KEY CONSIDERATIONS FOR INTEGRATING COVID-19 VACCINATION SERVICES: INSIGHTS FROM IRAQ AND SYRIA FOR THE MENA REGION.

SSHAP
Social Science in Humanitarian Action Platform

With the COVID-19 pandemic well into its third year, governments and response partners are recognising that it no longer makes sense for COVID-19 services, including vaccination, to exist in isolation. There is growing recognition of the potential for integration with other services as the way forward for COVID-19 vaccination.[1–8] This has recently begun to occur in various countries,[5,9] but until now, there has been little evidence available as to the success of these initiatives.

> Service delivery integration occurs where "managerial or operational changes to health systems bring together inputs, delivery, management, and organisation of particular service functions in ways that are contextually appropriate and person-centred with the aim of improving coverage, access, quality, acceptability, effectiveness, and cost-effectiveness"[10]

This brief draws on evidence from academic and grey literature and consultations with partners working in the COVID-19 response to review current integration efforts (as of August 2022) and explore potentially effective ways to integrate COVID-19 vaccination into other services in the Middle East and North Africa (MENA) region. Recent guidance on integration from WHO has also been cross-referenced where relevant. Iraq is taken as a detailed case study due to efforts already made there on integration of COVID-19 and routine immunisation (RI) services. Global integration experiences and a brief discussion of integration efforts in Syria are also included. The brief is part of the Social Science in Humanitarian Action Platform (SSHAP) series on social science considerations relating to COVID-19 vaccines. It was written for SSHAP by Nadia Butler supported by Soha Karam (Anthrologica), Amaya Gillespie, Aarunima Bhatnagar and Elnur Aliyev (UNICEF). Verbal consultations and reviews of the draft were provided from response partners in Iraq and other locations within the region (IFRC MENARO, Iraq MoH, UNICEF Iraq, UNICEF MENARO, UNICEF Syria, WHO EMRO). The brief was requested by the UNICEF Middle East and North Africa Regional Office (MENARO) and is the responsibility of SSHAP.

KEY CONSIDERATIONS FOR INTEGRATION IN MENA

DESIGNING CONTEXTUALLY APPROPRIATE INTEGRATION MODELS

- There are multiple, interconnected influencers that affect people's decisions and abilities to receive a COVID-19 vaccine. Integration of COVID-19 vaccination into other services may help to address barriers such as physical access and inconvenience, as well as cost of delivery. But integration efforts need to be holistic, addressing multiple barriers and levels at once, including psychological (individual) barriers such as vaccine hesitancy, sociological (household and community) barriers such as social norms, and environmental (structural) barriers such as physical access, resources, logistical considerations, and trust in authorities.[11,12]
- Integration efforts should be based on evidence about the specific services the target groups need to access, how they prefer to access them, and what barriers need to be overcome to facilitate or encourage acceptance, access, uptake, and delivery. Where feasible, evidence should be gathered through literature reviews, patient consultation, social listening activities, community feedback provided through regular mechanisms and demand generation activities, and primary and/or secondary qualitative and quantitative research if feasible.
- Evidence gathered can be used to design interventions in a way that is people-centred, tailored to specific contexts, locations, and population groups. Creative, multilevel, and intersectoral programming can work to address the multitude of issues in people's lives, such as protection concerns, food insecurity, education, and health and wellbeing.

- It can be useful to look beyond health services to bundle COVID-19 vaccination with other services that are most needed, frequented, or trusted by specific groups. This may be especially true in areas where health services are not well frequented, due to issues of access, trust, social norms, religion, or any other. It makes sense to integrate COVID-19 vaccination with services or platforms that are already working well and are trusted.
- Mobile outreach can be highly successful, as it takes vaccination to where people are, be it the market, mosque, or at home, thereby reducing the effort, energy and inconvenience that may prevent people from receiving the vaccine.
- Integrated programmes (whether mobile or fixed site) should be accompanied by demand generation and awareness raising activities, using multipronged communication strategies, to reduce hesitancy and address concerns and fears. Likewise, demand generation activities and community engagement for COVID-19 vaccination should be accompanied by vaccine delivery, so people can act as soon as they make a decision.
- Global literature suggests that if effectively designed and delivered, integration can reduce costs by consolidating efforts, while enhancing convenience and service experience, and therefore uptake for the target group. If approached holistically, integration could also strengthen systems.

