theory of change and are undergoing pilot testing, or approaches that rely on documented implementation experience and lessons learned. We also explicitly sought examples of community-level approaches, among others, as well as examples from other fields such as HIV/AIDS, family planning and maternal and child health, in which health outcomes are also strongly influenced by gender barriers.

Widening the audience for IEC; strengthening and sustaining social mobilization in under-immunized communities.

- In addition to mothers, systematically engage fathers and other decision makers in the household - such as elderly women - on awareness and the importance of child (and adolescent) vaccination. Countries have used different applications of this approach, for instance:
  - Young men and elderly women are engaged as volunteers in the context of a Community Action Process implemented in the Nigerian State of Zamfara, and provided with training and information on basic health, Polio and routine immunization – and more broadly child wellbeing – status of their settlements.
  - Community members lead the development and production of [customized health education media](#) in the “Projecting Health” project PATH has implemented with partners in India.
  - [Kiran Sitara](#) is a programme of the Sindh Education Department and other partners in Pakistan to build a network of trained adolescent school going girls to promote behaviour change and create referral networks, conduct household screenings within low income populations. While the original focus of this programme was on TB, there is now a trial going on applying the same model to immunization.
  - In India, the BBC World Service Trust developed [TV messaging](#) for the National Rural Health Mission (NRHM) to target men using slots at prime time (when they are most likely to watch TV).



- Strengthen caregivers' health literacy through innovative and context specific approaches, especially in areas with weak health systems and education levels.
  - Approaches based on participatory learning are being pilot-tested for cost-effectiveness and scalability in rural Uttar Pradesh (India).
  - A ['talking book'](#) has been designed for low-literacy women in Northeast Nigeria. Volunteer Community Mobilizers take it into communities and 'read' through with local women. A gold sticker on the front cover attests to the Islamic Society's endorsement.
- Utilize educational and other institutions at the national level to assist in planning and developing contextualized IEC materials. Partnership between health and education has been one of the [Social Mobilization Network \(SMNet\)](#)'s<sup>6</sup> innovations. Coordination between these two sectors has also proved critical for effective HPV vaccine delivery [11]. In India, the Self-Employed Women's Association (SEWA) is an organisation of 4mn poor, self-employed women workers who comprise more than 90% of the female workforce in the unorganized sector. Cross-sectoral partnerships with such institutions may leverage capacity for developing content and media that can reach low-literacy populations, as well as ethnic and language minorities.
- Engage community members and decision makers on the value and importance of HPV vaccination, emphasizing safety and efficacy and responding to misinformation, if any.

Encouraging fathers' greater input into child care, and integrating their involvement in child health

- Create communication platforms and related delivery strategies to promote positive behaviours related to early childhood development and nurturing care.
  - [One approach is being pilot-tested in Uttar Pradesh](#) and focuses on delivering the same messaging to both mothers and fathers – notably on ensuring that the child is fully immunized, and that parents wash their hands with soap at key occasions.
- Complement women's group interventions with father involvement programmes, including facilitating regular sessions with women and men to strengthen gender equal parenting and decision-making processes.
  - [CARE Village Savings and Loan Associations \(VSLA\)](#) and [Promundo Program H](#) (designed for young men) approaches are used numerous countries in Latin America, Africa and Asia. There has been an innovative attempt to combine them in response to knowledge and information expressed by households on the role men can contribute to supporting their spouses. In addition, [Promundo's gender transformative approach](#) (which explicitly aims to balance power differentials between women and men) has been found to be important in the effectiveness of working with men, and has led to positive outcomes including reduced violence against female partners, more time doing household chores, and improved relationships between men and their children and partners.
- Efforts to increase male engagement in the prevention of mother-to-child HIV transmission (PMTCT) through the UNICEF-supported Optimizing HIV Treatment Access Initiative in Uganda, the DRC, Malawi and Côte d'Ivoire highlight the importance of working with local leaders for community dialogue and social mobilization, the importance of engaging community

<sup>6</sup> The Social Mobilization Network (SMNet) was established to generate community support for polio immunization activities [61].

health workers to reach men, and strengthening male peer cadres [62]. In Malawi, for example, implementing partners created Male Study Circles (MSC) with volunteer male motivators who sensitize men's groups on the importance of supporting their wives to access services.

