Gender-related Barriers to Immunization: Zero-dose Children in Egypt, Iraq, Sudan, Syria and Yemen

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Cover photo: UNICEF/UN0648739/Njiokiktjien

Acronyms

BCG	Bacille Calmette-Guerin (vaccine for tuberculosis)
CNCT	Conditional Non-Cash Transfer
DTP	Diphtheria, tetanus, pertussis vaccine
EPI	Expanded programme on immunization
FGM	Female genital mutilation
GBV	Gender-based violence
HCD	Human-centred design
IDP	Internally displaced person
MR	Measles-rubella vaccine
NGO	Non-governmental organisation
SBC	Social and behaviour change communication
UNICEF	United Nations Children's Fund
WHO	World Health Organisation

Executive Summary

A total of 25 million children were un-or under-vaccinated in 2021 and the number of children missing out on any vaccination, or "zero-dose children[1]", increased by 5 million in 2021 compared with 2019, rising from 13 to an estimated 18 million. Almost half of all zero-dose children live in three key geographic contexts: urban areas, remote communities and populations in conflict settings.[2] Communities with zero-dose children face multiple deprivations, including high levels of poverty, lack of access to quality healthcare, nutrition, clean water, sanitation and other basic services, high levels of illiteracy and pervasive gender inequality.

Gender norms, roles and relations affect people's access to health services, health-related information and their health-seeking behaviours, including for immunization. This report explores gender-related barriers to immunization in Egypt, Iraq, Sudan, Syria and Yemen, with a focus on zero-dose and under-immunized children. Promising and innovative practices from these five countries to overcome gender-related barriers to immunization are highlighted, along with recommended approaches and entry points for addressing these demand and supply-side barriers at the individual, household, community, social and institutional levels in order to increase immunization reach and coverage.

The report draws on a desk review of existing literature related to gender and immunization in the UNICEF MENARO region as well a gender and zero-dose questionnaire completed by UNICEF Country Offices, complemented by interviews with key informants. Representing Phase I[3] of UNICEF MENARO's efforts to identify and address gender-related barriers to immunization, this report provides a snapshot overview of some of the challenges and barriers in zero-dose communities, with a recommendation to conduct in-depth research at the community level through interviews and focus group discussions with caregivers and service providers during the second phase.

Zero-dose children are geographically dispersed within each of the five countries, with each area facing specific vulnerabilities and challenges related to conflict, insecurity, poverty, lack of basic health infrastructure and displacement, characterized by entrenched gender inequality. Marginalized communities such as nomadic populations, internally displaced persons (IDPs), ethnic minorities and persons living with disabilities face compounded discrimination and disadvantage. Gender-related barriers to immunization are therefore manifested in several ways on different levels, ranging from women's restricted mobility, lack of access to transportation, money, time, information and other critical resources, the prevalence of gender-based violence as well as women's limited agency in household decision-making dynamics to men's low engagement and participation in children's health and caretaking. The lack of gender-responsive health systems create additional barriers on the institutional level for the health workforce and caregivers.

This report is divided into five main sections for the MENA countries included in this review, with each country section further divided into the following sub-sections: gender roles and responsibilities; access to and control over resources; beliefs, norms and perceptions; needs, preferences and challenges; enabling factors and partnerships, with recommended approaches and entry points for addressing gender-related barriers outlined at the end of each section. The report concludes with summary recommendations for addressing gender-related barriers to immunization at the individual and household level, community and social level as well as at the institutional and structural level.

[1] Defined in this report as children who have not received a single dose of diphtheria, tetanus and pertussis-containing vaccine.

[2] Gavi (2021) The Zero Dose Child: Explained. Available at: https://www.gavi.org/vaccineswork/zero-dose-child-explained?gclid=Cj0KCQjwlumhBhClARIsABO6p-zdGIbqYPPlEWXVLcMy5yMjA-iOPNb7DUvb2Adz9VnmbKWYSEAzQHoaApMiEALw_wcB

[3] Phase I began in December 2022 and ended in March 2023 – phase II is set to begin during the second quarter of 2023.

Introduction

WHO and UNICEF estimates for National Immunization Coverage (WUENIC) for 2021 indicate that immunization coverage has continued backsliding for a second consecutive year, resulting in the largest drop in childhood immunization coverage since the 1990s[4]. A total of 25 million children were un- or under-vaccinated[5] in 2021; this is 2 million more than in 2020, and 6 million more than in 2019. In the decade leading up to 2019, global immunization coverage had plateaued with one in five children persistently missing out on essential vaccines. Coverage of the third dose of diphtheria, tetanus, and pertussis vaccine (DTP-3) dropped a further 2 percent compared 2020 to 81 percent in 2021, leaving 25 million children vulnerable to vaccine-preventable diseases. The number of children missing out on any vaccination, or "zero-dose children[6]", increased by 5 million in 2021 compared to 2019, rising from 13 to 18 million[7].

The number of zero-dose children significantly increased during the COVID-19 pandemic. Zero-dose children lacking the DPT vaccine are also likely to be missing out on other life-saving health services as well as other essential childhood immunizations, including measles, polio, rotavirus and rubella. Reaching zero-dose children is therefore critical for advancing health outcomes beyond immunization. Zero-dose children mostly live in communities facing multiple layers of disadvantage, inequality, inequity and marginalization. Around half of all zero-dose children live in three key geographic contexts: urban areas, remote communities and conflict settings[8].

Data on the so-called "immunization cascade", that is, how children move from zero-dose to full immunization in low and middle-income countries, is limited. Focusing on zero-dose children is particularly important because those who are reached with the first vaccine are highly likely to also receive remaining vaccines[9]. While there was a dramatic increase in the coverage of new vaccines in low- and middle-income countries (LMICs) between 2000 and 2019, progress on extending routine immunization services to ensure they reach all children has stagnated. Zero-dose prevalence ranged from 5.2 percent in upper-middle income countries to 11.1 percent in low-income countries, with a total pooled prevalence of 7.7 percent in all countries studied. Boys and girls were equally likely to belong to the zero-dose category. Zero-dose children were more frequently found in rural than in urban areas and in poorer households[10]. Expanded focus on the "zero-dose agenda" can play a critical role in tackling existing inequities, increasing the visibility of marginalized and excluded groups and communities and may provide an entry point for strengthening key services across sectors and agencies[11].

UNICEF, along with WHO, Gavi and other partners, is committed to supporting governments to improve overall health service delivery in communities with large numbers of zero-dose children. UNICEF and partners

[4] WHO and UNICEF (2022) WHO/UNICEF estimates of national immunization coverage. Available at: https://www.who.int/teams/immunization-vaccines-and-biologicals/immunization-analysis-and-insights/global-monitoring/immunization-coverage/who-unicef-estimates-of-national-immunization-coverage

[5] An under-immunised child is defined as those missing the third dose of diphtheria, tetanus and pertussis (DTP)-containing vaccine (DTP3)

[6] Defined in this report as children who have not received a single dose of diphtheria, tetanus and pertussis-containing vaccine.

[7] WHO and UNICEF (2022) WHO-UNICEF 2021 Estimates of National Immunization Coverage (WUENIC)

[8] Gavi (2021) The Zero-Dose Child: Explained. Available at: https://www.gavi.org/vaccineswork/zero-dose-child-explained

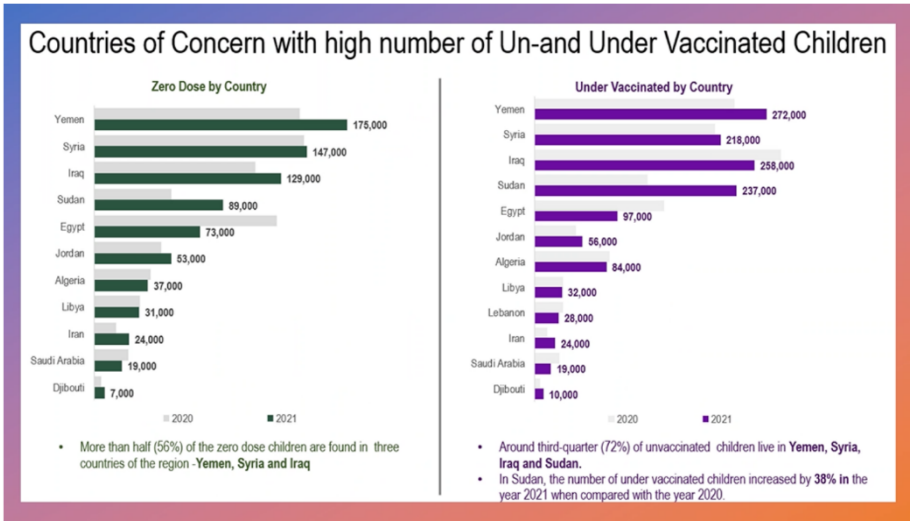
[9] Cata-Preta, B. et al (2021) Zero-dose children and the immunisation cascade: Understanding immunisation pathways in low and middle-income countries. *Vaccine*. 39(32).

[10] Ibid.

[11] Equity Reference Group (ERG) (2020) A Focus on Zero Dose Children: Key Considerations

seek to step up efforts to identify zero-dose children in these communities, understand barriers to access vaccination, design sustainable interventions and strengthen health systems to overcome those barriers and work to establish platforms to ensure reliable, sustainable delivery of immunization among other primary health care services.

As part of these ongoing efforts, UNICEF MENARO is committed to identifying and addressing gender-related barriers to immunization in zero-dose communities. This report examines gender-related barriers in reaching zero-dose children, with a focus on five UNICEF MENA countries, including Egypt, Iraq, Sudan, Syria and Yemen. These five countries were chosen as they represent the countries with the highest proportion of zero-dose children in the UNICEF MENARO region according to WHO/UNICEF data estimates.



Source: UNICEF and WHO immunization data estimates (2022)

Representing Phase I of UNICEF MENARO's efforts to tackle gender-related barriers to immunization in these contexts, this report outlines key gender-related barriers identified at the individual, household, community and institutional levels, with a specific focus on household and community-level demand-side and social barriers to immunization. The report is divided into five main sections covering findings from each country context, with each section including recommendations and entry points for future interventions to tackle gender-related barriers to immunization and expand vaccine coverage in zero-dose communities.

Objectives

As the first phase of the UNICEF MENARO project to address gender barriers in zero-dose communities, this report seeks to:

Objective 1

- Highlight gender-related barriers to immunization in zero-dose communities in Iraq, Egypt, Syria, Yemen and Sudan

Objective 2

- Identify effective response strategies and entry points for increasing immunization demand and expanding vaccine coverage in zero-dose communities

Methodology

This report draws on a review of relevant academic as well as grey literature on gender and immunization, interviews with key informants with expertise in the field of immunization, gender or country-specific knowledge, as well as a questionnaire on gender and zero-dose children completed by representatives from UNICEF Country Offices and partners in Sudan, Syria, Egypt, Yemen and Iraq.

The survey questionnaire was designed to collect information on gender-related barriers to children's immunization, particularly in zero-dose communities to be jointly completed by UNICEF experts in the fields of Gender, Immunization/Health and Social and Behaviour Change Communications with a background in these target countries. The questionnaire was introduced and discussed in a webinar attended by UNICEF regional and country office staff and partners in January 2023, after which it was further refined based on the feedback received from UNICEF Country Offices. The questionnaire consisted of two parts, with the first part focusing on the profile of zero-dose communities in each country, and the second part including a set of questions on gender barriers categorised under five key areas: gender roles and responsibilities; access to and control over resources; gender-related beliefs, norms and perceptions; needs, priorities and challenges and participation and partnerships as enabling factors.

Each area was further divided into questions exploring gender-related barriers to immunization at the individual and household level, community level and institutional/structural level. The questionnaire drew from existing UNICEF and partners' gender tools and checklists, including the UNICEF ECARO Gender Toolkit[12] (2019); UNICEF Little Jab Aid 5 Ideas to increase COVID-19 vaccination for women in MENA[13] (2021); UNICEF ROSA Immunization and Gender: A Practical Guide to Integrate a Gender Lens[14] (2019); and the Gavi Zero Dose Analysis Card[15]. Another webinar was conducted with UNICEF staff from MENARO and Country Offices in April 2023 to present and validate the key findings and recommendations included in this report.

A complete list of key informants who contributed to this review can be found in Annex A.

Limitations

The findings and recommendations outlined in this report represent the first phase of the UNICEF project to identify and address gender-related barriers in zero-dose communities in the MENA region. As such, it comprises an overview of existing literature and knowledge on gender and immunization in the contexts of the five countries. The project consisted solely of desk research and remote consultations with sector experts from UNICEF and partner organisations. The level of inputs received through the gender and zero-dose questionnaire from UNICEF Country Offices and the availability of key informants varied.

Existing data and analyses on gender-related barriers and challenges in zero-dose and under-immunized communities is limited. This is especially the case for the specific barriers faced by sexual and gender minorities and for persons facing multiple layers of marginalization and discrimination in their communities. The study design did not include community-level surveys, focus group discussions or interviews, either directly with communities, caregivers or with health workers. This represents a major limitation in terms of

[12] UNICEF Regional Office for Europe and Central Asia (2019) Gender Toolkit. Available at: https://www.unicef.org/eca/media/15101/file

[13] UNICEF et al (2022) The Little Jab Aid: 5 Ideas to increase COVID-19 vaccination. Available at: https://www.unicef.org/mena/reports/little-jab-aid-5-ideas-increase-covid-19-vaccination

[14] UNICEF ROSA (2019) Immunization and Gender: A Practical Guide to Integrate a Gender Lens. Available at: https://www.unicef.org/rosa/media/12346/file

[15] Gavi. Zero-Dose Analysis Card. Available at: https://www.linkedimmunisation.org/wp-content/uploads/2021/08/Gavi_Zero-dose_AnalysisCard.pdf

gaining a deeper, context-specific understanding of the specific barriers faced by zero-dose communities, which are geographically dispersed and extremely diverse within and between the five countries. The project also prioritized focus mainly on demand-side barriers at the individual, household and social levels and did not include in-depth analysis of the barriers and challenges faced by health workers. Therefore, further studies and intersectional gender analysis with direct community engagement and health workforce participation are required to uncover knowledge, attitudes and practices related to immunization demand and supply in zero-dose communities.

Gender-related barriers to immunization in zero-dose communities

Syria

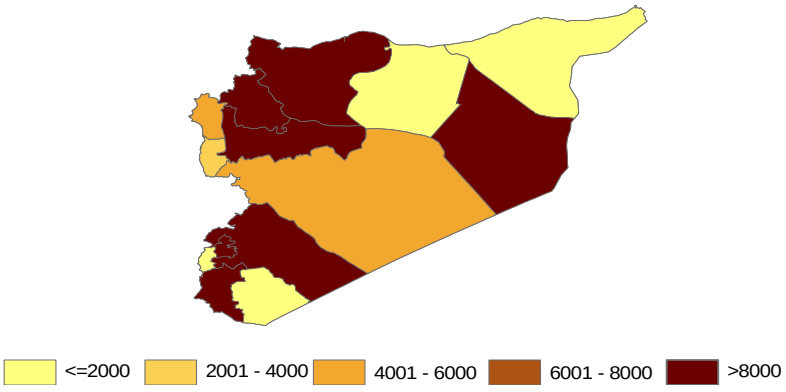
Overview of zero-dose communities

Syria remains in a complex humanitarian emergency situation after over 10 years of ongoing conflict and its long-term consequences, including massive destruction of civilian infrastructure, widespread poverty and the largest number of internally displaced people in the world. Insecurity and armed conflict significantly restrict women and girls' freedoms, including their freedom of movement and the ability to seek healthcare, protection services and access information. Over 3.46 million people are estimated to live with a disability which places them at greater risk for exclusion from health services.[16]

The number of zero-dose children is on the rise in Syria. The overall number of unimmunized children is **152,515** in 2022 (no sex-disaggregated data is available). This represents a 12 percent increase from 2021 when there were a total of 136,067 zero-dose children. Overall, the number of zero-dose children has been increasing since 2019. The number of under-vaccinated children (Penta 1-Penta 3) was 52,458 in 2022, a slight decrease from 53,977 in 2021.[17]

Year	Number of zero-dose children in Syria *(UNICEF Syria)*
2019	94,677
2020	137,828
2021	136,067
2022	152,515

Zero-dose children in Syria in 2021



Data source: Quarterly administrative report on subnational coverage (WHO)

According to UNICEF Syria Country Office estimates, most of Syria's zero-dose children reside in Aleppo and the north-eastern governorates of Raqqa, Hassakeh and Deir ez-Zor, specifically in rural or remote areas that are not regularly reached by mobile vaccination teams. Areas with low immunization coverage can also be found in some major cities, including Damascus, especially among IDP communities. Among the most vulnerable groups with high numbers of zero-dose children are IDPs living in host communities or in informal camps in the North-eastern governorates and Aleppo, as well as mobile nomadic populations (pastoralists), Badawin and the urban poor.