IDENTIFYING ENTRY POINTS FOR SPECIFIC POPULATION GROUPS

- Little attention has been paid to designing integrated programmes for high-risk groups such as the elderly, clinically vulnerable, and people with disabilities. The elderly could be reached through home visits and community dialogues, and at primary health care centres (PHCCs) or aged care facilities. Clinically vulnerable people could be reached through PHCCs, pharmacies, NCD, HIV and TB clinics. People with disabilities could be reached through long-term care and home visits.[13]
- Refugees, internally displaced people (IDPs), and returnees need similar services whether residing in camps or non-camp settings. The key humanitarian priorities need to be identified for different populations but may include health or other humanitarian services like nutrition, WASH, social protection, cash distribution, or psychosocial support. Linking to services, partner networks, and community groups may be easier in camps because services and networks are well established. Outside camps, mapping may be required to tap into existing services and entry points.
- Some women have expressed a preference to be vaccinated within their communities or homes, with adequate privacy and with female vaccinators. Women's networks can be engaged, and services frequented by women targeted, such as maternal, newborn, and child health (MNCH), antenatal and postnatal care and family planning, as well as services like cash distribution.
- Men can be reached through services they often frequent, such as health checks for common illnesses like diabetes and hypertension, as well as through mosques and workplaces.

NEGOTIATING CHALLENGES AND ENABLERS TO SUCCESSFUL INTEGRATION

- Enablers of successful integration include strong health worker capacity, public trust in health workers or volunteers, vaccination acceptance and confidence among health workers, a service delivery platform that is already frequented by and convenient for the target group, enabling social and gender norms, an enabling policy environment, appropriate infrastructure, adequate funding for transport and other expenses, solid procedures and record keeping, reliable supply chains, strong coordination among partners and sectors, a strong health system, strong community engagement structure and mechanisms, and a commitment to monitoring and evaluation.
- Barriers to successful integration include inability to attract and retain health personnel, limited capacity of health personnel to deliver a variety of services, lack of trust in service providers, restrictive social norms, difficulty accessing service sites, logistical and security challenges for outreach, supply challenges, inadequate infrastructure and funding, and restrictive policies.
- There is a lack of data on integration efforts, particularly on the challenges and the success or lack of success of integrated programmes. Integration efforts need to be better documented, including challenges, successes and lessons learnt, to design better programmes.

COVID-19 VACCINATION INTEGRATION EFFORTS IN MENA

MENA is a region of multiple, protracted, and large-scale crises. At the end of 2021, the region was home to 16 million forcibly displaced and stateless people, many living in vulnerable and hard-to-reach settings.[15] Many countries experience ongoing violence and fragile governance, and there are shortages of medical equipment and physicians, WASH services, and health infrastructure. People grapple with hunger, unemployment, poverty, and other immediate threats daily, meaning that COVID-19, and by association vaccination, are not at the top of their list of priorities or concerns. For this reason, if COVID-19 vaccination rates are to increase, there is a need to bring COVID-19 vaccines to where people are and make the process as effortless as possible.

Countries in the MENA region are beginning to integrate COVID-19 vaccination with other services. At this stage, this is mostly occurring with routine immunization (RI) for children. There are limited documented examples of integration with other services. In some countries (e.g. Yemen, Afghanistan, and Sudan), COVID-19 vaccine delivery support and funding is being integrated into the delivery of existing primary care services and humanitarian assistance.[5(p. 20)] In Egypt, the Ministry of Health and Population is developing an interactive mobile phone-based service to offer guidance and advice on COVID-19 prevention and vaccination, as well as health and nutrition for children under five, with a focus on targeting refugee and migrant communities.[16] In other countries, (e.g. Lebanon), there is strong advocacy for the integration of COVID-19 vaccination into the national primary health care (PHC) network, but it is still unclear the extent to which this has already occurred.[7] Because of the novelty of this type of integration, there is little documentation available, and most of the information used to inform this section of the brief has been shared by operational partners in the region.