- Family planning programmes offer numerous examples of male engagement strategies. Communication between male and female partners, between men and health care workers, and between men and male peers is cited as an important factor. An evaluation of the Male Motivator project in Malawi reported significant increases in family planning use following a peer information and behavior skills intervention, while projects evaluated in Ethiopia and Burkina Faso demonstrated measurable outcome improvements achieved through increased couple dialogue [63].

Making adjustments to service provision based on community perspectives of accessibility and quality

- Provide immunization services at more appropriate/flexible times for women and their families. This approach might encompass:
  - Low/no cost strategies, such as establishing a fast line for mothers and caregivers who come only for vaccination services (after triage), and clearly indicating and arranging the designated space specifically for vaccination in facilities, to ensure an efficient flow of patients [64].
  - Changing vaccination sessions' opening hours, and even working later on certain days or on certain weekends. This may require a compensation system or deployment of additional staff [64]. Senegal has successfully rolled out this strategy in 4 of the 7 districts of Dakar [65].
  - Bundling services, such that female caregivers can access child immunization services and family planning, nutrition services and/or other services at the same time and place, with benefits for other service uptake as well [66,67].
- Tailor location of service delivery to meet the needs of caregivers and ensure acceptability of services for both mothers and fathers. Increased outreach may be particularly useful in addressing the needs of under-served populations. This approach might include:
  - Setting up vaccination posts at transit sites (e.g. bus stops or railway stations) or high traffic sites (e.g. market place or churches/mosques) or places where women are already going for domestic labour [61, key informant interview]. This may be particularly important in urban settings. As part of the 'Mashako Plan' (2018), the government of the Democratic Republic of Congo is pilot testing availability of vaccination sessions in markets in Limete district, Kinshasa, to gauge demand from busy mothers.
  - Setting up overnight stay points to reach access compromised areas. Strategies may vary. For instance, camping equipment was provided to ensure a comfortable and enabling environment to health mobile teams during outreach in Zimbabwe (Maternal and Child Integrated Programme (MCHIP) led by JSI).
  - Ensuring that:
    - the schedule for outreach services is agreed upon with the beneficiaries;
    - the location for mobile outreach services is accessible to women and men at times that enable equal access/opportunity;
    - schedule and location are timely communicated;
    - the health mobile team has a balanced female/male ratio where needed, and a language interpreter – ensuring female inclusion in

health teams is particularly essential when home visits are conducted;

- the mobile outreach team provides confidential care for beneficiaries, including adolescents. Consider capacity building/mentoring to improve technical capacity and (gender-sensitive) interpersonal communication skills of the outreach team.

Increasing local support, and promoting a shared sense of purpose and accountability

- Work with [women's groups](#) to reach marginalized women and children
  - The Government of India's National Urban Health Mission Strategy acknowledges women's groups as facilitators for health care access. Women's groups provide a platform for counseling and behavior promotion focusing on health education, and strategies to address other barriers. Establishing trust in the community and among men has been critical to engage women in these groups [68].
  - The Urban Health Resource Centre (UHRC) in India trains, mentors and supports women living in slums in Agra and Indore to have a greater capacity to access government services and entitlements. Initial analyses show that engaged women and their families have better access to healthcare, children's education, and environmental improvements [69].
- With consideration to class/caste/ethnicity/religious dynamics deploy community mobilizers to areas with low immunization rates. Recruit women from the local community to ensure acceptance in the community and ease in mobilization, as well as minimize safety risks.
  - Identifying mobilizers from inside their community has been highlighted as critical to overcome resistance by some communities for which vaccination is either religiously or politically controversial (e.g. in Muslim communities in India [61] or Nigeria (GOC-funded project), or in Apostolic communities in Zimbabwe (currently at concept stage).
  - Recruitment of female frontline workers (FLWs) may be hampered by gender related barriers such as lower cultural status, economic, social and physical restrictions, as well as safety risks<sup>7</sup>. Ensuring transparency in the identification of FLWs, and carrying out community advocacy meetings are critical to support acceptance of this role by a concerned community. There is therefore a need for adequate support from – and linkages to – the wider health system, which is often absent for community health workers and has been identified as an important influence on attrition and stress for CHWs.