Médecins Sans Frontières (MSF) has highlighted the challenging situation in Kobane/Ain Al-Arab district in northeastern Syria which is not served by the national immunization programme due to "a lack of political will to serve the area," leaving humanitarian organisations to fill the gap in the midst of logistical and supply

[16] Syria 2022 Humanitarian Needs Overview (HNO). Available at: https://www.unicef.org/mena/media/15726/file/hno_2022_final_version_210222.pdf.pdf

[17] UNICEF Syria CO key informants.

challenges in an area affected by a decade of war.[18] For example in 2021, MSF supported the Kurdish Red Crescent and local health authorities in northeast Syria to carry out a vaccination campaign to protect children against measles, mumps and rubella, fully vaccinating 10,412 children under the age of seven and providing a first dose to a further 28,309 children in Kobane/Ain Al-Arab city and 14 other locations. A routine immunization coverage survey of 1651 children between ages 1-7 conducted by MSF in 2021 in Ain Al Arab/Kobane and Manbij showed that less than half of the children surveyed were protected from measles (41 percent), 64 percent of children had received their birth dose vaccination for hepatitis B, and there was 68 percent coverage reported for tuberculosis (BCG vaccine).[19] A UNICEF key informant noted that some Turkish-controlled areas, including Ras al-Ayn, also have children that have not been reached with vaccines for a longer period of time.

Gender-related barriers to immunization

Gender roles and responsibilities

Gender roles and relations impact immunization outcomes in various ways, influencing people's health-seeking behaviours and decision-making power, their utilisation of immunization services as well as the capacity, time and other resources they have available for immunising their children. According to a rapid gender analysis focusing on northwest Syria conducted by CARE in 2022, despite customs varying across religions and ethnicity groups and between rural and urban areas, generally husbands and sons have the **primary responsibility** for and **decision-making authority** over households. Eighty-eight percent of respondents to a household survey administered by CARE confirmed shared expectations that women should primarily occupy the private sphere as mothers and **caregivers**. Eighty percent of female respondents said they took care of all of their household's cooking and cleaning, while 57 percent of their male counterparts said they did not participate in this work at all. Eleven percent of adolescent girls said they were fully responsible for childcare. None of their male counterparts said they were fully responsible, but 40 percent said they were partially responsible.[20]

An assessment carried out by UNICEF in health facilities across all 14 governorates examining 962 children (47 percent girls and 53 percent boys) who had been brought to a health facility showed that **84 percent of caregivers who brought their children to receive healthcare were mothers**, followed by fathers (10 percent), grandparents (3 percent, gender not specified), or uncles or aunts (1 percent, gender not specified).[21] Overall, 75 percent were visiting the health centre for receiving vaccinations. In terms of areas with high concentrations of zero-dose children, for example in Aleppo, 71 percent of caregivers who brought their children to the health centre were mothers and 22 percent fathers, while in Deir ez-Zor mothers comprised 91 percent and fathers 8 percent. In Raqqa, 98 percent of accompanying caregivers were mothers and only 2 percent fathers.

A 2021 assessment of gender equality and women's rights in Syria notes that men's household contributions were more often related to grocery shopping and less likely to involve caring for children and older persons

[18] MSF (2021) Syria: MSF vaccinates children in areas neglected by national immunisation programme. Available at: https://reliefweb.int/report/syrian-arab-republic/syria-msf-vaccinates-children-areas-neglected-national-immunisation

[19] ibid

[20] CARE (2022) Rapid Gender Analysis: Sacrificing the Future to Survive the Present: Findings from Northwest Syria. Available at: https://www.care-international.org/sites/default/files/2022-08/RGA_NW%20Syria_202208.pdf

[21] UNICEF Syria Country Office and Ministry of Health Syria (2023) Syria Missed Opportunities for Vaccination Study.

or other caretaking tasks. The conflict has brought about an increase in **women-headed households** and women are increasingly contributing to the family's income, often juggling the double burden of income generation and unpaid care work. This might lead to **time poverty** reducing the likelihood of women to seek healthcare and immunization services for themselves or their children. The assessment also noted geographical differences in terms of gender roles and men's caretaking responsibilities, as men in Idlib were most open to care for their children, while men in Deir al-Zor and rural Damascus were the least open in this regard.[22]

Decision-making around family healthcare matters, including around children's vaccination, is mainly led by men. Women and men who responded to the CARE survey said women were consulted about decisions in all matters, including finances, selling assets, healthcare, relocation, school attendance, and family planning, but that "men held the power to have the final say".[23] UNICEF key informants noted that while fathers are often the primary decision-makers over children's vaccination status in rural areas, decisions are generally made jointly in urban areas.[24] A recent UNICEF assessment showed that out of the 962 caregivers surveyed, 48 percent indicated that decisions about children's vaccination are made jointly, while 34 percent indicated that mothers were the primary decision-makers, with only 16 percent indicating fathers. However, there was regional variation: for example in Idlib, 64 percent indicated fathers as the primary decision-makers on children's vaccination status while in Deir ez-Zor this was 56 percent.[25]

Gender roles and norms also affect the **schedule** and times when caregivers are able to visit health centres or be present when vaccinators visit households. For example, in agricultural communities during planting seasons, work is reportedly prioritised over attending vaccination services due to economic challenges.[26] Women and girls generally take care of children and work inside the household attending to household chores, while men and boys work outside the home.

In terms of restrictions of **movement and mobility** limiting access to health services, the security situation poses a major challenge for all people, regardless of their gender identity. Nevertheless, women, men and gender-diverse people experience different security challenges when accessing services. In certain areas, such as Hama, women are not allowed to visit health centres without being accompanied by a man.[27]

Child receives a vaccine during a national immunization campaign in rural Damascus. Photo: UNICEF/Syria/2020/Shahan

Women are generally expected to take children for immunization services. However, all respondents to the 2022 CARE survey covering northwest Syria noted that **freedom of movement** had become increasingly restricted, further complicated by social norms preventing women from traveling unaccompanied. Most of the women participating in CARE's focus groups said they were able to travel short distances within the

[22] Ramadan, M. et al (2021) The Status of Gender Equality and Women's Rights in Syria: Mapping the Terrain. Available at: https://gltn.net/download/the-status-of-gender-equality-and-womens-rights-in-syria-english/?wpdmdl=17630&refresh=624d2086972b51649221766

[23] ibid

[24] UNICEF Syria CO key informants

[25] UNICEF Syria Country Office and Ministry of Health Syria (2023) Syria Missed Opportunities for Vaccination Study

[26] UNICEF Syria CO key informants

[27] Ibid.

community independently, but they had to ask for permission or be accompanied by a man if they wanted to travel longer distances to markets or health centres. In case their husbands were not available, brothers or uncles were consulted. Women also preferred to travel locally in pairs or groups to "mitigate cultural taboos and rumours". In terms of longer-distance travel between governorates, women's main fears were related to harassment and exploitation whereas men were concerned about kidnapping or recruitment by armed actors.[28] Restrictions to women's movement and mobility highlight the need to expand the reach of mobile, outreach and house-to-house immunization interventions and bring these services closer to households and into places where women frequently gather.

Women comprise over 70 percent of **healthcare providers** in Syria – this is around 90 percent for vaccinators and 70 percent for community health workers.[29] A recent UNICEF assessment of health facilities across Syria showed that women make up around 88 percent of the 480 vaccinators surveyed.[30] UNICEF key informants noted that the low salaries paid by the Government of Syria to health workers is among the factors explaining the reluctance for men to work in the sector.[31] Ensuring women's participation in the health workforce increases the reach of immunization services as women are well-accepted and trusted by caregivers and they can easily enter households to vaccinate children during house-to-house campaigns. Especially in rural areas, mixed-gender outreach teams are generally deployed to enable men frontline workers to interact with men and women with women in line with social customs.[32] According to UNICEF Syria key informants, women vaccinators and community health workers are able to travel unaccompanied and do not face specific safety or security threats nor salary gaps when compared with men or other civil servant positions. However, further participatory research on the specific challenges faced by women frontline workers is required.

Access to and control over resources

Access to and control over resources affecting immunization outcomes is also shaped by gender norms, roles and relations. While women, men and gender-diverse people's access to and control over critical resources such as time, money, information and transportation can be limited, especially in lower-income or conflict settings, women tend to have poorer access to, and control over, resources that can influence health and immunization outcomes. This is especially the case for single mothers, and those in low income households in rural areas.[33]

There are a number of gender barriers related to access to and control over resources that hamper immunization uptake in Syria's under-immunized communities. Among the key barriers to access to health services identified by the 2022 CARE survey were **mobility** limitations caused by insecurity, ill-equipped health facilities and transportation challenges for people of all genders. All survey respondents, including adolescents, identified the lack of **transportation** as the main barrier to seeking maternal health and family planning services.[34] An assessment carried out in health facilities across 14 governorates showed that the majority of caregivers (of whom 84 percent were mothers) brought their children to the centre either by foot (44 percent), by car (22 percent) by motorcycle (16 percent) or by microbus (13 percent).

The ongoing economic crisis with severe devaluation of the local currency, in addition to increasing fuel costs, further increase the cost of transportation and thereby the mobility of people living in vulnerable situations,

[28] CARE (2022) Rapid Gender Analysis: Sacrificing the Future to Survive the Present: Findings from Northwest Syria.
[29] UNICEF Syria CO key informants.
[30] UNICEF Syria Country Office and Ministry of Health Syria (2023) Syria Missed Opportunities for Vaccination Study
[31] UNICEF Syria – internal briefing note on Nutrition.
[32] UNICEF Syria CO key informants.
[33] Feletto, M. et al (2019) Gender Lens to Advance Equity in Immunization. ERG.
[34] CARE (2022) Rapid Gender Analysis: Sacrificing the Future to Survive the Present: Findings from Northwest Syria.

especially in remote areas. Due to the difficulties in accessing affordable transportation, many families prefer to have mobile teams vaccinate their children. Cash transfer programmes targeting low income families would encourage the use of vaccination services and tackle challenges related to high transportation costs – these would particularly benefit women who often have less access to financial resources and disposable income.

Internally displaced women living in **host communities and in informal camps** often face more challenges in accessing health services than those living in formal camps as formal camps are usually covered by mobile vaccination teams. Moreover, IDP women, especially heads of households, are facing more difficulties in reaching immunization services because of conflicting priorities related to income generation.[35] **Time** is another critical resource affecting especially women's access to health and immunization services. Especially during conflict and the ongoing economic crisis, more women are working outside the household to earn an income and provide for their family. As health centres and mobile teams are mainly operating during similar hours in the mornings, this impacts women's ability to access services.

However, even when caregivers are able to access a health centre with their children, sometimes children miss vaccines due to other reasons. For example, in a recent assessment, UNICEF found that even if most caregivers visited the health centre for other reasons than vaccinating their children, 31 percent of those children had still not received their recommended vaccines. This points to an opportunity for health workers to actively enquire caregivers about children's vaccination when they come to visit for other reasons. Over half (52 percent) of the respondents stated that the health worker had not asked about their child's vaccination status – this was found to be the case especially in Damascus, Tartous and Aleppo and Deir ez-Zor governorates. Sometimes children missed vaccines because they were not available in the health facilities or because the doctor said the child cannot be vaccinated because they are ill.[36]

Gender also influences people's **access to information** related to vaccination. A recent UNICEF assessment carried out in health facilities across 14 governorates showed that of all caregivers, 48 percent knew about the vaccines their child needs – this was only 8 percent for caregivers in Idlib, 24 percent in Raqqa and 36 percent in Damascus (no sex-disaggregated data available, although the majority of respondents were mothers).[37] In terms of reasons given for why children were not previously vaccinated, 13 percent said that they did not visit the health facility on the day of the vaccination session (reason for not visiting not clear), followed by not knowing that their child is eligible for vaccination (11 percent). For caregivers who had visited the health centre but could not receive vaccines, the main reasons were that they visited during a day when there were no vaccine sessions (44 percent), followed by the lack of a vaccines (25 percent), especially in the governorates of Daraa and Hama.

Men and adolescent boys cited **security risks and transportation costs** as their main barriers to mobility, while women and adolescent girls identified **transportation** costs. Women experienced cultural barriers to their mobility about six times more than men, with adolescent girls particularly affected. Nineteen percent of adolescent girls interviewed reported prevailing societal norms as a barrier, compared with 5 percent of adolescent boys[38]. Most women respondents said they would only travel to a health facility with another woman or child and would not feel comfortable traveling independently without informing a male family member. Men said they were able to travel to medical facilities within their governorates without restriction.

[35] UNICEF Syria CO key informants.
[36] UNICEF Syria Country Office and Ministry of Health Syria (2023) Syria Missed Opportunities for Vaccination Study
[37] ibid
[38] CARE (2022) Rapid Gender Analysis: Sacrificing the Future to Survive the Present: Findings from Northwest Syria.

Beliefs, norms and perceptions

Data is scarce on potential differential treatment of boys and girls in terms of the prioritization of their health. UNICEF Syria key informants have not encountered incidents regarding gender-related beliefs or myths about vaccines that would have prevented immunization. However, it was noted that within some inaccessible communities, perceptions about vaccines causing **infertility** have sometimes been reported by outreach health workers. In some rural communities in Deir ez-Zor, cases of girls not receiving vaccines and their health not being prioritized have been recorded as fathers had considered it to be more important that boys obtain the necessary protection from vaccines.[39] UNICEF key informants note that this view is only held by a few community members and is not widespread.

To address these **gender-specific myths and beliefs** preventing girls from being immunized, UNICEF and partners engaged with the directorate of Awqaf and with influential imams, religious leaders and sheiks in mosques through advocacy meetings. Moreover, mosques in these areas disseminated **targeted messages** with a focus on gender equality using teachings from the Quran and Prophet Hadith through speakers during Friday sermons. With the support of UNICEF Social and Behaviour Change Communications (SBC) teams, religious leaders also held one-on-one and group dialogue sessions with fathers. Directly after these sessions, UNICEF and the directorate of health dispatched mobile vaccination teams to successfully immunize the girls who had missed their doses. These efforts were complemented by engagement with tribal leaders in rural areas to reach zero-dose girls.

Most of the harmful beliefs and myths that vaccinators have encountered are not gender-specific – some people are reported believing that vaccines are dangerous and lead to negative health outcomes and some have low trust levels towards public health services. Anecdotal reports also refer to some people refusing vaccines as they are considered to be *haram.*[40] Due to women's limited decision-making power and position within family power dynamics (especially for younger women), they might be less able to address **disinformation** and myths about vaccines.

In terms of beliefs and norms impacting **men's involvement** in children's health and immunization, there are differences in terms of geographic areas. For example, in some communities it is not socially acceptable for men to take their children to health centres for vaccination, whereas in other areas, men often accompany their wives to the health centre.

A health worker assessment carried out by UNICEF in 2023 shows that the primary reasons why healthcare providers believe caregivers do not vaccinate their children are negative beliefs about vaccines and the timing of the vaccination sessions being incompatible with caregivers' busy lives, emphasizing the need to intensify the work of communications teams to educate caregivers about vaccines and their importance.[41]

Needs, preferences and challenges

Women, men and gender-diverse people experience different security and safety challenges impacting their access to health and immunization services. **Gender-based violence**, including child marriage, is prevalent in Syria. Women living in IDP camps are especially at risk of gender-based violence. Men are more vulnerable to security incidences (kidnaping and killing) as they can be targeted due to their ethnic groups or political affiliations. In camps, most of the areas are equipped with lights, but usually women and girls need to be escorted by other family members when they leave their tents at night. In some camps, incidences of violence

[39] UNICEF Syria CO key informants.
[40] Ibid.
[41] UNICEF Syria Country Office (2023) Health worker questionnaire.

against women and health workers perpetrated by men have been recorded.[42] UNICEF key informants note that in certain remote rural areas it is not safe for women to reach health services, especially in the rural areas of northwest Syria due to the security situation. Although mobile vaccination teams cover many of these areas, the intervals between visits are often not sufficient.