Table 1 provides information on current integration efforts being made by selected countries in the region:

Table 1: COVID-19 vaccination integration efforts in MENA

Country	Services integrating COVID-19 vaccination	Model/approach	Efforts at country level
Iraq	Routine child immunisation	Mobile outreach from PHCCs, while continuing RI and COVID-19 vaccination at fixed sites, community programmes, schools, young people groups, IDP and refugee camp communities, host communities, and religious congregations	Intensification of RI integration with COVID-19 vaccination (3iS) by outreach from PHCCs was supported since February 2022. The approach has varied according to geographical access, and cultural, social, and linguistic differences. The public health information and communication about RI and COVID-19 vaccination has been adapted for specific audiences and programmes based on evidence around vaccination and other services.
Syria	MoH Routine Immunisation and School Health Programme, Back to School campaign, Children with Disabilities programme	Health services and mobile outreach with health promotion teams	Mobile vaccination teams paired with teams delivering awareness activities on both COVID-19 vaccination and RI. People were able to receive the vaccine immediately after participating in community dialogues. Specific groups were targeted, such as women, and the approach varied according to governorate.
Djibouti	Routine child immunisation, RUTF distributions	Mobile outreach: camels for rural areas, cars for city	Used buses staffed by young volunteers in Djibouti city, and camels in hard-to-reach localities to offer a full package of activities that included medical consultations, screening for acute malnutrition with distribution of Ready-to-Use Therapeutic Food (RUTF), and targeted RI.

Yemen	Fixed health facilities immunisation services, MNCH programmes	Mobile outreach including in IDP camps, fixed health facilities	Mobile outreach in Yemen helped to reduce access barriers. Intensive social mobilisation was done to increase demand and ensure people were aware that COVID-19 vaccination was available along with the usual child-targeted outreach services. However, in some localities, integrating RI with COVID-19 vaccines resulted in a reduction in RI vaccine uptake from previous years.[17] Meanwhile, integration of COVID-19 vaccination with other services at facilities was not able to overcome access challenges faced by people who had to travel long distances and face significant out of pocket expenses to receive a vaccine.
Sudan	Cash distribution (Mother and Child Cash transfer Programme), bed nets distribution, PHCC services	Mobile outreach at cash distribution points, and deployment of vaccinators and social mobilisers at the same time	In some states, intensive outreach activities are thought to have resulted in higher coverage. Health promotion activities such as mobile cinema and interactive drama were also delivered at mother and child cash distribution sites to encourage vaccination. However, there is not yet enough evidence to know how effective these programmes will be.

* The information included in Table 1 was provided by UNICEF Country Office staff during a small internal survey about COVID-19 vaccination integration activities in the region.

Most of the above examples have employed a combination of fixed site distribution and mobile outreach. According to operational partners, this works well when considering the varying access needs of different population groups and helps to address vaccine hesitancy at the point of distribution, using more interpersonal communications where necessary to build trust.

Inadequate resourcing and inappropriate planning and implementation were among the main barriers to effective integration cited by partners, including lack of health workers with sufficient capacity. Mobile outreach is particularly resource intensive, requiring funding for vehicles and travel, and can leave fixed sites understaffed. Low demand also remains a barrier to uptake, driven by low perception of COVID-19 risk, the persistence of misinformation, information overload, and lack of trust in vaccines and vaccinators. Hesitancy among health workers in certain situations exacerbates the problem, given that they are important influencers for the broader population.[18] The challenge of coordinating with multiple partners to integrate services, including government bodies, UN partners and non-governmental partners, was also mentioned.

Partners in the region have suggested other potential entry points for COVID-19 vaccination integration that they believe would work well in specific contexts. These include both health and non-health-related services: early childhood development (ECD), and schools (Iraq); birth registration services, health campaigns to screen for chronic diseases such as diabetes and high blood pressure (Djibouti); higher education institutions (Yemen); emergency response, including distribution of trauma kits, hygiene kits, malaria bed nets, life-skills training (resilience and social cohesion), and other capacity building initiatives (Sudan); pharmacies and mobile clinics (Libya); family planning for women, and diabetes and hypertension services for men (regional). Partners also highlighted the strategic importance of working with community health workers (CHWs), religious leaders, young people, and other influencers to advocate the advantages of vaccination. There is some concern that integrating COVID-19 vaccination with other services, particularly routine immunisation, may have the effect of tainting those services with COVID-19-specific doubts (such as lack of trust, safety concerns, and the perception of vaccination as a foreign agenda). This concern has been raised by health colleagues and is also of concern to polio teams, who fear hesitancy specific to COVID-19 vaccination may negatively affect efforts to combat polio.[19] In addition, a reliance on outreach services may diminish participation in other health services provided at PHCCs.

Case study: Iraq's 3iS campaign

The following section describes Iraq's experience with integrating COVID-19 vaccination services into routine childhood vaccination efforts through a community mobilisation outreach approach. This is called the 3iS (Intensifying Integrated Immunisation) campaign. Information provided is drawn from consultations with partners working on the campaign, unless otherwise indicated.