Using descriptive monitoring and improved targeting to identify those who are left behind

- The Government of Bangladesh, with technical support from UNICEF and Gavi PEF TCA funding, has introduced individual patient records into DHIS2 using Tracker, to help health workers track and follow-up with patients who require continuous care. In 2018, with a focus on urban populations, e-Registers were developed and EPI registration was linked with the civil registry vital statistics (CRVS) system. In 2019, the Android version of DHIS2 EPI e-Register (both online and offline) was developed and rolled out in 7 Upazilas and one zone of city corporation. The scale-up of the e-registry and tracker is envisaged with the HSS3 programme in Bangladesh.

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<sup>7</sup> Much research has focused on the cost-effective job performance improvements but there is a growing body of qualitative literature that describes the experiences of female community health workers or volunteers in their social context and with consideration of the gendered dimension of their work.

## Actionable recommendations

It is hoped that the evidence and analysis presented in this discussion paper will inform:

- country-based coverage and equity assessments,
- demand and supply related programmatic decisions that are gender responsive, and
- implementation research undertaken to identify additional promising approaches to reduce gender-related barriers.

### **SUGGESTED COUNTRY LEVEL ACTIONS**

#### **1. Assessment and analyses of demand and supply side levers**

EPI implementers and relevant partners to incorporate analyses of demand and supply-side gender-related inequalities and barriers into Coverage and Equity Assessments (CEAs) at national and sub-national levels.

For example, on the demand-side:

- assess context-specific household-decision making dynamics, and key influencers within communities (via tools such as qualitative assessments)
- identify existing gender related barriers in specific settings more precisely by considering both gender and socio-economic determinants that mediate immunization outcomes
- generate evidence of the context-specific interactions and manifestations of the various socio-economic determinants of gender inequity within the adolescent population group (e.g., age-specific cultural and societal roles and norms) in order to inform HPV introduction.

For example, the analyses on the supply-side may inform tailoring of RED/REC approaches, including:

- efforts to plan and implement immunization services to reduce the physical, geographic and time barriers that the most vulnerable populations within countries/ priority sub-national areas face in accessing these services
- efforts to improve the supply chain and vaccine management (e.g., reduce stock outs) and to expand the cold chain. This will help women receive reliable immunization services and reduce common challenges women face, such as long distances to travel for services
- disease-specific strategies (e.g., measles – pro equity SIAs to target zero dose children) should also include an equity, and therefore a gender, lens.

#### **2. Tailored approaches to demand and supply side interventions at national and sub-national levels by considering the following dimensions:**

- What: the nature of intervention. For example:
  - bundling of immunization with other health services to ensure that every contact with mothers, adolescents and the community is maximized to better cater to the broader health needs of both the individual and family
    - HPV vaccinations may be combined with a Td booster dose (the 5<sup>th</sup> dose if there is a booster before the start of school) but also with adolescent sexual reproductive health and nutrition counselling.