The UN Country Team in Syria emphasizes that the armed conflict and crisis in Syria has resulted in an unprecedented increase in disability rates with increased number and severity of injuries. The disproportionate unemployment rate and increased dependence on assistance suggests that households with persons living with disabilities are more vulnerable.[43]

Immunization services are provided through health centres (around 60 percent provide routine immunization services), outreach and mobile vaccination teams, and house-to-house during campaigns. Sometimes community leaders (*Mukhtars*) host the vaccination teams in their homes to support immunization delivery in their villages. **Women vaccinators** are generally better accepted in communities than men. Mobile teams generally consist of men due to the nature of the work requiring vaccinators to spend time away from home and travel long distances. However, during vaccination campaigns male and female nurses are included in vaccination teams to ensure acceptance in communities and at the same time improve the safety of women nurses. Especially in northeast Syria, there is a need for more vaccination teams in general. Most of the nurses delivering immunization services in fixed health centres are women, while most of the nurses in the mobile vaccination teams are men (exact breakdown of personnel figures was not available). There are currently no complaint or feedback mechanisms in place in health centres.[44]

The overall **literacy** rate in Syria is 86 percent - this is 88 percent for men and slightly lower for women at 81 percent. Literacy rates among women are lower in remote rural areas and in the northeastern governorates.[45] A recent UNICEF assessment of caregivers who brought their children into health facilities showed that on average, 88 percent of respondents can read and write, but this was lower for example in Idlib (64 percent) and Raqqa (39 percent). Sex-disaggregated data was not available for these figures, although mothers comprised 84 percent of overall respondents.[46] The assessment also showed that 69 percent of respondents did not hear or see messages about vaccination within the last month, with the figure being as high as 90 percent in the centres of Tartous, Damascus, Sweida, Hama, Rural Damascus, Quneitra and Aleppo (no sex-disaggregated data available).

Creating effective outreach and communications for immunization requires understanding and **addressing the different literacy needs and constraints**, and communication **preferences** of diverse women and men. Government and local NGOs often utilize face-to-face communication when visiting communities to discuss the importance of vaccination, using mostly pictorial aids to support their engagement. Community workers mainly utilise direct communication with mothers and caregivers through home visits, community-based dialogue and individual counselling sessions.[47] UNICEF SBC teams conduct assessments to better understand community needs and preferences for trusted **information sources and preferred channels**, as well as specific gender-related barriers to be addressed. Local NGOs also organize education sessions for women before and during the vaccination campaigns to ensure that their concerns are addressed.[48]

[42] UNICEF Syria CO key informants
[43] United Nations Syria (2021) Country Team Report prepared in accordance with paragraph 15(B) of resolution 5/1 of the HR Council For the Third Universal Periodic Review of the Syrian Arab Republic.
[44] UNICEF Syria CO key informants.
[45] Ibid.
[46] UNICEF Syria Country Office and Ministry of Health Syria (2023) Syria Missed Opportunities for Vaccination Study.
[47] UNICEF Syria CO key informants.
[48] Ibid.

Men are usually reached when community leaders are targeted as they have more access to community events, including religious leaders. According to UNICEF key informants, social media is popular among women and men, and health workers are generally trusted sources of information for both. A recent UNICEF assessment showed that print media such as newspapers or phone messages are not as effective in informing people about vaccines, as most respondents reported hearing vaccine-related messages during their visits to the health facility or through home visits (no sex-disaggregated data available but mothers constituted 84 percent of the respondents).[49]

Religious leaders are important opinion shapers and influencers, especially for men. Immunization-related messaging through health centres and NGOs is generally directed at mothers. In general, most community engagement activities address mothers as their target audiences; however, in more conservative areas, men are also engaged.[50] Given men's influence and decision-making roles within households, increasing **men's engagement** and including fathers in the design and development of messages or initiatives regarding immunization and children's health would support efforts to increase demand for vaccines.

Enabling factors and partnerships

Gender equality and women's rights continue to be undermined by inequitable legislative frameworks. However, the Government of Syria has enacted several reforms: for example in 2019, over 60 articles of the Syrian Personal Status Law were amended and approved, along with a 2020 law abolishing the legal recognition of "honour killings". Further legislative and policy reform to advance gender equality is required, specifically focusing on addressing various forms of gender-based violence and women's inheritance rights.[51]

The collection, analysis and use of sex-disaggregated **data** related to immunization is rather weak in Syria. Data disaggregated according to sex and age is collected at service delivery points but it is not systematically summarised and shared to higher reporting levels. Therefore, the data remains only available at the health facility-level registers and is not further analysed or used to guide and shape programme interventions.

The **training** curriculum for vaccinators and social mobilisers includes gender-related training to some extent. **Civil society** groups in different areas are the main groups targeting women and caregivers with health and immunization messages. Increasing young people's and youth groups' participation and engaging influencers in zero-dose communities is critical for addressing demand-side barriers. In addition to ongoing partnership with the Ministry of Health and other line ministries, the UNICEF SBC programme has a wide network of partnerships with several NGOs across different governorates of Syria, through which they conduct demand-generation related activities.

Although civil society actors, including **women-led organisations and networks**, have increased in Syria in the last decade, they could be further engaged in health-related programming. A Gender Programmatic Review conducted by UNICEF noted that the number of women-led community-based organisations that UNICEF has as implementing partners is low, leading to an absence of women's voices and experiences in UNICEF's programming.[52] A recent gender analysis from CARE[53] highlights that before the February 2023 earthquake, local civil society organisations, particularly informal and formal women's groups had established coordination mechanisms across local networks, seeking to expand their sphere of influence and

[49] UNICEF Syria Country Office and Ministry of Health Syria (2023) Syria Missed Opportunities for Vaccination Study
[50] UNICEF Syria CO key informants
[51] UN Syria Country Team (2021) UN Syria Country Team Report prepared in accordance with paragraph 15(B) of resolution 5/1 of the HR Council For the Third Universal Periodic Review of the Syrian Arab Republic.
[52] UNICEF Syria Country Office (2021) Gender Programmatic Review.
[53] CARE (2023) Türkiye - CARE: Rapid Gender Analysis Policy Brief: Türkiye & Northwest Syria Earthquake Response. Available at: https://data.unhcr.org/en/documents/details/98892

participation. However, while humanitarian actors seek support from informal women groups and volunteers in aid delivery (especially in information dissemination and community-based protection activities), meaningful consultative sessions are rarely held in the design or decision-making stages.

One of the main barriers to vaccination in Deir ez- Zor governorate reported by key informants is the low-risk perception of the importance of routine immunization and widespread rumours and misconceptions about vaccines, especially among older women who carry strong influence over pregnant women and mothers with newborns. UNICEF, in collaboration with the **UNFPA and NGOs partners** worked with **midwives' networks** in Al Maydin district to educate, engage and build trust among women about vaccines. As midwives provide home deliveries and post-natal support during home visits, they also conducted counselling sessions and delivered messages about the importance and safety of routine immunization, addressing misconceptions and vaccine hesitancy. They referred women to the nearest vaccination points in addition to conducting follow-up household visits to ensure the child's vaccination schedule is adhered to.

Women are largely absent from local, **community-level decision-making** structures. Decisions at the community level are primarily made by local councils, which are largely attended and controlled by men. According to a rapid gender assessment conducted by CARE, 90 percent of women respondents said they were not part of community-level decision-making bodies, compared with 59 percent of men.[54] Strengthening opportunities for women's meaningful participation in community-level decision-making would offer opportunities for gender-transformative programming that challenges harmful gender norms, roles and relations and increases women's agency, with potential benefits for health-related interventions, including for immunization coverage in zero-dose communities.

Recommended approaches and entry points:

- Conduct **context-specific, in-depth analysis** of gender-related barriers in zero-dose communities, supported by data from focus groups and interviews when possible, to better understand and address these barriers, focusing on Aleppo and the north-eastern governorates of Raqqa, Hassakeh and Deir ez-Zor, rural or remote areas and major cities with displaced populations as well as mobile nomadic populations. Ensure exploration of drivers, factors and barriers at the individual/household, community/social and institutional/structural levels.
- Build and **strengthen existing partnerships** with civil society and community-based organisations, including informal and formal networks and women's groups – for example existing collaboration with midwives' networks in Al Maydin in Deir ez-Zor with UNFPA and NGO partners to educate, engage and build trust among women.
- Increase **opportunities and incentives** for caregivers to immunize children, for example by linking immunization delivery with cash, nutrition or reproductive, maternal, newborn and child health programmes for optimized delivery.
- Continue working with **religious leaders** through gender-focused approaches: for example, building on the experiences from the successful identification and immunization of zero-dose girls in Deir ez-Zor – engaging with influential imams, religious leaders and sheiks in mosques through advocacy meetings, disseminating targeted messages with a focus on gender equality using religious teachings during Friday sermons, complemented by one-on-one and group dialogue sessions with fathers with immediate links with mobile teams to vaccinate missed children.

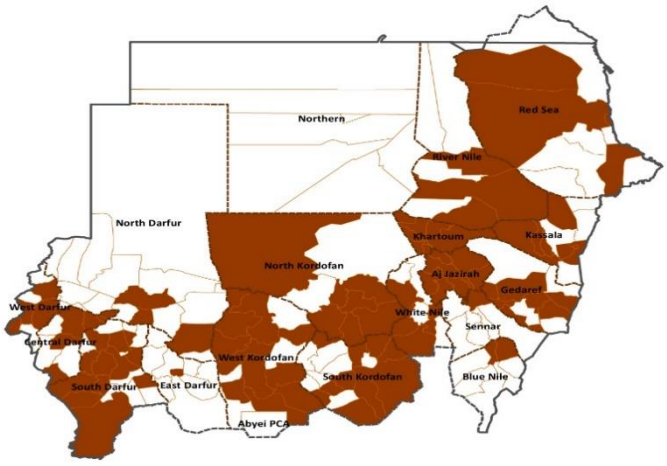
[54] CARE (2022) Rapid Gender Analysis: Sacrificing the Future to Survive the Present: Findings from Northwest Syria.

- Focus on developing **gender-responsive and transformative SBC** interventions informed by an intersectional gender analysis, engaging men and encouraging their equal participation in caretaking, children's health and immunization.
- Explore linkages with **gender-transformative parenting programming** which has started in Syria under the leadership of the Ministry of Health and UNICEF Child Protection section with positive feedback from communities – consider its use in immunization interventions in zero-dose communities, including engaging fathers, supporting parenting alliances and capacity building of frontline service providers.

Sudan

Overview of zero-dose communities

Sudan continues to suffer from a protracted humanitarian crisis exacerbated by conflict and unprecedented increases in acute food insecurity due to droughts, floods and persistent disease outbreaks, with 3.7 million people displaced internally, mainly in the Blue Nile State, Darfur and Kordofan regions[55]. Access to healthcare is limited, with 81 percent of the population not having access to a health service within a two-hour walk. Umdoren, Alburam and Heban localities in South Kordofan state are completely inaccessible for immunization service providers due to conflict. Dalami locality in South Kordofan as well as Elkormuk, Baw and Tadamon localities in Blue Nile are also partially inaccessible. There is lack of reliable information about the overall situation in these areas[56]. Many communities become even harder to reach during the rainy season or due to security situation or communal conflicts, especially in the Darfur region, Blue Nile and Kordofan states.[57]



High-burden localities for zero dose children targeted by UNICEF Sudan for the Gavi Equity Accelerator Fund. Source: UNICEF Sudan

Before the COVID-19 pandemic, Sudan managed to sustain DTP1 coverage – however, the number of zero-dose children substantially increased from 2020 to 2022. As a cumulative number of unimmunized children in the past five years, **there are a total of 497,170 zero-dose children and 532,015 under-vaccinated children in 186 localities**. The 2021 national immunization coverage estimates published by WHO and UNICEF in July 2022 show that Sudan has seen a decline in the coverage of the third dose of DTP3 from 93 percent in 2019 before the pandemic to 84 percent in 2021. This is the largest decrease in immunization coverage of Sudan since 2009, exacerbated mainly by the COVID-19 pandemic as well as political instability caused by the military coup in 2021. Overall 81 percent of infants have received three doses of pentavalent vaccine protecting them from diphtheria, pertussis, tetanus, pneumonia and hepatitis B, and 80 percent have received at least one dose of the measles vaccine.[58]

Zero-Dose Children in Sudan by Geographic Setting based on 2020 data
(Source: UNICEF Sudan)

	# in Setting		% in Setting		
Setting	**Surviving infants**	**Zero Dose**	**Surviving infants**	**Zero Dose**	**Zero dose prevalence**
Remote rural	470,011	33,586	38%	50%	7%
Conflict (broad)	386,320	29,113	31%	44%	8%
Rural non-remote	631,459	28,663	51%	43%	5%

[55] OCHA (2022) Sudan Humanitarian Needs Overview 2023
[56] UNICEF (2023) Supporting Narrative for Theory of Change for Gavi Equity Acceleration Fund Sudan.
[57] ibid
[58] UNICEF. (2021). Health Annual Report. UNICEF Sudan.

Urban	109,280	3,499	9%	5%	3%
Peri-urban	24,919	760	2%	1%	3%
Slums	2,891	-	0%	-	-
ERG Total	**604,211**	**37,845**	**49%**	**57%**	**6%**
Note that settings are not mutually exclusive and cannot be added together for totals. The ERG Total is the combination of Urban, Peri-urban, Remote rural and Conflict (broad). Data on zero dose in slums not available due to large uncertainty in estimates.					
Setting definitions: *- Conflict (broad): locality where >30 deaths per 1m pop occurred, per ACLED data. - Remote rural: Areas >3 hours from nearest city >50k pop, per MAP data. - Urban: Areas defined as urban centers according to UN Stats, per GHSL data. - Peri-Urban: Areas defined as dense urban clusters according to UN Stats, per GHSL data. - Slums: Urban/Peri-Urban areas with dense blocks and limited street access, per Million Neighborhoods data.*					

Nearly all zero-dose children live in **remote rural, conflict, or rural non-remote areas**. These are mostly areas in Darfur, Kordofan, Blue Nile and Kassala. Refugees, IDP, nomadic populations and people living in urban slums are most at risk. There are also zero-dose localities in Khartoum state and the states' capitals, mainly due to increasing urbanization and a growing number of slums. In these areas approximately 20 percent of zero-dose children live less than an hour away from a city, while 23 percent live around 1-3 hours away. UNICEF analysis of zero-dose children and missed communities in the 103 prioritized localities showed that the majority of zero-dose children are from rural communities (72 percent), followed by urban poor communities (20 percent) while the rural mobile population constitutes around 8 percent.[59]

Routine immunization services are delivered either through fixed posts, outreach teams or mobile immunization services. Of all health facilities, 74 percent provide fixed immunization services covering 51 percent of the population, while outreach services represent 48 percent of the delivered immunization services.[60]

Gender-related barriers to immunization

Data on gender-related barriers to immunization in Sudan is scarce. A study assessing routine immunization coverage in South Darfur State found no evidence to support that a child's sex or gender had any impact on vaccine uptake or in defining missed opportunities for vaccination, "indicating that there was no gender-related barriers for immunization within the study population".[61] However, gender-related barriers operate in more subtle ways, beyond sex-based discrepancies in immunization coverage. To fully uncover the dynamics of gender-related barriers operating at the individual, household and community level as well as at the institutional level, more **nuanced, qualitative data** is required. The following section presents an overview of some of the key gender-related barriers identified in Sudan, with a focus on zero-dose communities.

[59] UNICEF (2023) Supporting Narrative for Theory of Change for Gavi Equity Acceleration Fund Sudan
[60] The Federal Ministry of Health of the Republic of Sudan (2019) The Immunization Barrier Mitigation Strategy. Directorate of Primary Health Care.
[61] Ismail, I. et al (2014) Assessment of Routine Immunization Coverage in Nyala Locality, Reasons behind Incomplete Immunization in South Darfur State, Sudan. Available at: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4340504/

Gender roles and responsibilities

Gender roles, norms and responsibilities affect health-seeking behaviours and utilization of health services, including immunization. In Sudan, women are primarily responsible for **household chores and caretaking** tasks whereas it is not common for men to actively participate in childcare or other household responsibilities. Sometimes women receive support from older children or female relatives, such as aunts or grandmothers. Fathers are generally in charge of storing vaccine cards, along with other important family documents.[62]

A 2022 UNICEF study focusing on COVID-19 vaccination in Sudan noted that, overall, women are able to visit vaccination sites alone, especially in the urban areas.[63] The study also found that children's vaccination is primarily perceived to be **mothers' responsibility**, noting that vaccinators do often encourage fathers or other relatives to bring children for subsequent doses if the mother is unwell or busy. In certain contexts, the responsibility for children's health depends on the sex of the child – the father will take his son to a health facility when he is sick while mothers reportedly accompany girls.[64]

A child holds up a vaccination card during an immunization campaign in Sudan.