THE RATIONALE

In September 2021, the first goal set by the WHO for COVID-19 vaccination in Iraq was achieved – to reach 10% population coverage. The demand was highest in November 2021, but after that it began to drop. COVID-19 risk perception fell and misinformation continued to circulate, reducing demand. By late 2021, COVID-19 vaccination was being provided mainly in PHCCs and results from mass vaccination interventions were not promising. At the same time, coverage of childhood RI was lagging. This was due to ongoing issues including hesitancy and access challenges, compounded by pressures of the pandemic on the health system. The pandemic resulted in the funnelling of resources toward COVID-19 to the detriment of RI, risking the resurgence of vaccine preventable disease (VPD). Directorates of Health (DoHs) and field offices lacked resources to sustain RI services, especially in humanitarian settings. In 2022, ample funding became available from donors to support COVID-19 vaccination. As such, the EPI department at the MoH, in partnership with UNICEF and WHO, sought to integrate RI and COVID-19 vaccination through a nationwide outreach campaign that would mutually enhance both services.

The Intensification of Integrated Immunisation Services (3iS) campaign, launched in February 2022, had five objectives: 1) accelerate control of COVID-19 by improving COVID-19 vaccine uptake, particularly among hard-to-reach groups; 2) reduce the probability of VPD resurgences; 3) bridge coverage gaps and reach children who had not received a single dose of routine vaccines; 4) raise public awareness about the risks of COVID-19 and other diseases; and 5) strengthen ties between health systems and communities.[20,21] The campaign is ongoing at the time of writing and has a particular focus on remote, hard-to-reach, and underserved areas. Thinking longer term, partners saw opportunities for an integrated approach to be built around community mobilisation and community engagement, not only to improve RI and COVID-19 vaccination coverage, but also to improve access to and uptake of other essential health services and strengthen health systems.

THE APPROACH

The 3iS campaign has a national framework, timeline, and reporting channels so the impact can be measured across the whole health system, but with a bottom-up microplanning approach. The campaign is now being implemented in all DoHs in Iraq, and in 94% of districts across the country. It covers 1320 sites in 1064 PHCCs, with around 7000 visits per month nationwide.[20,21] The campaign has been ongoing for seven months at the time of writing and is planned to continue until at least the end of 2022.

One outreach team was created for each of the selected PHCCs. Each team consists of six members: one RI vaccinator, one COVID-19 vaccinator, two logbook registrars, one IT officer, and one health promoter or community mobiliser.[21] Teams carry all routine antigens and three types of COVID-19 vaccine and are trained on their use. Often, the teams incorporate people with experience working on national polio and measles campaigns. These teams visit specific communities with a mobile clinic or set up a vaccination point in a village 'health house', shrine, or public park. The community mobiliser then walks through the locality talking to families about vaccination, answering their queries, attempting to build trust, and encouraging them to visit the mobile clinic. The teams visit schools, universities, shopping centres, and other key local sites. Sometimes, the community mobiliser goes house-to-house, identifying unvaccinated people and talking to them about (routine and COVID-19) vaccination before the vaccination team visits the house.

The community mobilisers and other team members are familiar with the context of the local area and know the community leaders and other influencers. They involve community leaders, both male and female, religious leaders, and health workers in awareness sessions and encourage them to talk to their neighbours about vaccination. The community mobilisers are trained on interpersonal

communication and key messages, which they deliver using culturally specific job aids (videos, flip charts, and interactive materials).

The MoH and DoHs carry out monitoring and supervision at national, provincial, district, and local levels, sometimes accompanied by UNICEF and WHO staff. The campaign has its own data submission channel. At the end of each month, it is possible to see exactly how many people have been vaccinated through the campaign and how many through service delivery at health facilities.

Flexibility to adapt to the local context

Although the campaign is national, partners working on the campaign described an approach that is bottom-up and flexible, with input from the service points whose personnel are familiar with the needs of the local population. DoH managers have decision-making capacity about the approach taken in their province, which allows them to use MoH and DoH statistics to decide which localities or population groups to target and how. Teams may engage with women's groups, religious leaders, medical students' groups, or youth groups as entry points, depending on the demographics and needs of each locality.