- an increase in the number of female vaccinators where needed (as availability of only male vaccinators may be a barrier in some socio-cultural contexts)
- training of vaccinators and health care workers to be: (a) respectful, responsive and empathetic to the needs of those who may be stigmatised and vulnerable, those with diverse health beliefs, practices, and cultural and linguistic needs; (b) effective communicators, especially to address vaccine hesitancy and to respond to reports of serious adverse events following immunization, to maintain trust and allay fears.
- reducing waiting time and lengthy queues at health centres/ posts
- creating a comfortable and safe environment at health centres/ posts for those accessing immunisation services through availability of adequate seating, lighting and latrines
- ensuring safety of female vaccinators and health workers, for example, those operating in challenging socio-cultural contexts or conflict settings
- targeted IEC for un/less educated mothers/ primary care givers to explain the benefits of vaccination and the importance of adhering to immunization schedules
- Where: the place/ site of intervention. For example:
  - improved session planning to reduce transactional and transportation costs, such as outreach immunization services nearer the community, places frequented by mothers/ primary care-givers, for example, market places, places of worship etc.
- When: timing of intervention. For example:
  - late evening or weekend immunisation service sessions to suit the convenience of working mothers/ primary care-givers
- Who: targeting change agents
  - On the demand side - who should be targeted to increase uptake of immunization services. For example:
    - target mothers/primary caregivers, including those who may have low literacy/be less educated/be a younger parent, with intensified and context appropriate interpersonal communication (IPC)/ advocacy strategies
    - target men, elderly women and community gatekeepers through outreach and other services
    - where appropriate, actively engage/consult with adolescents in the design, implementation and monitoring stages of HPV vaccination programmes (e.g., include adolescents on oversight committees, etc.)
    - Work with self-help, micro-finance and women's groups to generate demand and advocate for immunization
  - On the supply side – interventions should be targeted at service providers, such as health workers and vaccinators.

### **3. Monitoring**

Community-based monitoring that includes the measurement of gender-related inequities should be integrated into national health strategies and sub-national health plans as an important mechanism for accountability to improve accessible immunization service delivery and uptake. (Please refer to Annex 3 for further information on measurement of gender-related inequalities and barriers to immunization.)

#### **SUGGESTED GLOBAL LEVEL ACTIONS**

The following recommendations are intended for actors and partners at the global level:

1. Analyses/ findings from this paper relating to demand- and supply-side levers should be used to further strengthen existing programmatic guidelines.
2. A working group on data should be established to identify the specific, and feasible, metrics (at global and country levels) that can be used to improve programme monitoring of gender-related inequities and barriers, building on the initial compilation of indicators included in Annex 3.
3. Actionable guidance should be developed to help countries determine how and when to integrate immunization services (including HPV vaccination) into existing service platforms – both within and beyond health. It will be critical to ensure that countries aim to provide HPV vaccination as early as possible within the 9-14 age group. The World Health Organization has produced a useful resource guide for integration of immunization services throughout the life course which suggests a range of relevant resources, summarizes current knowledge and provides guidance on the integration of immunization with other health interventions, health policies or activities to strengthen health systems.<sup>8</sup>

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<sup>8</sup> World Health Organization. Working together: An integration resource guide for immunization services throughout the life course. Geneva: World Health Organization; 2018. [https://www.who.int/immunization/documents/ISBN\\_9789241514736/en/](https://www.who.int/immunization/documents/ISBN_9789241514736/en/)

## Areas for further research

### **Widening the audience for IEC; strengthening and sustaining social mobilization in under-immunized communities**

- In the context of immunization programmes, many strategies are available to effectively improve women's health literacy, but how can they be scaled?
- What would be the impact on immunization outcomes and on women's status, of addressing health promotion or knowledge translation interventions to the family as a whole and to the relationship between males and females?
- What are effective strategies to ensure sustained funding for social mobilization / IEC activities?
- What are effective platforms to improve the health literacy, including on HPV vaccination, of younger female adolescents, or of female adolescents living in conflict, urban poor, or remote rural settings?

### **Encouraging fathers' greater input into child care, and integrating their involvement in child health**

- What approaches are effective in countering household-decision making dynamics, and community-decision making dynamics that limit the agency of women in accessing immunization services for themselves and their children?

### **Making adjustments to service provision based on community perspectives of quality**

- How do efforts to improve women's experiences of the quality of services (whether for themselves or their children) influence immunization uptake among the most vulnerable families?
- What are effective strategies to redistribute human resources for health in underserved areas that they are more accessible to women who are constrained by geographic, social, or security constraints?
- What are effective strategies to ensure a balance of female and male health workers where the sex of the vaccinator may be important to caregivers' access to and utilisation of services?

### **Increasing local support and promoting a shared sense of purpose and accountability**

- Noting that "community" means different things in different contexts (e.g., urban versus rural), which strategies supporting the participation and engagement of women within vulnerable communities have a positive impact on immunization coverage?