Photo: UNICEF

A vaccinator interviewed by UNICEF shared that **fathers** who bring children for immunization are often given priority because they are perceived to be less adept at "handling children for long hours or managing crying babies". Another study conducted by the Ministry of Health echoed this, noting that mothers generally bring children for vaccination as they are the primary caretakers and more familiar with the vaccination doses and timing. If mothers are not available, sometimes grandmothers or aunts take children for immunization[65].

Men and fathers are often working outside the household and women generally need **permission** from their husbands before taking children to healthcare and immunization services. One key informant recalled a situation where a woman had taken her child to the nutrition clinic without the husband's approval, and the husband followed her and physically abused her outside the facility. Another key informant recalled similar incidences of **violence** perpetrated by men against women when women have left their homes to attend health services alone without asking for permission or being accompanied by a mahram. Meaningful action to address these specific risks women might face when seeking health services should be built into immunization interventions by bringing the services closer to women and caregivers, targeting men through gender-transformative approaches to generate change in harmful attitudes and norms and strengthening safeguarding mechanisms in health facilities and at the community level.

Understanding the gender dynamics around **decision-making related to vaccination** is critical in increasing coverage and reach and for developing targeted messaging and outreach interventions. According to a UNICEF study conducted in 2022, vaccine-related decisions are generally jointly made by caregivers. In some

[62] UNICEF (2022) Gender and Immunization Case Study: Social Listening for Vaccine Equity in Sudan, and UNICEF and GAVI (2022) From Coverage to Empowerment: Integrating Gender in Immunization Demand.
[63] UNICEF (2022) Gender and Immunization Case Study: Social Listening for Vaccine Equity in Sudan.
[64] UNICEF (2017) Gender Programmatic Review: Sudan Country Office.
[65] Brair, S. (2018) Barriers to Immunization. Ministry of Health in collaboration with Al Neelain University and UNICEF.

communities men may be the main decision-makers – however, this varies depending on the community and levels of education. A UNICEF assessment found that in Darfur, around 65 percent felt that children's well-being and health, including vaccination, is primarily the responsibility of the mother while this was 80 percent in Kassala.[66] UNICEF key informants noted that, for example, in Gabal Awlia, Ombuda and Khartoum with high proportions of zero-dose children, around 90 percent of men work outside the household and play minimal roles in childhood immunization.[67] Decisions about children's vaccination could also be influenced by in-laws, typically the paternal grandmother as well as uncles, aunts or older siblings.[68] Given the high rates of **child marriage** in Sudan (12 percent of girls are married by age 15 and 34 percent by age 18[69]), girls' and young women's decision-making power and their ability to influence vaccine-related decisions might be further constrained.

Women vaccinators are well-accepted and preferred in their communities and therefore key to reaching zero-dose and under-immunized children. Families are more accepting of male vaccinators if they speak the local language, belong to the community and are known and trusted by them.[70] A polio communication for development (C4D) assessment found that vaccination home visits during daytime hours were hampered by social norms restricting interaction between women and (male) vaccinators while the women's husbands and brothers were outside working. According to the assessment, some preferred to vaccinate their children in health centres to avoid "over-dosing" or other incidents. Some pointed out that they have lower levels of **trust** towards mobile teams and outreach vaccinators because of their perceived lack of accountability and them being unknown to the community. Addressing these barriers and increasing trust requires that health workers and vaccinators are recruited from within their communities to the extent possible, with an emphasis on recruiting women (or at least mixed teams where women-only teams cannot be deployed).

There are geographical differences in terms of **preferred timing** for receiving health-related services or information. For example, the preferred time to receive this information in Sudan's eastern region is during the morning after 10 am as women are busy with chores in the early morning, while for example in Darfur and Kordofan, mothers preferred to receive messages before 8 am or in the evening after 5 pm as they are busy working during other times. For other regions, mothers preferred to receive information in the afternoon during coffee gatherings.[71] UNICEF key informants noted that most women and men work outside especially in the mornings until the afternoon – in IDP camps women work all days of the week, including Fridays, hampering immunization efforts.[72] Given the gender differences in preferred timings and availability of caregivers in different localities, it is critical that immunization outreach and service provision is informed by a thorough analysis of local preferences, taking into consideration different needs and overlapping priorities.

Access to and control over resources

Access to and control over critical **resources** linked to health service utilisation, such as time, money, information and transportation, is overall limited for people in many localities; however, women tend to have less access to and control over resources influencing health and immunization outcomes. Around 46 percent of people in Sudan are living below the poverty line – those most affected by poverty include people living in

[66] UNICEF (2022) Evidence to Action – EPI.
[67] UNICEF Sudan CO key informants.
[68] UNICEF (2022) Gender and Immunization Case Study: Social Listening for Vaccine Equity in Sudan.
[69] Girls Not Brides. Sudan Prevalence Rates. Available at: https://www.girlsnotbrides.org/learning-resources/child-marriage-atlas/regions-and-countries/sudan/
[70] UNICEF (2022) Gender and Immunization Case Study: Social Listening for Vaccine Equity in Sudan.
[71] UNICEF and Federal Ministry of Health (2020) Rapid Assessment of the Recent Polio Outbreak. September 2020.
[72] UNICEF Sudan CO key informants.

rural areas, particularly women, nomads and internally displaced persons.[73] Of all people living in urban areas, 74 percent live in slums[74] which also have a high concentration of zero-dose children. The **literacy** rate in Sudan is 61 percent - this is 56 percent for women (aged over 15) and 65 percent for men. This increases up to 73 percent for both young women and men aged 15-24.[75] Women's lower literacy rates, as well the digital gender divide, impact women's access to **information** about vaccines, highlighting the importance of gender-responsive SBC interventions that consider the different and unique needs and barriers women face.

Women in general have less access to **financial resources**, limiting their access to healthcare and transportation. Even through immunization services should be offered free-of-charge, there have been reports of health facilities demanding payments for services - for example community members from White Nile Tandalty locality mentioned paying 5 or 10 SDGs to receive services.[76] Even when the service itself is free, the cost of transport to vaccination centres in rural areas presents a barrier especially for women, compounded by the current economic hardship and increasing fuel prices.

Long travel times to vaccination points was also noted as a barrier which could be addressed through careful microplanning utilizing fixed points, outreach and mobile teams. Long travel times pose barriers especially for women who are often in charge of taking care of children and face multiple demands on their time use, juggling household chores, caretaking responsibilities and sometimes also paid work outside the household. Women living in remote rural areas or with limited financial resources found it difficult to travel and leave other young children at home to receive routine immunizations. Distances to health centres in rural areas are long and vaccines are available only on assigned days.

Especially people living in rural and remote areas rely mainly on **mobile services** for immunization; however, the schedules and availability of these services are not always consistent. Adequate notice prior to the arrival of mobile teams is also often missing. A barrier assessment carried out by UNICEF found that some mobile teams spend less hours than recommended to cover the available targets per village, which may lead to missed children and communities. Increasing the availability of mobile services that are convenient and acceptable to local communities, ensuring the presence of women staff, would particularly benefit women as they often face greater barriers in accessing transportation and travelling longer distances to reach fixed health delivery points.

Beliefs, norms and perceptions

A UNICEF polio assessment found that the most common reasons for vaccination refusals were the lack of information, misconceptions about vaccines and lack of trust towards healthcare providers.[77] Social norms may affect service delivery in many states. In some states, **social norms and customs** prevent girls and women from accessing health facilities where men deliver services and where girls and women think there is a lack of privacy (for example, circulating information about patients or lack of privacy in the examination room). Customs among some tribal groups, such as the *Hadandaw*, promote **gender segregation**, making it difficult for an outsider to come into contact with young children since they live with women in the "female

[73] The Federal Ministry of Health of the Republic of Sudan (2019) The Immunization Barrier Mitigation Strategy. Directorate of Primary Health Care.
[74] World Bank (2018) World Bank Data – Sudan. Available at: https://data.worldbank.org/indicator/SE.ADT.1524.LT.MA.ZS?locations=SD
[75] Ibid.
[76] Brair, S. (2018) Barriers to Immunization. Ministry of Health in collaboration with Al Neelain University and UNICEF.
[77] UNICEF and Federal Ministry of Health (2020) Rapid Assessment of the Recent Polio Outbreak. September 2020.

village" which is often closed to outsiders. This is common in the rural and in peri-urban sites of the main cities.[78]

A demand barriers analysis conducted by UNICEF discovered that there are people in Elfasher, Darfur region, who do not vaccinate children due to beliefs that vaccinations cause serious complications such as paralysis, **infertility** or even death – whether these beliefs were specific to girls or boys was not specified. UNICEF has previously faced difficulties in tetanus vaccination for adolescent girls, due to circulating beliefs among women that vaccination, especially when administered by international organisations, may affect girls' fertility rates. As a result, UNICEF limited the tetanus vaccination to pregnant girls or women to avoid resistance in targeted localities.[79] Community members in some localities perceive that families are more concerned with boys' health rather than girls' due to their perception that boys will work and generate future revenue[80]. More information is needed on the gender-specific myths and beliefs surrounding the negative effects of vaccines to effectively tackle them.

Needs, preferences and challenges

A 2022 UNICEF study focusing on COVID-19 vaccination found that women were concerned about the **lack of privacy** and the availability of closed-off spaces in vaccination sites. According to the vaccinators UNICEF interviewed, access to vaccines, restricted mobility, cost concerns or agency to make independent health decisions were not significant barriers as the vaccine campaign included mobile vaccination sites. The barriers for uptake of COVID-19 vaccines among women were predominantly related to the lack of adequate information, rumours or misinformation about vaccines.[81]

A rapid assessment focused on polio found regional differences in terms of **caregivers' preference** for vaccine **delivery modalities**. For example, respondents living in the Eastern region mainly preferred visiting health centres, while those living in the West preferred to receive health services within their homes. In Darfur and Kordofan regions, caregivers preferred to receive vaccinations either at home or at a health facility. The preference to receive health services from health centres was often linked to the need to ensure the safety of children in case of vaccine side effects or other complications, as well as concerns over having unknown men visit homes during daytime when women are alone. However, some expressed their preference to receive vaccines at home due to travel expenses and lack of access to health facilities.

Respondents living in Khartoum with access to health centres frequently found that the vaccine was unavailable. This had discouraged caregivers from keeping up with their children's routine immunizations.[82] While the rapid assessment did not analyse gender-specific preferences or concerns, house-to-house service delivery is often preferred by women, especially if the vaccinators are women, due to the financial and mobility-related challenges women face in traveling to health centres and leaving their other children at home.[83]

In terms of **preferred channels and sources of information** on vaccines, radio and information from healthcare providers are generally well-trusted modalities. According to UNICEF data, 65 percent of people living in rural areas prefer the radio as a source of information on vaccines, while this is around 50 percent in urban areas and 27 percent among IDPs. Healthcare providers are the most trusted source of health

[78] Brair, S. (2018) Barriers to Immunization. Ministry of Health in collaboration with Al Neelain University and UNICEF.
[79] UNICEF (2017) Gender Programmatic Review: Sudan Country Office.
[80] Ibid.
[81] UNICEF (2022) Gender and Immunization Case Study: Social Listening for Vaccine Equity in Sudan.
[82] UNICEF and Federal Ministry of Health (2020) Rapid Assessment of the Recent Polio Outbreak. September 2020
[83] UNICEF (2022) Gender and Immunization Case Study: Social Listening for Vaccine Equity in Sudan

information in IDP camps while TV and social media are among the most trusted and preferred sources in urban areas. Less than 1 percent of the people surveyed prefer posters, flyers and other print media as communication support materials[84] (gender-related differences and preferences were not analysed). Microphone announcements during immunization campaigns and face-to-face awareness raising sessions are also popular means of communication. There are also regional variations in terms of preferred communication channels and methods. For example, mothers in the Red Sea state expressed that they prefer to have educated girls or young women to mobilize their community. However, in Gadaref, they preferred resistance committees while key informants in Darfur had a preference for health promoters and midwives.

Many prefer to hear health-related messages from their local influential community leaders such as tribal and religious leaders to mobilize their communities. Those living in Red Sea and South Darfur preferred to use word of mouth as their source of information with those living in North Darfur and Gaderef also having the same preference. For example, women living Gadaref reported having access to the television, whereas nomads in Darfur did not.[85]

The use of **edutainment** approaches that actively engage communities, including interactive community theatre and mobile cinema, have been successful in sharing messages around immunization with diverse communities in Sudan. These approaches have been especially effective in areas where people lack access to TV or radio.[86] Key informants also highlighted the importance of gender-responsive focus group discussions, utilising for example "coffee mornings" where women in the community gather. Engaging **trusted influencers and message multipliers** is key – these include, for instance, "tea ladies" who are closely engaged with community members as well as midwives, youth partners and medical students.

The need to consider gender issues in messaging was also highlighted in order to shift away from generic messaging through mass media to more gender-specific messaging, frequently asked questions (FAQs) and other information resources focused on active tracking and tackling of gender-specific myths and barriers related to vaccination. The role of religious leaders is especially important in countering misinformation and promoting the safety of vaccines; however, only men have been engaged to date as religious leaders. Key informants highlighted the potential of engaging **women religious leaders** in immunization-related programming to enhance outreach to women.

Health facilities are often not well organised or equipped to provide quality services. In rural areas, vaccines are sometimes out of stock and safe water supply is often missing. Inconvenient and limited hours for immunization service availability was also identified as a barrier. Moreover, **waiting times** in health facilities are often long. Long waiting times and limited hours present barriers especially for women who often face time poverty, multiple competing demands on their time as well as mobility restrictions. Women vaccinators do not always have separate toilets at the health facilities or separate prayer rooms or spaces. Motivation levels of health workers and vaccinators have been reported to be low due to low wages and inadequate training. Health workers are often overworked and do not spend enough time communicating with clients about the types of vaccines they are administering or sharing information with them which would increase trust levels. In addition, in conflict-affected areas where mistrust against the government is high, communities might not be welcoming of government-supported aid, including vaccinations.[87]

[84] UNICEF (2022) Evidence to Action – EPI.
[85] UNICEF and Federal Ministry of Health (2020) Rapid Assessment of the Recent Polio Outbreak. September 2020.
[86] UNICEF Sudan key informant
[87] UNICEF (2022) Gender and Immunization Case Study: Social Listening for Vaccine Equity in Sudan.

Enabling factors and partnerships

Gender equality is reflected Sudan's national strategies, plans and policies such as the Twenty-Five Years National Strategy (2007-2031), and over the past decade, international and national legislation related to gender equality has been gradually improving.[88] Sudan has not ratified the Convention on the Elimination of All Forms of Discrimination against Women (CEDAW) and the optional protocol, and the country has signed but not ratified the Protocol to the African Charter on Human and People's Rights on the Rights of Women in Africa. The Constitution guarantees the right to healthcare and emergency services free of charge. Two of the Social Welfare and Development Strategy objectives target women highlighting the importance of "strengthening the role of women as a partner in community building" and "mobilising women to participate in sustainable development".[89]

Strengthening gender-focused **data** collection systems and overall health system strengthening are needed to tackle gaps in reaching zero-dose communities. As one key informant noted, the programme is often "operating blindly" due to the lack of accurate immunization-related data disaggregated by sex and additional critical factors.[90] **Integrating and bundling** immunization-related messaging and services to other interventions and sectors is also important, for example using UNICEF's cash transfer programmes that engage large numbers of people and have a surplus of demand in eastern Sudan to integrate immunization-related messaging and build trust in communities. Within the Mother and Child Cash Transfer Plus (MCCT+) programme, people can register through primary healthcare facilities where they receive non-conditional cash grants combined with knowledge and linkages to essential healthcare services, including immunization and nutrition care.[91]

There are opportunities for integrating gender into existing **capacity building** and training interventions offered to vaccinators and health workers, with a focus on understanding, identifying and addressing gender-related barriers to immunization as well as ensuring that health workers and community volunteers are aware of existing safeguarding mechanisms. For example, information about gender-based violence prevention and response, including sexual harassment, is included in trainings and orientation sessions for health care providers, including for doctors, medical assistants, nurses and midwifes, but vaccinators have not yet been included in these trainings.[92] The current training curriculum for vaccinators and social mobilizers does not include gender and diversity-sensitive training.