### **Targeting and integration**

- What approaches can be used to leverage relevant and real-time individual-level data within and across delivery systems, to inform resource allocation decisions and targeted actions that will accelerate coverage for all?
- What are effective programmatic approaches to improve uptake of HPV vaccination among the most vulnerable adolescent girls and adolescents (including those out-of-school, with low literacy, younger, or those living in conflict, urban poor, or remote rural settings)?
- What type of integration is viable at different stages of implementation within countries?

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## Annex 1: Existing operational guidelines for countries

### **GAVI, The Vaccine Alliance**

- [Gender Programme Guidance](#)
- [Demand Generation Programme Guidance](#)

### **UNICEF**

- [Gender Action Plan 2018-2021](#)
- [Communication Handbook for Polio Eradication and Routine EPI](#)
- [Integrating Information and Communication Technologies into Communication for Development Strategies to Support and Empower Marginalized Adolescent Girls](#)
- [C4D Rapid Assessment Tool](#)
- [Behaviour Change Communication in Emergencies: A Toolkit](#)

### **World Health Organisation**

- [Gender Mainstreaming for Health Managers: A Practical Approach](#)
- [Human Rights and Gender Equality in Health Sector Strategies: How to Assess Policy Coherence](#)
- [The Innov8 Approach for Reviewing National Programmes to Leave No One Behind. Technical Handbook](#)
- [Facilitator's Manual for the Innov8 Approach for Reviewing National Health Programmes to Leave No One Behind](#)
- [Country Support Package for Equity, Gender and Human Rights in Leaving No One Behind in the Path to Universal Health Coverage](#)

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## Annex 3: Measurement of gender-related inequalities and barriers to immunization

As noted in this paper, most efforts to measure gender inequalities and barriers to childhood immunization have been limited to assessments of coverage differentials: 1) between boys and girls and 2) by maternal education. These two outcome measures are important to assess and, fortunately, are collected in standard household Demographic and Health Surveys (DHS) and Multiple Indicator Cluster Surveys (MICS), which are conducted every 5 years or so in many low- and middle-income countries. Additional disaggregation (intersectionality) of these and other measures may be informative when feasible and sample sizes are sufficient within household surveys. For example, it may be possible to assess immunization coverage by sex or subnational area with other measures such as: timeliness of immunization coverage, age of mother at birth, child's birth order, household wealth, household headship, maternal employment status, religious affiliation, rural/urban area, ownership of mobile phone, etc.

Increasingly, organisations and governments are looking beyond these (and other) outcome measures to determine and monitor critical gender-related inequalities and barriers that influence coverage of lifesaving interventions such as immunization. This can be challenging in part because such 'process' and 'output' indicators are often not standardised at global level, and are not always available within countries. Another challenge is that it may be necessary to utilise proxy measures to assess some gender-related inequalities and barriers, particularly for concepts that are abstract, multidimensional or comprehensive in nature (e.g., women's empowerment).

Still, it is useful to reflect on measurements currently being used and recommended across global development organisations and research institutions in order to consider those that might be feasible and helpful within specific country programmes aiming to reduce gender-related inequalities and barriers to immunization.

We have collated many of these indicators into the table below. These are organized by key "challenge" area highlighted in this discussion paper, as well as potential data source(s) and data availability. The full list of documents reviewed and colleagues consulted to prepare this table is included at the end of the Annex.

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### Materials reviewed relating to measurement of gender-related inequities

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Reilly J & Mathews G (2015) [The Gender-Wise Toolkit for Grant-Makers](#).

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UNICEF (2017) [Gender Action Plan, 2018-2021](#). New York.