The engagement of **community-based organisations and civil society**, including women and youth-led organisations, in immunization demand generation interventions is critical. Deepening existing partnerships with the Medical Students Association and students and engaging youth-led organisations as credible and trusted information sources would increase effectiveness of outreach interventions, especially among women. Overall, building on the promising demand generation practices from COVID-19 response carried out in Sudan[93] and applying these in zero-dose communities would be valuable.

[88] African Development Bank and UN Women (2020) Country Gender Equality Profile: Sudan. Prospects of change in a new era?
[89] Gender Programmatic Review: Sudan Country Office
[90] UNICEF Sudan CO key informants
[91] UNICEF (2022) UNICEF's Cash Plus programme boosting health of children during the first 1,000 days of life. Available at:https://www.unicef.org/sudan/stories/unicefs-cash-plus-programme-boosting-health-children-during-first-1000-days-life
[92] UNICEF Sudan CO key informants
[93] UNICEF and GAVI (2022) From Coverage to Empowerment: Integrating Gender in Immunization Demand.

Recommended approaches and entry points

- Conduct more in-depth **gender analysis** of zero-dose communities to explore drivers, factors and barriers at the individual/household, community/social and institutional/structural levels.
- Leverage ongoing work on **gender-transformative parenting** for generating demand for immunization and addressing barriers in zero-dose communities, including engaging fathers, supporting parenting alliances and building capacity for frontline service providers.
- Apply **edutainment** approaches such as interactive community theatre and mobile cinema in zero-dose communities (using lessons learned from COVID-19 programming).
- Utilise **trusted influencers** and message multipliers – for example "tea ladies" close to community members, midwives, youth partners and medical students.
- **Integrate and bundle** immunization-related messaging and services, e.g. using UNICEF's cash-based programmes with high demand in eastern Sudan to integrate immunization-related messaging and build trust in communities – for instance using the Mother and Child Cash Transfers (MCCT+) project currently implemented in Kassala and Red Sea States as an entry point for spreading awareness about immunization benefits and campaign schedules.[94]
- Develop **gender-specific messaging**, FAQs and resources to counter myths and misconceptions and continue active tracking and tackling of gender-specific myths and barriers related to vaccination (build on lessons learned from ongoing research carried out by Ahfad University for Women in Kassala on girls' underimmunization).
- Engage **female religious leaders** in immunization-related programming to enhance outreach to women (while continuing engagement with male religious leaders).
- Continue social listening and monitoring, supported by gender analysis (building on COVID-19 successes and the use of Talkwalker).
- Ensure that **information about GBV** prevention and response, including sexual harassment, is included in trainings and orientation sessions for vaccinators (in addition to other health workers such as doctors, medical assistants, nurses and midwifes who already receive this information).
- Strengthen engagement with **community-based organisations and civil society**, including women and youth-led organisations – deepening partnerships with the Medical Students Association and students and engaging youth-led organisations.

[94] UNICEF (2022) How the Mother and Child Cash Transfers programme empowers women in East Sudan. Available at: https://www.unicef.org/sudan/stories/how-mother-and-child-cash-transfers-programme-empowers-women-east-sudan

Iraq

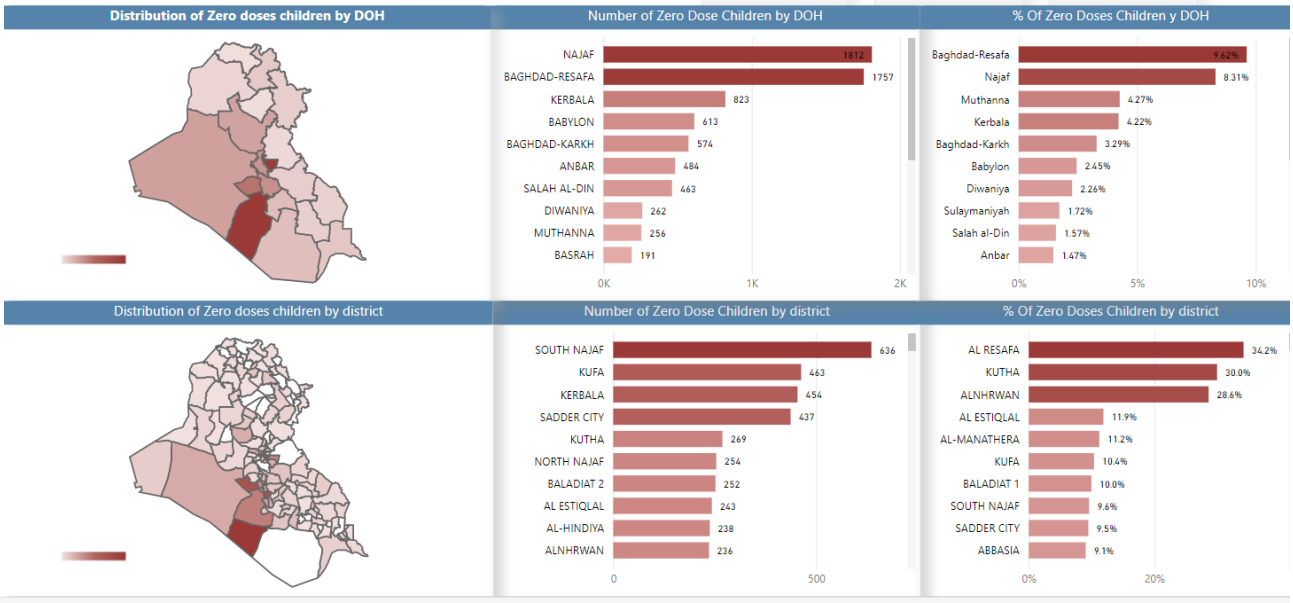
Overview of zero-dose communities

Iraq's post-conflict context is characterized by persistent insecurity, lack of livelihoods and damaged infrastructure along with widespread displacement. Since the conclusion of formal military operations against ISIL in 2017, major reconstruction and rehabilitation efforts have restored health facilities, roads, public water and electricity, and rebuilt housing and schools.[95] Of the 6.1 million people who were displaced between 2014 and 2017, around 19 percent remain internally displaced, with 2.5 million people in need of humanitarian assistance.[96] A joint assessment conducted by the Ministry of Planning, UNICEF and the World Bank in 2020 found that due to the impacts of the COVID-19 pandemic, an additional 4.5 million people (around 12 percent of the total population) fell into poverty, with the national poverty rate increasing in 2020 to 31.7 percent from 20 percent in 2018.[97]

The overall health sector in Iraq has deteriorated with continuous shortage in vaccines, medicines and other critical supplies, hampering people's access to basic health services. Vaccine-preventable diseases are still occurring in high incidence, causing outbreaks due to variable and weak vaccine coverage.[98] Vaccination coverage has stagnated in Iraq – only half of children between 12-23 months are vaccinated against the main vaccine-preventable diseases (47 percent in 2011 rising to 50 percent in 2018).[99] However, recent trends show improvements in overall vaccination coverage across the country, although pockets of zero-dose children still exist.

Data from a multi-antigens vaccination campaign conducted in December 2022[100] shows that the highest numbers of missed doses were in Ninewa (187,030), Dahuk (79,611) and Erbil (76,370) directorates of health. A total of 408,476 children were vaccinated during the campaign. Overall 8,126 zero-dose children were reached in the campaign (out of them 49.4% girls and 50.4% boys). The highest percentage of zero-dose children were found in **Baghdad**-**Resafa** (9,62%) and **Najaf** DOH (8.31%) – in terms of districts, the highest percentages were in **Al Resafa** (34.2%), **Kutha** (30%) and **Alnhrwan** (28.6%). According to UNICEF Iraq, all governorates have zero-dose children who mostly reside in rural areas. No specific vulnerabilities have been identified in terms of racial or ethnic minorities or displacement status. The common and routine delivery modality for vaccines is through health centres, complemented by outreach, home visits and door-to-door campaigns.

[95] UN OCHA (2022) Iraq Humanitarian Needs Overview 2022.
[96] Ibid.
[97] UNICEF and World Bank (2020) Assessment of COVID-19 Impact on Poverty and Vulnerability in Iraq. Available at: https://www.unicef.org/iraq/media/1181/file/Assessment_of_COVID-19_Impact_on_Poverty_and_Vulnerability_in_Iraq.pdf
[98] Lafta, R. and Hussain, A. (2018) Trend of vaccine preventable diseases in Iraq in time of conflict. *The Pan African Medical Journal.* Available at: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6462360/
[99] UNICEF (2023) Immunization data dashboard.
[100] UNICEF (2022) Multi-Antigens Vaccination Campaign data 18-29 December 2022.



Multi-antigens vaccination campaign data on zero-dose children 18-29 December 2022. Source: UNICEF Iraq.

Gender-related barriers to immunization

Gender roles and responsibilities

Women are generally **responsible** for taking children to **immunization services**, sometimes accompanied by their husbands or grandmothers. **Men are less engaged** in childcare-related activities, including around healthcare, in part due to their roles in working outdoors during the day to earn an income for the family. A gender analysis conducted in the Kurdistan Region of Iraq in 2021 notes that men are generally expected to be "protectors and providers for their families." Men hold the most **decision-making power** at the family, community, and societal levels and also control household finances and can limit women's activities and movement.[101] Mostly fathers or grandparents living in the same household make decisions around vaccination and children's health while women hold less decision-making power.

Women often need to seek **permission** from male household members to pursue activities outside the private sphere. According to the Ministry of Health data for selected governorates, **mobility restrictions** men impose on women is one of the barriers to immunization.[102] A case study examining women's integration in economic activities revealed that 11 of the 12 women under study faced travel restrictions due to security concerns or societal norms and values.[103]

Most **care work,** such as cleaning, cooking, and caring for children or older persons, is performed by women and girls and is usually not remunerated, with women spending on average more than six hours a day performing unpaid work.[104] A 2017 study conducted by Oxfam and UN Women reported that unpaid care work has increased in contexts of displacement, with women, mainly mothers, older (unmarried) daughters

[101] Seed Foundation (2021) Gender Analysis: Kurdistan Region of Iraq. Available at: https://www.seedkurdistan.org/Downloads/GenderEqualityKRI/Gender_Analysis_Of_Iraq.pdf
[102] UNICEF (2018) Iraq Gender Programmatic Review.
[103] UN Women (2018) Iraq Gender Profile. https://oxfamilibrary.openrepository.com/bitstream/handle/10546/620602/rr-gender-profile-iraq-131218-en.pdf
[104] Ibid.

and older women, continuing to consistently spend most of their time on unpaid care work.[105] UN Women data shows that women and girls aged 10 and over spend 24 percent of their time on unpaid care and domestic work, compared to 4.2 percent spent by men.[106] Women's disproportionate burden and time spent in household and caretaking work impacts their ability to seek health services, including immunization, for themselves or their children. Immunization services are generally offered between 8:30 am – 2:30 pm, with a waiting time between 15-30 minutes – these limited service hours often clash with women's other responsibilities as well as posing barriers for men who are generally engaged in paid work outside the household during these hours.[107]

Access to and control over resources

Women face constraints to their **mobility** in some areas, while also having less access to financial resources and **transportation** to reach health facilities. Women are also more affected by **time poverty** as they are in charge of household chores and childcare responsibilities and cannot easily reach vaccination points during daytime hours. During the daytime, men are often outside at work which hinders their ability to take children out to vaccination centres during the opening hours. Especially in rural areas, women cannot access health facilities alone and need to seek permission from male household members.[108]

A child receives a vaccine in Iraq.

Photo: UNICEF Iraq/2019/Anmar

Beliefs, norms and perceptions

Key informants from UNICEF Iraq were not aware of any gender-specific beliefs, perceptions or myths around vaccines. Some did note that there is an overall perception that boys' health and wellbeing is prioritised over girls – sometimes this leads to boys being vaccinated to protect them against diseases whereas in some areas there are fears over side effects of the vaccines more on boys than girls. UNICEF has found that families are inclined not to seek outside care when a girl is ill (44 percent) than when a boy is ill (38 percent).[109] Key informants have not noted any differential treatment being provided by health workers when the caregiver presents with a boy vs. a girl. More research and insights from the community level is needed to better understand gender-related myths and beliefs impacting immunization uptake and outcomes.

[105] Dietrich, L. & Carter, S. (2017). Gender and Conflict Analysis in Isis Affected Communities of Iraq. UN Women and Oxfam.
[106] UN Women Iraq Data. Available at: https://data.unwomen.org/country/iraq
[107] UNICEF Iraq CO key informants.
[108] Ibid.
[109] UNICEF (2021) UNICEF Iraq Gender Equality Strategy 2021.

Needs, preferences and challenges

The overall literacy rate for Iraq is 86 percent - this is 91 percent for men and 80 percent for women, with variations between geographic areas and the urban/rural divide.[110] Women's lower literacy rates could impact their access to reliable **information** about vaccination. A 2022 study on gender and COVID-19 vaccination in Iraq highlighted that women have less access to information, knowledge of, and willingness to accept the COVID-19 vaccine then men.[111] Women scored lower than men on every indicator around knowledge, attitudes, and practices about the COVID-19 vaccine: 64 percent of men and 52 percent of women knew where they could get a vaccine and 50 percent of men and only 30 percent of women knew how to register for vaccination. Barriers to vaccine access were assessed to be high especially for women. Of all respondents, 55 percent of women and 42 percent of men would have to travel more than 30 minutes to get a vaccine. In Ninewa, for example, 18 percent of people live more than an hour away from vaccination sites.

Preferred media **channels** and **sources** of **information** related to vaccines vary according to gender, place of residence and other factors. For example, 60 percent of men and 46 percent of women who responded to the COVID-19 survey indicated that social media platforms, mainly Facebook, Instagram, Twitter and WhatsApp, are main sources of information. Women were more likely to be using television news as a source of information than men are (28 percent of women and 20 percent of men). The study found that women (particularly those not engaging in paid work outside the household), religious leaders, daily wage labourers and people over 50 years were least likely to have correct information about COVID-19, vaccines, and side effects, leading to higher hesitancy among those groups.

Different geographical areas also showed different barriers related to messaging and hesitancy: for example, Ninewa governorate had higher gaps between men and women than Duhok, and host communities are less likely to accept vaccines and have information than refugees or returnee populations. The study noted that IDPs in camps require specific outreach interventions, especially as access to smart phones and internet is more limited. Although digital platforms are an increasingly popular channel for vaccination information, these may not be accessible to women or older persons, especially in poor and rural populations. UNICEF's ongoing SBC interventions that focus on interactive **edutainment** activities (for example the use of animated videos), **youth engagement** through SBC "champions" as well as collaboration with tribal **and community leaders, teachers and student leaders** offer opportunities for enhancing immunization-related messaging specifically in zero-dose communities.