**1.1 Mothers are considered the primary caregivers for their children but may not be the sole decision-makers in relation to child health care. They may also be limited in their ability to access resources to utilise services.**

Indicator	Potential data source(s)	Data availability	Notes
Indicators to assess household decision-making (household headship, <sup>9</sup> or decision-making with respect to assets such as land and housing, purchases, health care, etc.)	Demographic and Health Surveys; possibly other household surveys	widely	SWPER (Survey-based Women's emPOWERment index includes multiple indicators focused on 3 domains representing women's empowerment: attitude to domestic violence, social independence, and decision making. <sup>10</sup>
% of males that strongly agree that immunization of their child is their primary responsibility	EPI or other household surveys	Limited	Gavi summary of cMYP mapping exercise
% of male parents participating in immunization activities	Programmatic/ admin data	Limited	Gavi summary of cMYP mapping exercise
Number of IEC initiatives targeted at men that focus on women's health issues and rights, violence against women, and the importance of joint health care responsibilities	Programmatic/ admin data	Limited	ADB Toolkit for Gender Equity Results
% of adults 15 years and older with an account at a bank or a mobile service provider, by sex	World Bank FINDEX (financial inclusion survey)	In 140 economies	This is an SDG indicator

<sup>9</sup> The DHS defines "head of household" as "the person considered responsible for the household. This person may be appointed on the basis of age (older), sex (generally, but not necessarily male), economic status (main provider) or some other reason. It is up to the respondent to define who is the head." (Institute for Resource Development/Macro International Inc., 1990). This definition of household headship has several limitations. The propensity for women to perceive or report themselves as the household head, especially if an adult male lives in the household, will vary across cultures and is itself likely to be a function of the status of women. In addition, there is no clear association of household headship using this definition with economic responsibility. Thus, while the interest in the sex of the household head derives mainly from the assumption that the household head is the one mainly responsible for the economic welfare of the household, the reader should be aware that for an unknown proportion of household heads, whether they be male or female, this assumption may not be true.

<sup>10</sup> SWPER enables within-country and between-country comparisons, as well as time trend analyses for African countries. No other index has these features. Additionally, it can be calculated at the individual level, enabling detailed analyses to be done of empowerment as an outcome or as a determinant of health.

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5554795/pdf/main.pdf>

**1.2 Women typically have multiple roles – including reproductive and productive work – which pose considerable time pressure, and may result in a trade-off between child care (and preventative care in particular) and the need to earn an income for the household. Geographic barriers may exacerbate this trade-off.**

Indicator	Potential data source(s)	Data availability	Notes
% of women who reported a problem in accessing services	EPI or other household surveys <sup>11</sup>	variable	Gavi summary of cMYP mapping exercise
% of mothers who did not get their child vaccinated because the facility was too far	EPI or other household surveys	variable	Gavi summary of cMYP mapping exercise
% of mothers who did not get their child vaccinated because she was busy with other things	EPI or other household surveys	variable	
% of mothers who did not get their child vaccinated because the session time was inconvenient	EPI or other household surveys	variable	
% of women who work outside of the home	DHS; local surveys	widely	
Proportion of districts not having EPI centres	Programmatic/ admin data	widely	Gavi summary of cMYP mapping exercise
% of districts with access to services within 5 km of travel	Programmatic/ admin data	widely	Gavi summary of cMYP mapping exercise
Proportion of area covered by immunization services to the total populated area	Programmatic/ admin data	widely	Gavi summary of cMYP mapping exercise

**1.3 Health knowledge – ranging from knowledge of vaccination to health literacy – has been shown to be a critical determinant of immunization uptake. Women lacking health knowledge/literacy have a lower understanding of vaccination, lower motivation to vaccinate their child, and weaker capacity to negotiate the health system.**

Indicator	Potential data source(s)	Data availability	Notes
% of fully immunized children by mother's education	DHS, household surveys	Widely	Gavi core indicator for measuring gender
% of countries in which penta3 coverage among children whose mothers/female caretakers received no education is within 10 percentage points of coverage among children whose mothers/caretakers have received some education	DHS, household surveys	Widely	Gavi core indicator for measuring gender
% of fully immunized children by mother's literacy status	DHS, EPI, household surveys	Widely	Gavi summary of cMYP mapping exercise

<sup>11</sup> Consistency across different data sources/surveys may be a problem with these indicators, especially if the objective is to monitor progress. EPI surveys widely vary in methods.

% of caregivers with knowledge about vaccines and the recommended schedule	DHS, EPI, household surveys	Widely	Included within Gavi's Demand Generation Programme Guidance
% of caregivers that can name at least one benefit of immunization for their children	DHS, EPI, household surveys	Widely	Included within Gavi's Demand Generation Programme Guidance
% of caregivers who trust the safety and efficacy of vaccines	DHS, EPI, household surveys	Widely	Included within Gavi's Demand Generation Programme Guidance
% of children whose mothers intend to vaccinate their child	DHS, EPI, household surveys	Widely	Gavi summary of cMYP mapping exercise
% of mothers of children <1 who can identify the nearest immunization centre	DHS, EPI, household surveys	Widely	Gavi summary of cMYP mapping exercise

**1.4 Health facilities emphasise attendance by women, and are typically not very favourable to fathers. Yet, quality of service (encompassing providers' attitudes, inconvenient service hours or unavailability of female providers) may discourage women to attend.**

Indicator	Potential data source(s)	Data availability	Notes
% caregivers satisfied with the quality of the service experience	Exit interviews; other localised studies	Limited	SDG indicator and included within Gavi's Demand Generation Programme Guidance
% of caregivers that have confidence in their service provider	Exit interviews; other localised studies	Limited	Included within Gavi's Demand Generation Programme Guidance
% of mothers who did not get their child vaccinated because the vaccinator was absent	EPI or other household surveys	Widely	Gavi summary of cMYP mapping exercise
% mothers that did not get their child vaccinated because of long wait times	Localised studies	Limited	Gavi summary of cMYP mapping exercise
% mothers stating the announcement for vaccination came 1 day before or on the day of session	Quality of care assessments	Limited	Gavi summary of cMYP mapping exercise
% of interviewed health workers having the minimum required interpersonal communication skills for immunization services	Quality of care assessments	Limited	Included within Gavi's Demand Generation Programme Guidance
% of health staff trained on communication	Quality of care assessments	Limited	Gavi summary of cMYP mapping exercise
Implementation of activities to prepare for or to communicate about adverse events following immunization or other vaccine related events (JRF)	Quality of care assessments	Limited	Included within Gavi's Demand Generation Programme Guidance
% of caregivers that trust the authorities providing immunization services	Exit interviews; other localised studies	Limited	Included within Gavi's Demand Generation Programme Guidance
# of health workers per 100,000 population	Programmatic/ admin data	Widely	Gavi summary of cMYP mapping exercise
# of nurses per 100,000 population	Programmatic/ admin data	Widely	Gavi summary of cMYP mapping exercise



Gender breakdown of staff	Programmatic/ admin data	Limited (not routinely collected)	Gavi summary of cMYP mapping exercise
Number of countries that have institutionalized community health workers into the formal health system	Global/ regional surveys	Limited	UNICEF's Strategic Plan Goals for Gender Equity
Proportion of medical housing provided to women health staff, including in rural and remote areas	Programmatic/ admin data	Limited	ADB Toolkit for Gender Equity Results
Type of incentives to encourage women and men health workers to live in rural and remote areas (e.g., safe housing); and percentage of women and men who receive incentives	Programmatic/ admin data	Limited	ADB Toolkit for Gender Equity Results
	Frontline worker satisfaction surveys	Limited	
Number of additional midwives and other health workers trained, by sex	Programmatic/ admin data	Limited	ADB Toolkit for Gender Equity Results
Percentage of women and men employed in Ministry of Health, provincial health departments, and health facilities, by level of seniority, location, type of employment (e.g., management, administration, nurses, doctors, CHWs, etc.)	Programmatic/ admin data	Limited	ADB Toolkit for Gender Equity Results
The regulatory framework for public-private partnerships includes performance standards for the employment of women as service providers, gender-sensitive protocols and service delivery practices, and human resource management practices	Policy assessments	Limited	ADB Toolkit for Gender Equity Results

**1.5 The community has an important role in providing a supportive environment for demand for and utilization of immunization services - either through support for vaccination in the community or by coordinating with the health facility for services to be delivered through more accessible mechanisms (e.g. at appropriate times/places).**