Acceptance or satisfaction levels of service users is not currently monitored or measured at health facilities. According to UNICEF key informants, although there is a mechanism to receive complaints and feedback about the services received at health facilities, the extent to this is functional remains unclear. Incidents of disrespectful or insensitive attitudes or practices from healthcare providers towards caregivers have been reported but not properly documented.[112] A UN Women report notes that there is a need for more training for healthcare providers and more monitoring of "sexist practices" or practices that endanger women's and girls' lives within health centres in hospitals, including, for example, shaming and blaming victims of violence or women who get pregnant too often, or unfriendly services, or inadequate reporting of GBV cases.[113]

Gender-based violence, including child marriage, can impact immunization uptake due to women's decreased decision-making power and ability to negotiate health-related decisions. Gender-based violence

[110] World Bank (2017) Data for Iraq. Available at: https://data.worldbank.org/indicator/SE.ADT.LITR.FE.ZS?locations=IQ
[111] CARE (2021) COVID-19 Vaccine Uptake in Iraq. Available at: https://www.care-international.org/sites/default/files/files/Iraq_Vaccine_Uptake_Study_Summary.pdf
[112] ibid
[113] UN Women (2018) Iraq Gender Profile.

is widespread throughout the country, with high levels of sexual violence, child marriage and honour crimes perpetrated against women and girls. Data from the 2018 Iraq MICS survey showed that around 36 percent of married women were exposed to at least one form of violence by husbands and 46 percent of girls aged 10-14 were exposed to violence perpetrated by a family member at least once during the month preceding the survey.[114]

UN Women notes that **child marriage** is religiously and socially practised in many communities, further exacerbated in refugee and IDP contexts.[115] The legal age of marriage is 18 years for boys and girls in Iraq; however, this can be lowered to 15 years with parental consent and judicial permission. Among women aged 20-24 years, around 7 percent were first married before age 15 and around 28 percent were married before the age of 18. Early marriage and pregnancy are among the major causes for girls not attending school and poorer literacy levels.[116] Forced marriages also decrease girls' and women's agency and power in terms of decision-making on health-related issues.[117]

Enabling factors and partnerships

Engaging diverse **civil society** organisations, networks and women and youth-led groups in immunization-related programming is critical for increasing demand and addressing gender-related barriers to immunization. The UNICEF 2021 Gender Equality Strategy notes that there is currently a lack of partnerships and meaningful engagement between the UNICEF Country Office and **women-led organisations**. While there are NGOs and women's rights groups working in conflict-affected areas, UNICEF/Ministry of Health key informants note that there is currently no mechanism in place for involving them in reaching zero-dose or under-immunized communities.[118]

Engaging closely with women-led organisations, groups and networks that are trusted within communities is key for gender-transformative programming and shifting harmful gender norms. Iraq has an active civil society with multiple organisations focused on advancing women's rights, inclusion and LGBTQI+ rights whose expertise, trust and community contacts could be leveraged for immunization outreach and programming interventions.

UNICEF key informants note that immunization is currently **integrated** into nutrition as well as maternal, newborn and child health interventions. Further strengthening the integration and bundling of immunization services with other services with high-demand and community acceptance, such as cash-based interventions of WASH, could support advance immunization coverage and reach.

The collection, analysis and use of sex-disaggregated data needs to be further strengthened. According to the Ministry of Health, there is currently a strategy and plan under development to refine data collection and sex-disaggregation. Training curricula for vaccinators and social mobilizers does not specifically include gender and diversity sensitive topics.[119]

Recommended approaches and entry points

- Conduct **research** through community-level focus group discussions, interviews and surveys especially in districts such as Al Resafa, Kutha and Alnhrwan with high numbers of zero-dose children, to gain a deeper understanding on the context-specific perceptions,

[114] UNICEF Gender Programmatic Review
[115] UN Women (2018) Iraq Gender Profile.
[116] UNICEF (2021) UNICEF Iraq Gender Strategy.
[117] UN Women (2018) Iraq Gender Profile.
[118] UNICEF Iraq CO key informants.
[119] Ibid.

knowledge and attitudes of caregivers and service providers, with a focus on gender analysis and utilising human-centred design at the individual/household, community/social and institutional/structural levels.

- Strengthen engagement with **religious leaders** through established community engagement platforms, such as the Shia and Sunni Endowment partnership which is being formalised in 2023 – explore opportunities for scaling this partnership to also cover zero-dose communities and amplifying their work beyond messaging (explore links with male engagement interventions and possibilities of working with women religious and community leaders).
- Build on the results achieved from the **capacity** building of over 10,000 community health **workers** (the majority of whom are women) from 14 governorates on immunization messaging and outreach, for example by utilising them in specific, targeted social mobilization campaigns in zero-dose communities (in addition to their general immunization-focused work).
- Continue to expand promising work carried out through **edutainment** interventions into zero-dose communities – for example the use of animated videos and innovative and interactive communications content and methods specifically targeting those less literate.
- Enhance engagement with **tribal and community leaders**, teachers and student leaders and young people on immunization messaging and outreach, with a focus on zero-dose and underserved communities, ensuring the equal and meaningful participation of women and girls.
- Leverage work carried out by child protection **committees**, **women's groups** and SEA committees to include discussions and information sessions on immunization and healthcare into these platforms.
- Continue to expand work around **youth engagement** in immunization programming, building on the results achieved by the 25,000 young people UNICEF has already trained – continue to draw from social listening tools such as Talkwalker to enhance digital engagement and targeted messaging to address identified gender barriers.
- Strengthen the work of the "**SBC Champions**" and the established young people's advisory group – the theme of 2023 SBC Champions is immunization, providing an excellent opportunity to engage these champions in immunization messaging and outreach with a focus on zero-dose communities, with potential for gender-transformative messaging and approaches.
- Explore possibilities in rolling out the **"3 Is"** COVID-19 vaccination campaign (Intensification and Integration of Immunization Services campaign consisting of six health workers per one mobile health unit) into zero-dose communities to cover other routine immunization and health promotion messaging around vaccination in zero-dose and under-immunized communities.
- Strengthen collaboration and partnerships with **local partners** (including UN agencies and community-based organisations) and government as an entry point for ensuring sustainability and effective on-the-ground implementation.
- Utilize evidence and **social data** generated to date, using the several communication needs assessments and studies conducted in Iraq exploring knowledge, attitudes, practices and behaviours to guide interventions.
- Strengthen linkages with **community feedback** structures and accountability to affected populations strategies that can support community-specific interventions for reaching zero-dose communities and enhance meaningful community participation.

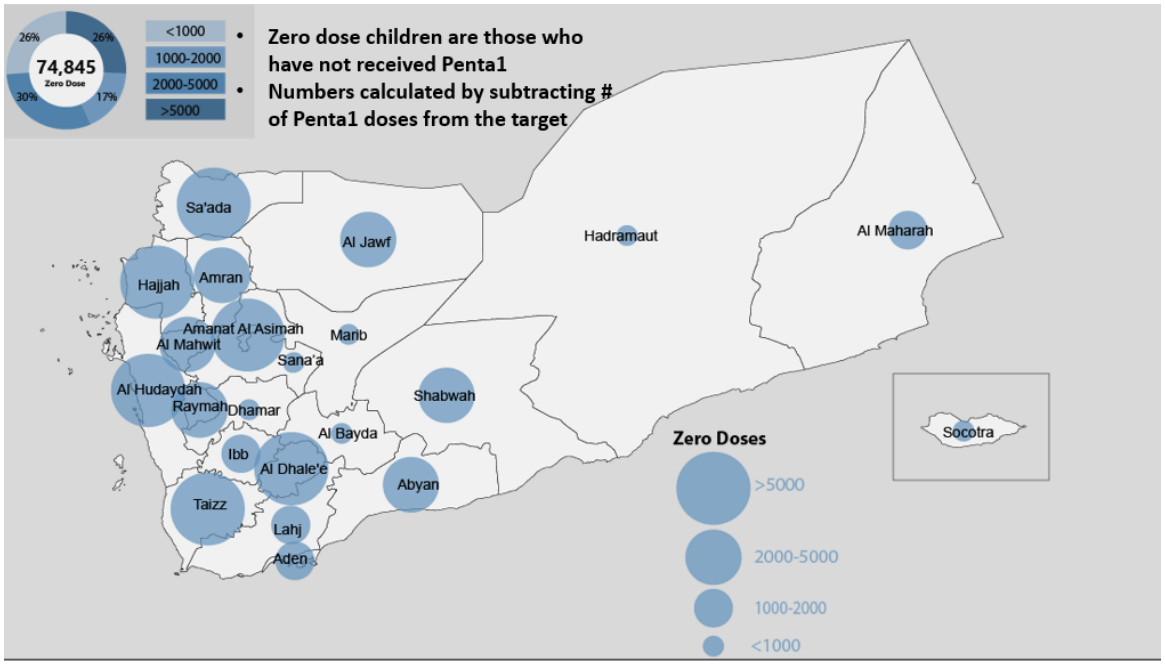
Yemen

Overview of zero-dose communities

Over eight years of armed conflict in Yemen has caused tens of thousands of civilian casualties and displaced over 4 million people (around 80 percent are women and children), with over 23 million people in need of humanitarian assistance. Almost all regions face severe humanitarian and security challenges and only half of Yemen's health facilities are currently operational. Malnutrition, disease outbreaks, economic strife and civilian casualties and displacements are pervasive in Yemen. More than 80 percent of the people in Yemen struggle to access food, safe drinking water and adequate health services.[120]

The total number of zero-dose children in Yemen is estimated at **152,489** in 247 districts out of 333 in 2021, representing around 14 percent of the total under-one targeted children of Yemen. Zero-doze and under-immunized children are scattered among the four regions of Yemen, including the narrow coastal plain, hills and mountains, plains, and the desert. Being the most populated, **the plain coastal and mountains regions** are the most affected by zero-dose and under-immunization with almost **71 percent of cases located in 13 governorates** in these two regions. These children represent around 10 percent of the total population under one in the country. The remaining 29 percent of zero-dose and under-immunized live in plain and desert regions.[121] Currently zero-dose children are calculated at the governorate and district level but not at sub-district level – therefore, there might be zero-dose children concentrated in a specific population or geographical area that is not accounted for.

Out of the 40 priority districts for zero-dose children, 37.5 percent of the zero-dose and dropout children are not being reached due to the non-functionality of many health facilities, in addition to significant health workforce displacements, resulting in the shifting of health service provision increasingly towards mobile and outreach services.



Yemen: Zero Dose Children in Routine Immunization in 2020 per Governorate (WHO)

[120] UN OCHA (2022) Yemen Humanitarian Needs Overview 2022.
[121] UNICEF Yemen (2023) Yemen Narrative for Equity Acceleration Funding for Gavi Support Request.

Gender-related barriers to immunization

Gender roles and responsibilities

Gender roles, norms and relations are shaped by diverse religious, cultural, social and political traditions in Yemen, marked by differences across the north and south of the country, between urban and rural areas, and between different tribes and generations.[122] Women and adolescent girls are generally responsible for **household chores**, including fetching water, cooking, farming, collecting firewood as well as caretaking responsibilities with children, older persons and persons living with disabilities. On average, women spend 8.7 hours a day on household tasks including cleaning, cooking and childcare, compared to 2.8 hours for male household members. Men's main household and caretaking tasks consist of childcare (0.7 hours per day), food purchase (0.6 hours) and healthcare of relatives (0.5 hours).[123] Both boys and girls are responsible for sheep grazing and assisting their families during harvesting seasons. Men are sometimes involved in children's healthcare related activities, for example taking children to the hospital when needed, but overall, **children's health and care** is considered to be the mother's responsibility.

Women and men's responsibilities often conflict with the **timing** when immunization services are available. Vaccination services are often offered between 9-12 which often clashes with caregivers' work hours, whether paid or unpaid. The MR and BCG vaccines are only available once a week in rural health facilities, and sometimes only once a month. Especially in the rural areas, infants' protection from the cold weather during the winter season can lead to them missing vaccinations.

Decision-making power over children's immunization and healthcare is mainly held by male heads of households or grandmothers (mostly the fathers' mothers). It is generally women, either mothers or grandmothers, who take children to immunization services. Older women, employed women, women living in urban areas and those who have more education are more likely to make decisions for themselves. According to an assessment carried out by CARE, older women, employed women, women living in urban areas and those who are more educated are more likely to make decisions for themselves. Married women are as likely to say that decisions about women's own healthcare and about major household purchases are made jointly by the husband and wife as they are to say that such decisions are made mainly by the husband alone. Around 9 percent of married women say they make these decisions themselves.

Although Yemeni social norms have traditionally placed men as the source of family authority, several years of conflict and upheaval have brought about social change with the number of women-headed households increasing. The conflict has intensified the economic pressure for women who struggle to provide for their families, often without any experience in income-generating activities.[124] Displaced women often bear additional burdens including caring for injured household members, dealing with the loss of family breadwinners, and challenges in accessing assistance and services. According to estimates, around 30 percent of displaced women may be heading their families.[125]

In the 40 districts where the majority of zero-dose children reside in rural areas, there are no functional **health committees** within communities and women do not generally participate in meetings where community-level decisions are taken. UNICEF key informants noted the need to activate the health

[122] CARE (2016) From the Ground Up: Gender and Conflict Analysis in Yemen. Available at: https://www.careevaluations.org/wp-content/uploads/rr-yemen-gender-conflict-analysis-201016-en.pdf
[123] ibid
[124] UNICEF and Gavi (2022) From Coverage to Empowerment: Integrating Gender in Immunization Demand.
[125] CARE (2016) From the Ground Up: Gender and Conflict Analysis in Yemen.

committees in these communities and increase the participation of women and adolescents. Women community volunteers play a critical role, however their numbers are still rather limited.

There is no accurate data available on the **gender balance among healthcare providers and vaccinators**. However, according to UNICEF key informants, the ratio is around 50-50 percent in rural areas, and in urban areas, most of the vaccinators are women. The majority of community health workers and volunteers are women. The highest position in the national immunization programme, the EPI Director at the Ministry of Public Health, is held by a woman. UNICEF notes that there has been an increase in women's recruitment in the health sector.[126] However, the lack of adequate numbers of women health workers especially in rural areas has been highlighted by CARE and Oxfam as a barrier to women's access to healthcare.[127]

There are currently no systematic complaint mechanisms or safeguarding processes in place to report incidents of disrespectful practices by healthcare providers towards caregivers.[128] According to UNICEF key informants, the main barriers and challenges women vaccinators and community health workers face relate to security, mahram requirements and mobility challenges in terms of moving from districts or from one governorate to another.

Access to and control over resources

According to the Yemen Multi-Cluster Location Assessment (MCLA) results of 2021, more than 90 percent of the investigated households reported **physical inaccessibility** either because the health facility was too far, transportation was not available, or the household was not able to bear the transportation cost. This impacted the overall health status of the family together with the financial affordability to cope with livelihood requirements.[129] According to the 2013 Yemen National Health and Demographic Survey (YNHDS), three in five women (59 percent) referred to distance to a health facility as a "big problem in accessing health care."[130]

A "mobile imam" administers the oral polio vaccine for a child in Aden, Yemen.

Photo: UNICEF/Yemen/2022/ Tairah Firdous.

Especially in rural areas, distances to health facilities are long and caregivers face several difficulties in safely accessing them. Women face **mobility restrictions** as they often need to be accompanied by men when visiting health facilities. Restrictions on women's mobility, as well as the lack of female health workers and medical staff in remote rural areas, hamper women's access basic health services both for themselves and for their children.[131] In many remote areas, women face difficulties in accessing health centres as the male mahrams that would be

[126] UNICEF Yemen CO key informants.
[127] CARE (2016) From the Ground Up: Gender and Conflict Analysis in Yemen.
[128] UNICEF Yemen CO key informants.
[129] UNICEF Yemen (2022) Yemen Narrative for Equity Acceleration Funding for Gavi Support Request.
[130] ibid
[131] UNICEF and Gavi (2022) From Coverage to Empowerment: Integrating Gender in Immunization Demand.

needed to accompany them are often busy and occupied with other work during the day.[132] Overall, there are increased limitations to women's mobility due to insecurity, the need for male household members to authorise women's movements and accompany them to health services as well as a lack of privacy measures such as curtains in health facilities. In conflict-affected areas, these obstacles are further exacerbated.[133] Given the challenges that caregivers, especially women, face in accessing health facilities, the importance of mobile campaigns and outreach is further elevated for increasing access to zero-dose children. Key informants noted challenges for mobile teams in northern governorates due to anti-vaccine campaigns, noting that campaigns are not allowed in northern governorates.[134]

Women have less access to **financial resources** than men in general due to pervasive gender inequality and patriarchal gender norms. Women provide 60 percent of the labour in crop cultivation and more than 90 percent of the labour in tending livestock, while earning 30 percent less than men.[135] An assessment carried out by CARE found a difference in control over women's cash earnings by urban/rural setting: 57 percent of urban and 49 percent of rural women were able to decide how to spend their earnings. Women with no education were slightly less likely than women with any education to decide themselves how to spend their money. Families are increasingly unable to cover the costs of **transportation** to health facilities outside their districts – this has been further worsened by the fuel and economic crisis.

Considering the overwhelming situation of the outbreaks and epidemics, especially in the mountainous and coastal districts, **competing priorities** are negatively affecting the caregivers' and the healthcare providers' participation in the campaigns and immunization sessions, resulting in "vaccination fatigue". Thus, investing in vaccinators' capacity building is essential. This entails training on the provision of integrated services, post-training monitoring, and maintaining immunization activities in hard-to-reach areas.

Beliefs, norms and perceptions

Misconceptions around vaccines are on the rise, especially after the COVID-19 pandemic. Households and family decision-makers continue to seek guidance from health workers as they are trusted sources of information on vaccines. It is therefore important equip and train health workers to address their growing concerns and mitigate vaccine hesitancy. Key informants did not recall any gender-specific perceptions or myths about vaccines. The perception that vaccines cause infertility has been a concern, however this was not specific for girls or boys. The spread of misinformation and anti-vaccination campaigns has intensified in the recent years, further accelerating the spreading of rumours. Boys' health and wellbeing is sometimes prioritised over girls – however, key informants did not notice the effects of this specifically on immunization outcomes.

One key informant noted the increasing challenges posed by **anti-vaccination campaigners** in Yemen, with some spreading rumours about the threat of harassment against women health workers or volunteers to allegedly negatively influence women's willingness to work for immunization campaigns or to get vaccinated.[136]

[132] Key informant interview.
[133] OCHA. Gender Considerations in Humanitarian Response in Yemen. Available at: https://response.reliefweb.int/yemen/gender-considerations-humanitarian-response-yemen?gclid=Cj0KCQjwz6ShBhCMARIsAH9A0qX7BOUufVa1sQOf5cLjRiWkvbvqIHKEVweMlqhHbzek_m81DtPPNHYaAkSMEALw_wcB
[134] Key informant interview
[135] CARE (2016) From the Ground Up: Gender and Conflict Analysis in Yemen.
[136] Key informant interview.

Needs, preferences and challenges

Among particularly **vulnerable groups** in Yemen are the Muhamasheen,[137] a minority group suffering from caste-based discrimination and longstanding exclusion. Most of them reside in slum areas and on the outskirts of cities, facing high rates of unemployment, illiteracy and deep poverty, often lacking access to basic services such as water, sanitation and education, as well as economic opportunities. Muhamasheen women also experience higher rates of gender-based violence, including harassment, as many work outside on the streets.[138] Other specifically marginalized and vulnerable groups include IDPs, immigrants and persons living with disabilities. It is critical to ensure the participation of at-risk and marginalised communities with active outreach. Referring to the marginalized group of Muhamasheen, key informants noted that "they don't show up, even in outreach programmes".[139]

There are gender differences in **literacy** rates: 73 percent of men are literate, compared to only 35 percent of women.[140] Less than half of the people in Yemen are connected to mobile networks, with only 2 percent of the population with fixed broadband access. Mobile coverage is generally weak in many areas, with the digital divide disproportionately affecting women. For example, women constitute only around 13 percent of all Facebook users in Yemen.[141] Women's lower literacy levels and lack of access to digital communication underline the need to conduct a thorough gender and inclusion analysis to inform communication interventions and to deploy community health workers and community volunteers to conduct active outreach. UNICEF key informants noted that enhancing communication skills is a focus area during health worker trainings.

Gender-based violence, including sexual harassment and abuse, sexual and labour exploitation, female genital mutilation as well as child marriage, is prevalent. According to UNDP, gender-based violence against women and girls has increased by 63 percent since conflict began in 2015, further exacerbated by the COVID-19 pandemic.[142] Child marriage remains a pervasive human rights violation, with 52 percent of girls being married before the age of 18, including 14 percent before the age of 15. However, the trend is reportedly increasing as families use it as a coping mechanism during the ongoing crisis and as a means to access dowry payments. An IDP assessment in Taiz showed that 8 percent of girls aged 12–17 were pregnant, indicating a prevalence of child marriage.[143] High prevalence of gender-based violence, including child marriage, affects girls' and women's decision-making and negotiating power within families, as well as their ability to seek health services and obtain information about health-related issues.

According to UNICEF key informants, among the most popular means for receiving **trusted information** about vaccines or upcoming vaccination campaigns are radio, TV, health workers, megaphones, community volunteers, religious leaders and social media. Women generally participate less in outdoor activities. A key informant highlighted the importance of using inclusive language in immunization messaging that addresses

[137] Minority Rights Group International (2018) Muhamasheen. Available at: https://minorityrights.org/minorities/muhamasheen/

[138] INSAF (2020) Marginalised women and double marginalisation. Available at: https://insaf-ye.org/archives/1140

[139] UNICEF Yemen CO key informants.

[140] World Bank (2004) Yemen data: https://data.worldbank.org/indicator/SE.ADT.LITR.FE.ZS?locations=YE (note that the latest available data references 2004).

[141] Al-Sakkaf, N. & Alexander, J. (2022) Internet Access in Yemen Should Be an Opportunity for Cooperation, not a Target. Washington Institute of Near East Policy. Available at: https://www.washingtoninstitute.org/policy-analysis/internet-access-yemen-should-be-opportunity-cooperation-not-target

[142] UNDP (2023) Bridging the Gender Digital Divide. Available at: https://www.undp.org/stories/bridging-gender-digital-divide-way-out-crisis

[143] CARE (2016) From the Ground Up: Gender and Conflict Analysis in Yemen.

people of all genders and is not discriminatory.[144] **Religious leaders** are generally targeting only men whereas community volunteers engage women in outreach events. Key informants noted that religious leaders are often pushed by anti-vaccine groups to spread false and negative information about vaccines.

Sheikhs and tribal leaders are important actors in communal decision making, with jurisdiction at the sub-district level. These are mostly men, but occasionally women sheiks are selected by the community. Furthermore, wives of sheiks or community leaders are reportedly a traditional route of referral for local women to these decision-making structures.[145] Especially in rural areas, male and female community and traditional leaders were relatively active before the crisis, although their influence has reportedly decreased.

While there are not many female religious leaders in Yemen, a key informant noted a group called **Zainabiat**, influential women who are spreading information to communities. However, this group is reportedly misinformed about the importance of vaccination, highlighting the importance of exploring possibilities for engaging and partnering with this group. Further, they are mainly active in urban areas such as in Sanaa.

UNICEF and partners established **mother-to-mother clubs (M2M)** in Yemen in 2019 to provide a platform for women to learn about and share information on health practices including immunization, maternal and child health and hygiene. In some regions, the club also included a livelihood component with club members producing masks and clothes for sale and distribution. Supporting women in engaging in economic activities supported building self-reliance and income generation, enabling women to financially support their families. The meetings are led by a club leader (Jaadatina) selected by the group and supported by a community volunteer who utilise participatory methods such as role plays, songs, discussion and stories to increase engagement. Each club member is expected to share what she has learned with at least five houses in her neighbourhood, and home visits also support information dissemination to other family members including spouses, in-laws and older children. Receiving information from trusted messengers from their own communities increased acceptance and uptake of recommended practices.[146]

Enabling factors and partnerships

According to UNICEF key informants, there are already existing and functioning mechanisms led by government that could be further leveraged to engage civil society organisations and women's groups to reach zero-dose children, especially in the south. Key informants also noted that currently, UNICEF does not specifically collaborate with civil society groups in connection to immunization programming. Yemen Women Union (YWU) is one of the main entities focusing on women's rights and gender-related issues. Men are generally more involved in community committees and women and young people are often excluded, or when they are present, they do not participate in a meaningful way.[147]

Further research is required on the role of traditional women leaders within extended families or the community, and how they can be supported. Especially in rural areas, traditional women leaders provide consultations and represent women in a culturally appropriate manner in front of men in the family or community leaders.[148]

Gender data to guide immunization interventions and shape programming is often missing. The collection, analysis and use of sex-disaggregated data should be further strengthened through the full operationalization

[144] Key informant interview.
[145] CARE (2016) From the Ground Up: Gender and Conflict Analysis in Yemen.
[146] UNICEF and Gavi (2022) Gender and Immunization Demand: Final Report and Recommendations
[147] OCHA. Gender Considerations in Humanitarian Response in Yemen.
[148] CARE (2016) From the Ground Up: Gender and Conflict Analysis in Yemen.

of the DHIS2 at all levels of the national health system, ensuring sub-national and facility-based disaggregation.

Recommended approaches and entry points

- Conduct **research** in zero-dose communities with interviews and focus group discussions with caregivers and health workers, including with the Muhamasheen, to gain a deeper, context-specific understanding of gender-related barriers and their proposed approaches to overcome these barriers at the individual/household, community and institutional levels, utilising human-centred design.
- Develop targeted outreach programmes to reach the Muhamasheen and other **marginalized groups** with immunization messaging and services.
- **Integrate** vaccination with other (high-demand) services and the government's Minimal Service Package (MSP) to increase equitable distribution of services and boost immunization coverage and reduce missed opportunities to vaccinate, including enhanced partnerships with district-level partners on institutionalising integrated services to increase efficiency, complemented by SBC interventions.
- Support **cash-based interventions** to empower households to access EPI services, targeting those most marginalised in districts facing financial hardships preventing access to primary care services in line with planned activities under UNICEF's Equity Accelerator Fund (EAF) proposal.
- Ensure **gender integration** into the planned Conditional Non-Cash Transfer (CNCT) programme that includes the vaccination of children as a requirement for receiving household cash transfers to increase immunization coverage rates, including considering marginalized groups and women-headed households as part of the targeting criteria and vouchers to cover transportation costs (which often presents as a barrier especially for women). Ensure participatory research and community engagement in project design, piloting and roll-out to address risks of increased vaccine hesitancy and mistrust.
- Develop **partnerships** with women-led organisations and civil society organisations to support in messaging and outreach on immunization and countering misinformation and myths around vaccines.
- Continue to support **women health workers** from high-risk areas and analyse and address specific barriers and challenges faced by women vaccinators and community health workers in these areas (using participatory approaches).
- Strengthen the collection, analysis and use of **sex-disaggregated data** as part of the operationalization of the DHIS2 at all levels of the national health system, ensuring sub-national and facility-based disaggregation.

Egypt

Overview of zero-dose children

Accurate and reliable data on zero-dose children in Egypt is scarce. Vaccination coverage of all obligatory vaccines (10 antigens) range between 94-98 percent in 2022. According to WHO and UNICEF estimates, there are approximately 73,000 zero-dose children in Egypt, mainly residing in rural, slum or hard-to-reach areas in the border provinces. Sewa and Salom in Matrouh, Kom-ombo in Aswan, Shalteen and Halaieb in the Red Sea are examples of hard-to-reach areas in border governorates with unvaccinated and unimmunized children. Tribes and nomads on the move between Egypt and Sudan from south and Libya from east are also among vulnerable groups. Greater Cairo has certain areas of unvaccinated children, mainly due to increasing urbanization and a growing number of slums as well as the increasing numbers of refugees and migrants.[149]

Gender-related barriers to immunization

Gender roles and responsibilities

Women face **mobility** restrictions in certain areas, for example in Upper Egypt and in certain border provinces due to social norms that limit their movement. **Decisions** related to immunization and healthcare are generally made by mothers. According to data on married women from the 2014 Demographic and Health Survey (DHS) in Egypt, 15 percent reported making healthcare-related decisions themselves while 16 percent reported that to make such decisions and 68 percent indicated that health-related decisions are made jointly between partners. Key informants also noted that the dominant mode of decision making is jointly between partners, with women's increased autonomy correlating with higher education levels, urban locations and higher household income. In rural Upper Egypt, women often need to seek approval from family members before visiting health centres. Lower education levels and low rate of utilising healthcare services are correlated, leading to women's low health literacy and limited decision-making power within households.[150]

Women are generally expected to take care of **children and household responsibilities**. Expectations about the ideal family structure and responsibilities within the household are set from a young age, with girls aged 10 to 19 being twice as likely as boys to engage in unpaid household work (64 percent compared to 27 percent). Gender norms ascribe to women and girls a disproportionate share of unpaid care and household responsibilities and women are almost fully responsible for housework and childcare, even if employed. The 2015 Labour Market Survey notes that 91 percent of Egyptian women report carrying out unpaid household work, with 27 percent saying they perform unpaid care for family members, compared with 26 percent and 8 percent of Egyptian men, respectively. Women on average spend more than double the total time that men spend on household and care responsibilities (7.3 versus 3.5 hours a day).[151]

Women's high burden of responsibilities including paid work outside the household and unpaid caretaking roles lead to competing priorities and **time poverty**, hampering women's ability to seek immunization services for themselves or their children. For example in certain slum areas, especially in greater Cairo, women may work late and thereby not have time to vaccinate their children during the hours when services are offered.[152]

[149] UNICEF Egypt Country Office key informants.
[150] JICA (2018) Country Gender Profile (Arab Republic of Egypt) Survey Report. Available at: https://openjicareport.jica.go.jp/pdf/12305181.pdf
[151] USAID (2020) Gender Analysis and Assessment: USAID/Egypt Final Report. Available at: https://pdf.usaid.gov/pdf_docs/PA00X46M.pdf
[152] UNICEF Egypt Country Office key informants.

In areas with low vaccination coverage, gender roles are influenced by social and educational backgrounds. In the border provinces, women are generally not engaged in paid employment outside the household, girls have lower rates of education than boys and men usually work or travel. In urbanized slum areas education levels are low for women and men.[153]

Most **health workers** in Egypt are women – according to UNICEF estimates, women comprise around 90 percent of healthcare staff and vaccinators, and women are also represented in managerial and functional levels in immunization programmes. Women generally prefer to receive services from female health workers. According to a gender analysis conducted by JICA, an absence of a nursing culture in Upper Egypt leads to difficulties among families to accept their daughters working in the field of nursing and to a lack of qualified medical staff in these areas.[154]

Access to and control over resources

According to a gender and health barrier assessment carried out in rural southern Egypt, **distance** and **transportation** to health facilities (structural barriers) prevented 30 percent of women from seeing a doctor. Overall, 42 percent had difficulties in paying for health services and around a quarter of women said that gaining family permission, allocating time to go to health facilities, or concern about a lack of female physicians (personal/social barriers) was a major barrier.[155] Distance to healthcare services and means of transportation also create obstacles for women in rural Upper Egypt.[156] Women's access to **financial resources** is generally limited, which may affect their access to immunization and health services as well as transport. Only 18 percent of women are in the labour force and men earn about 3.8 times more than women on average.[157]

Although women have less access to **digital** tools and the internet relative to men, recent data indicate increases in computer and internet usage by gender as well as among youth. Although not disaggregated by sex, the Digital 2020 report for Egypt shows widespread usage of ICT: mobile phone connection (91 percent), internet usage (54 percent) and active social media users (41 percent). More than two-thirds (67 percent) of Egypt's population have access to a laptop and 24 percent can access a tablet.[158] Egypt's 2017 census shows gender disparities in the use of computers, the internet and mobile phones where ICT usage rates are consistently higher among men. On average, men and boys aged 4 years and above were nearly 8 percent more likely to use ICT in comparison to women or girls. This **digital gender gap** was visible also in the 2015 Egypt Health Issues Survey where boys and men aged 15-19 were more likely to use internet frequently compared to women and girls, with further disparity for people living in rural areas.[159] Strengthening women's and girls' digital literacy and access to ICT, particularly in rural areas and Upper Egypt, is critical especially in the context of expanding Egypt's RapidPro digital health system to enhance immunization-related awareness raising and coverage in underserved communities.

[153] ibid
[154] JICA (2018) Country Gender Profile (Arab Republic of Egypt) Survey Report.
[155] Chiang, C. et al (2013) Barriers to the use of basic health services among women in rural southern Egypt (Upper Egypt). Nagoya *J Med Sci*. 2013 Aug;75(3-4):225-31.
[156] JICA (2018) Country Gender Profile (Arab Republic of Egypt) Survey Report. Available at: https://openjicareport.jica.go.jp/pdf/12305181.pdf
[157] USAID (2020) Gender Analysis and Assessment: USAID/Egypt Final Report.
[158] Ibid.
[159] NCCM Child Rights Observatory (2018). Policy for Action: Issue 3. Available at: https://www.unicef.org/egypt/media/5271/file/Girl-Empowerment%20Policy%20Brief%20EN%20DIGITAL.pdf

Beliefs, norms and perceptions

Key informants could not recall any instances of gender-related myths or misconceptions around vaccines. In some areas of Upper Egypt, especially in communities with higher illiteracy levels, boys' health is sometimes prioritised over girls'.

Mobile vaccination team visits a house in Menoufeya, Egypt.