Indicator	Potential data source(s)	Data availability	Notes
% of caregivers who report that it is a social norm in their community to vaccinate children	Localised studies	limited	Included within Gavi's Demand Generation Programme Guidance
% of districts where CSOs conducted community awareness / mobilisation sessions	Programmatic/ admin data	Limited	Included within Gavi's Demand Generation Programme Guidance
% of facilities that have a functioning health committee (or similar) that includes community members and meets at least quarterly	Facility survey or other localised studies	Limited	Included within Gavi's Demand Generation Programme Guidance

# of sensitization sessions per year with women's groups	Facility survey or other localised studies	Limited	Gavi summary of cMYP mapping exercise
% of facilities that involve communities in the microplanning process	Facility survey or other localised studies	Limited	Included within Gavi's Demand Generation Programme Guidance
% of community groups that include women in leadership positions	Localised studies	Limited	Suggested in the ADB Toolkit for Gender Equity Results  (UN Women is currently developing methodology to look at local governance)

### 1.6 Cross-cutting and other issues

Indicator	Potential data source(s)	Data availability	Notes
% of fully immunized children by sex	Household surveys (DHS, MICS, EPI, etc.)	Widely	Gavi core indicator
HPV vaccination coverage for girls aged 9-13	Administrative data	limited	Gavi summary of cMYP mapping exercise
% of EPI budgets and/or HSS funds allocated to Demand Generation	Programmatic/ admin data	Limited	Included within Gavi's Demand Generation Programme Guidance
% of children with up-to-date immunizations based on employment status of women/mothers	Household surveys	variable	Gavi summary of cMYP mapping exercise
% of government funding spent on demand generation	Programmatic/ admin data	Limited	Gavi summary of cMYP mapping exercise
Evidence that sex-disaggregated data is routinely collected and used in all areas of health planning and monitoring	Review of Programmatic/ admin data		ADB Toolkit for Gender Equity Results
Evidence that medical and nursing curricula include a focus on gender and health	Review of curricula	Limited	ADB Toolkit for Gender Equity Results
Number of facilities that implement protocols for dealing with physical and sexual gender-based violence	Programmatic/ admin data	Limited	ADB Toolkit for Gender Equity Results
Proportion of seats held by women in national parliaments	Cross-country review of parliaments	In 193 countries	This is a SG indicator. The Inter-Parliamentary Union compiles this on a monthly basis.
Proportion of seats held by women in local governments	Cross-country review of parliaments by the Inter-parliamentary Union	In 89 countries	This is a SDG indicator. Data are compiled annually by UN Women with the support of UN Regional Commissions

Time use surveys (also measured for adolescent girls) (SDG indicator): looking at the proportion of women's or men's time spent on paid and unpaid (domestic, child care, voluntary) work			<ul style="list-style-type: none"> <li>• Time use diary (15 minute increments how you spent your day)</li> <li>• OECD SIGI is working to incorporate this</li> <li>• Not standardized across countries</li> <li>• In MICS: collect the sex and age of person responsible for water collection (in households with water outside of the home) – proxy for time use data</li> </ul>
Women's Empowerment Agriculture Index (USAID funded)			Sample indicators track change in women empowerment occurring as a direct/indirect result of Feed the Future interventions Can be adapted to other sectors, including health
ICT access – percentage of population who own phone and or use one	MICS; International telecommunications Union (ITU): maintain data for all countries (but not necessarily by sex)		An SDG indicator
Percentage of countries where legal frameworks are in place to promote, enforce and monitor equality and non-discrimination on the basis of sex			UNICEF's Strategic Plan Goals for Gender Equity  OECD SIGI – pulls from different data sources to develop country profiles. <sup>12</sup>
Percentage of countries with at-scale programmes addressing gender discriminatory roles and practices among children			UNICEF's Strategic Plan Goals for Gender Equity
Social networks and social support		Limited	OECD is developing this work (especially important when migrate to urban contexts)

<sup>12</sup> The SIGI measures discriminatory social norms, institutions and practices (e.g. son bias, legal frameworks, age of marriage, are women allowed to inherit, divorce, etc.), commonly used to understand barriers that preclude the achievement of outcomes for women. The most recent analysis was done in 2014 for 160 countries; planning to release new data for 180 countries in 2019.