Photo: UNICEF/Mohamed Ragaa

Needs, preferences and challenges

Gender-based violence, including female genital mutilation (FGM), is prevalent in Egypt, affecting women's autonomy, decision-making power within households and their ability to seek health services. As many as 90 percent of women aged 17-28 interviewed in Egypt reported having been sexually harassed. Husbands are the most common perpetrators of violence, but ever-married women also reported that since age 15, they have experienced violence from mothers/stepmothers (31 percent) and fathers/stepfathers (26 percent).[160] Around 87 percent of girls and women aged 15-49 have undergone female genital mutilation. In recent years, FGM has become increasingly medicalized, performed by health care providers in clinical settings. Overall 23 percent of girls married before age 18; as many as 21 percent married before age 15. Around 15 percent of all marriages in the country were child marriages.[161]

The overall **literacy** rate in 2021 was 73 percent in Egypt – this was 67 percent for women and 79 percent for men.[162] Men with disabilities are between 1.5 times more likely to be literate than women with disabilities in urban settings. Illiteracy rates for older women in Egypt reach nearly 100 percent for women in rural areas.[163]

Among the most common opinion influencers and **trusted information sources** are community leaders, social workers and health workers, nurses, doctors and sheikhs. Religious leaders are also influential opinion shapers, and UNICEF has ongoing engagement with religious leaders that could be leveraged also for immunization outreach and messaging. Data on the preferred channels and communication sources for women and men was not available. As noted above, the use of computers, digital tools and internet is widespread among all genders and especially with younger people – however, women still have less access due to the digital gender divide, especially in more rural and remote communities. UNICEF is currently engaged in gender-transformative parenting programming which could be leveraged for immunization interventions and outreach.

The Government of Egypt, with the support of UNICEF and partners, is currently utilizing the **RapidPro** open source software and digital information system to engage with vulnerable communities, raise awareness and monitor the adoption of health-related practices, including immunization. The software collects data via short message service (SMS) and other communication channels, including social media channels, such as Facebook Messenger, Telegram, WhatsApp, to enable real-time data collection and mass-communication

[160] USAID (2020) Gender Analysis and Assessment: USAID/Egypt Final Report. Available at: https://pdf.usaid.gov/pdf_docs/PA00X46M.pdf
[161] UNICEF Egypt Gender Situation Analysis
[162] World Bank (2021) Egypt data. Available at: https://data.worldbank.org/indicator/SE.ADT.LITR.MA.ZS?locations=EG
[163] UNICEF Egypt Gender Situation Analysis

with target end-users, including beneficiaries and frontline workers.[164] The RapidPro system is linked with Egypt's birth registry where around 2.5 million new births are registered every year, allowing the system to send periodic reminders to new parents about children's vaccination schedules. The use of RapidPro does not require a smart phone as it functions with any regular mobile phone – however, the digital gender divide should be considered to ensure that women and marginalized groups have equitable access.

Enabling factors and partnerships

UNICEF supports the National Girl's Empowerment Initiative "Dawwie" which is led by the National Council of Women, a national machinery for gender mainstreaming in Egypt with branches in all the 27 governorates implementing projects and activities with use of local human resource network. "Dawwie" offers young girls and boys the opportunity and platform to express themselves, have their voices heard, and develop new skills, with training on digital learning including a focus on communication, self-expression, access to and verification of information, content creation and online safety.[165] The Dawwie is a youth network that utilises digital learning, community interventions, Dawwie camps and intergenerational dialogue sessions which could potentially also be leveraged for immunization messaging and awareness raising in zero-dose communities.

UNICEF has also built partnerships with youth volunteers through collaboration with 12 national universities, linking with youth from medical and nursing schools. These volunteers engage in peer-to-peer education digitally and face-to-face on campus as well as at the community level – these networks could be further expanded to cover immunization-focused interventions. Positive parenting programming implemented by the Ministry of Social Solidarity with UNICEF support could also offer opportunities for promoting immunization demand, complemented by gender-transformative approaches focused on shifting harmful gender norms and relations.

Recommended approaches and entry points

- Strengthen the **RapidPro digital system** to enhance reach in underserved and zero-dose communities, addressing possible digital gender gaps to ensure equitable access and reach for women and marginalized groups.
- Build on the **positive parenting** programmes and engagement with religious leaders to include immunization-related information sharing and outreach components into these interventions to generate demand.
- Expand planned programmes focused on the **empowerment of women and girls** at the community level as health champions to include immunization-related messaging in zero-dose communities, utilising gender-transformative approaches to enhance the role of women and girls as a health community promoters.
- Capitalize on existing **youth and girl-centered programmes** such as the "MoYS Civic Engagement Programme" and the "National Girls' Empowerment Initiative", Dawwie, with youth (aged 14-24) engaged with relevant digital and face-to-face capacity building sessions focusing on COVID-19 prevention and response, nutrition and healthy lifestyles, building links with routine immunization messaging and outreach.

[164] UNICEF. Real-time Information: RapidPro. Available at: https://www.unicef.org/innovation/rapidpro
[165] UNICEF Egypt (2023) Digitally Empowered, Connected and Protected through "Dawwie". Available at: https://www.unicef.org/egypt/stories/digitally-empowered-connected-and-protected-through-dawwie

Conclusion

This report has explored gender-related barriers to immunization in Egypt, Iraq, Sudan, Syria and Yemen and outlined recommended approaches and entry points for addressing these barriers at the individual, household, community and institutional levels in order to increase immunization reach and coverage in under-immunized communities. Zero-dose children are geographically dispersed within each country, with each area facing specific vulnerabilities and challenges related to conflict, insecurity, poverty, lack of basic health infrastructure and displacement, characterized by pervasive gender inequality. Within each setting, there are also marginalized communities such as nomadic populations, IDPs, ethnic minorities and persons living with disabilities who face compounded discrimination and disadvantage. During the second phase of the UNICEF MENARO project examining gender and zero dose children, it is therefore essential to conduct in-depth gender analysis and research with interviews and focus group discussions with caregivers and health workers to identify context-specific barriers and practical interventions to overcome them at the individual/household, community/social and institutional/structural levels.

Generating demand for vaccines and addressing barriers in zero-dose communities requires a combination of approaches that tackle both demand and supply-side barriers and bottlenecks. Human-centred design (HCD), applied through a gender lens, can be an effective approach as it looks beyond knowledge and awareness to also consider the intent to vaccinate, associated opportunity costs, service experience and community feedback while aiming to understand the multiple influencers on caregivers, community members and health workers.[166] HCD is well-suited for zero-dose communities as it is aimed at tackling challenges where existing research is generic and difficult to activate, and where the complexity of the situation requires tailored solutions.

Enhancing meaningful collaboration with local NGOs and civil society organisations, including women's groups, young people and informal networks, in the design, delivery, monitoring and evaluation of immunization programming and social behaviour change communications is critical. There are ample opportunities for enhancing the role of women religious and community leaders in immunization outreach and messaging that could be further tapped into. Strengthening the engagement of men as caregivers and building on promising practices linked to positive parenting programmes would offer opportunities for gender-transformative approaches tackling harmful gender norms, roles and relations and advancing gender equality in communities for more long-lasting and broader benefits beyond immunization coverage.

Addressing supply-side gender barriers related to immunization, including the distance and timing of vaccination service provision, long waiting times, vaccine availability and the lack of privacy in health facilities with efforts to bundle services and integrate immunization into high-demand interventions across sectors could help close immunization gaps. Gender-responsive health system strengthening, supported by building health worker capacity, improving the collection, analysis and use of data disaggregated by sex, age and additional factors, developing feedback mechanisms to improve the quality and acceptability of services and strengthening safeguarding and complaint mechanisms to support a predominantly female health workforce must also be prioritized in order to effectively tackle gender-related barriers to immunization.

The review of current gaps and existing good practices has highlighted several recommended approaches and entry points to address gender-related barriers to immunization, summarised below. These approaches should be further tailored to each country context through the development of practical action plans with

[166] WHO and UNICEF (2022) Human-centred Design for Tailoring Immunization Programmes. Available at: https://apps.who.int/iris/bitstream/handle/10665/354457/9789240049130-eng.pdf?sequence=1 and UNICEF HDC Master Classes: Training Workbook: Identifying Community Centric Health Interventions.

specific and measurable indicators, supported by gender capacity building, to ensure that the barriers faced by communities are effectively and meaningfully understood and tackled.

Summary of recommended approaches:

Addressing individual/household level barriers:

- Conduct in-depth country-specific **intersectional gender analyses** at the community level with the participation of caregivers and health workers in areas with zero-dose children to gain a deeper understanding of context-specific gender barriers to inform interventions.
- Address caregivers' **practical needs** that prevent access to immunization services, such as providing transport vouchers and support, enhancing house-to-house outreach and mobile teams, linking immunization with cash transfer programmes and bundling immunization with other high-demand services (nutrition, reproductive, maternal and child health) to address barriers related to competing priorities, mobility and poverty, build incentives and generate demand for immunization.
- Utilise **human-centred design** (HCD) drawing on existing motivations, daily realities, habits and limitations to find effective solutions jointly with communities for tackling gender barriers in zero-dose communities, utilising existing UNICEF capacities to build skills and implement HCD.
- Use diverse **communication channels and trusted influencers** to reach different sub-groups of women, men and gender-diverse people with different levels of literacy, ensuring intersectional gender analysis informs SBC programming in zero-dose areas.
- Ensure **channels** and communication modalities for immunization and health-related messaging are accessible to those with lower literacy levels and cater to gender-specific preferences (for example, prioritising edutainment approaches and face-to-face outreach in areas with high illiteracy, systematically conducting intersectional gender analysis as part of outreach and communications interventions, acknowledging and addressing the digital gender divide).
- Actively tackle gender-related **misconceptions and myths** about vaccines leading to under-immunization (lessons learned for example from social listening for COVID-19 in Sudan to develop gender-specific messaging, engagement with religious leaders with gender equality messaging in Syria's Deir ez-Zor to immunize zero-dose girls).
- Leverage **gender-transformative parenting** interventions for generating immunization demand and addressing barriers in zero-dose communities, including components for engaging fathers, supporting parenting alliances and capacity building for frontline service providers.

Addressing social and community-level barriers:

- Enhance **collaboration** with local **NGOs and civil society** groups, including women's groups, informal networks, youth and student organisations and groups (such as the Zainabiat in Yemen, UNFPA-UNICEF collaboration with midwives' networks in Syria's Al Maydin district) to identify gender-related barriers to immunization and generate demand.
- Continue engagement with **religious leaders**, building on gender-responsive interventions carried out in Syria's Deir-ez-Zor where outreach with religious leaders used gender equality messaging from religious scriptures to influence gender-discriminatory attitudes to immunize zero-dose girls.

- Explore building engagement with **women religious leaders** (for example in Sudan) as message multipliers for immunization outreach in zero-dose communities.
- Enhance outreach with targeted interventions to specifically **marginalised groups** experiencing multiple layers of oppression and disadvantage, such as the Muhamasheen in Yemen, utilising human-centred design and participatory approaches.
- Strengthen women's meaningful participation in **community-level decision-making** structures.
- Build linkages with ongoing **community engagement/adolescent programming** – for example in areas with high rates of child marriage and early pregnancy, adolescent programming may offer a platform for identifying ways to reach families with immunization-related messaging.
- Utilise community engagement programmes where mothers are already meeting as **entry points** to disseminate information about the benefits of immunization and schedules of upcoming campaigns (for example, mother-to-mother clubs in Yemen and parent teacher associations).

Addressing institutional/structural barriers:

- Bring immunization services and vaccine-related outreach closer to communities where possible and into areas where women can easily **access**, for example households of trusted people in the community, markets, schools, salons and clubs frequented by women.
- Consider the **timing** of services to ensure equitable access and address competing priorities and time poverty, for example by offering evening or after-hours vaccination services to meet the needs of working caregivers.
- Develop and strengthen **safeguarding** measures to protect vaccinators and other frontline workers from sexual and gender-based violence, including sexual harassment, ensuring access to confidential complaint and reporting mechanisms and offering regular training for staff (including internal support and reporting mechanisms for staff and health workers as well as available mechanisms for beneficiaries/service users to seek support and report misconduct).
- Build mechanisms to meaningfully **engage** with vaccinators and community health workers to jointly identify challenges and barriers and appropriate solutions through human-centred design participatory approaches (for example through co-design initiatives with health workers).
- Support **gender-responsive health system strengthening**, addressing infrastructural issues at health facilities (for example curtains to ensure privacy, separate waiting areas, lockable toilets) and health workforce capacity building on gender-responsive communication – build gender integration into training curricula for vaccinators and outreach personnel.
- Strengthen cross-sectoral **integration** and **bundling** of immunization services with other services and sectors in high demand, including for example nutrition, parenting, sanitation, hygiene, reproductive health and GBV programmes.
- Integrate gender issues and highlight the importance of analysing and addressing gender-related barriers in immunization-related **strategies, policies** and national **action plans**, including in social behaviour change communication plans.
- Strengthen UNICEF and partner staff **capacity** to identify and tackle gender-related barriers in their contexts, including through delivering training on gender and immunization, intersectional gender analysis and gender mainstreaming and developing practical tools to support staff (for example, gender checklists and toolkits).
- Ensure that all **resource mobilization** efforts to Gavi and other donors address relevant recommendations from this report and that all project proposals and plans are reviewed by gender experts to ensure consistent gender integration.
- Strengthen efforts to systematically **collect**, **analyse** and **use data** disaggregated by sex and additional factors (such as ethnicity, age, disability, rural/urban areas), ensuring that this data is shared to higher reporting levels from service delivery points and that it is analysed and used to guide programming.

Annex A: List of key informants

Name	Organisation
Maha Muna	Regional Gender Adviser, UNICEF MENARO
Amaya Gillespie	Senior Behavioural Scientist, UNICEF MENARO
Daniel Ngemera	Senior Immunization Specialist, UNICEF MENARO
Shoubo Jalal	Senior Advisor, Gender Equality, UNICEF HQ
Hiba Ali	UNICEF Sudan
Batoul Elshiekh	Director of Women and Child Health Protection Department, Ministry of Health, Khartoum State, Sudan
Alsir Yousif	Director of Expanded Programme Immunization, Khartoum Ministry of Health, Sudan
Ali Mudhwahi	Public Health Consultant, Yemen Association for Development (YAD)
Lamis Bazzaneh	Health and Nutrition Officer, UNICEF Syria
Sahar Hegazi	Senior Social and Behaviour Change Specialist, UNICEF Syria
Rosam Al Ali	SBC Third Party Technical Facilitator, UNICEF Syria
Nidal Abourshaid	Health and Nutrition Manager, UNICEF Syria
Peter Okoth	Immunization Specialist, UNICEF Syria
Dina Kayyal	UNICEF Syria
Abdulhakim Alnahari	Deputy EPI manager, MoPHP, Yemen
Abdulnasser Alrubaai	Immunization & Surveillance Officer, WHO Yemen
Mohammed AlHaboub	Immunization Specialist, UNICEF Yemen
Hanan Al-Medhwahi	Gender & Development Officer, UNICEF Yemen
Suha Al-Zurqa	Immunization Officer, UNICEF Yemen
Hauwa Hassan	SBC Specialist, UNICEF Yemen
Mervat Ahmed	Project Coordinator, World Relief Sudan
Nafisa M. Bedri	Professor in Reproductive & Women's Health, Ahfad University for Women (AUW), Sudan
Majdi Sabahelzain	Assistant Professor in Public Health, School of Health Sciences, Ahfad University for Women (AUW), Sudan
Shaimaa Ibrahim	Health Specialist, Programme Section, UNICEF Iraq
Muqaddisa Mehreen	Gender and Development Specialist, UNICEF Iraq
Marwah Saad Abdullah	Supplementary Immunization Activities (SIAs) unit manager, Ministry of Health Iraq
Firas Jabar Hashim	National Immunization Programme (NIP) manager, Ministry of Health Iraq
Kamal Abdulrazak Kadhim	NIP Deputy Manager, Ministry of Health Iraq
Ola Zuhair Abdulhussein	Gender programme manager, Ministry of Health Iraq
Rafal Sabah Abd Muhsin	NIP Manager – Local Health Directorate of Baghdad / Karkh, Ministry of Health Iraq
Aarunima Bhatnagar	Chief, Social and Behavior Change – Community Engagement, UNICEF Iraq
Alaa Rahi	UNICEF Iraq
David Hipgrave	UNICEF Iraq
Ali Abdul Husain	Health and Nutrition Officer from Central Zone Office, UNICEF Iraq
Gaia Chiti Strigelli	UNICEF Egypt
Nevine Dous	UNICEF Egypt
Rehab El Lakay	EPI Executive Director, MoHP Egypt
Véronique Fages	Senior Country Manager, Gavi
Jean Munro	Senior Manager, Gender Equality, Gavi
Katja Schemionek	Senior Manager, Health Systems and Immunisation Strengthening, Gavi