Overall, teams are driven by one of three strategies:

- RI driven, where unvaccinated children are identified through facility records and the team deploys to the areas with the highest number of children in need of RI. While there, they identify people in need of COVID-19 vaccination.
- COVID-19 driven, where the team visits an area known to have a low COVID-19 vaccination rate. While there, they check children's RI cards and identify children in need of vaccinations.
- Mixed, where the team knows of an area with low COVID-19 vaccination rate but high RI rate. In this case, the team may split, with half staying to carry out COVID-19 vaccinations and the other half visiting a nearby area with lower rates of RI.

> *"In one of the DoHs, they decided not to send teams to all areas, but to instead use some of the resources to communicate with communities and encourage them to come to the health facilities to get vaccinated. They would then visit only those who did not come. The benefit of this approach was that it allowed the teams to visit communities that were the most hesitant and as such had many zero dose children, and to open a dialogue with them." (UNICEF Iraq CO)*

Different approaches are being used for different settings and population groups.

IDP and refugee camps usually have established, and well-frequented clinics run by community health workers, which offer nutrition, maternal, and newborn health, and immunisation services. A COVID-19 vaccination team is then added to the clinic. The community mobiliser goes tent-to-tent making people aware of the COVID-19 vaccination services available at the clinic.

For IDPs and returnees living in informal settlements, RI and COVID-19 vaccination is offered by health workers delivering routine healthcare services to these communities by outreach. These services are often overstretched and struggle to include all returnees.

For IDPs and returnees living within host communities, outreach teams are deployed in the same manner as with other underserved communities.

Women are sometimes reached through home visits, since they are less likely than men to be accessible outside the home. Teams connect with local people to find out how to reach women who do not have children. Most teams have at least one female vaccinator dedicated to work with women.

In remote and hard-to-reach areas, the team communicates with the local population beforehand as to when and where they will be arriving, or alerts caregivers listed on their database via SMS or phone. Some villages have permanent health houses where two health workers are stationed. The health workers inform the population that a vaccination team will be arriving, and the outreach team sets up their clinic in the health house on arrival.

Access is challenging in **areas where security remains poor, usually those formerly claimed by ISIS.** The MoH coordinate with security forces in these areas to develop appropriate ways to reach

people. Security forces issue the teams with special identification cards to allow them to access these places.

Teams are not able to access some **disputed areas**. Instead, local health workers from tribal societies in these areas, who have experience working on the national polio and measles campaigns, lead campaigns in these areas. The approach for including these locations in the campaign is managed on a case-by-case basis by the DoH.

There is no specific approach to target the **elderly or clinically vulnerable** populations through the 3iS campaign, although specific messaging has targeted these high-risk groups. People travelling to Mecca for pilgrimage are required to be vaccinated, so this was one way to reach the elderly population. However, the maximum age of pilgrimage has been reduced to 55, removing the impetus for this older cohort to be vaccinated. In general, although the target group for COVID-19 vaccination in Iraq includes the population above the age of twelve years, there is not enough capacity for programmes to specifically target **young people** under eighteen through the 3iS campaign.

Attempts to integrate with other services beyond RI

The focus on the community mobiliser role allows the approach to be versatile. The community mobiliser can be trained to engage communities on different topics and services, not just vaccination. As an example, some DoHs have used this approach to integrate cholera prevention activities into the 3iS campaign.

> *"When we had cholera resurgence, we reached for those community health mobilisers. We provided them with the Aquatab for water purification and with messages. And we said, since they are going to underserved communities targeted for cholera response, then we can integrate with this." (UNICEF Iraq CO).*

Public health messages on hygiene practices have been integrated with COVID-19 vaccination in schools in Baghdad. Prior to the 3iS campaign, UNICEF also tried integrating COVID-19 vaccination awareness with the winterisation campaign in Baghdad.

> *"We tried to integrate COVID-19 vaccine in some of our activities, especially the winterisation campaign, which was basically about getting cold-weather supplies to the IDP children returning to school. So, we trained the youth volunteers to raise awareness and talk to them about the importance of getting vaccinated, and they did a great job of convincing people to get vaccinated, but at that point there was no COVID-19 vaccination near where the camp was, and we tried to find another solution to get them vaccinated later". (UNICEF Baghdad Field Office)*

THE OUTCOME

In February 2022, 207,276 COVID-19 vaccines and 381,585 routine vaccines were administered through the 3iS campaign in Iraq.[20] Between February and May 2022, the percentage of COVID-19 vaccines administered through the 3iS campaign averaged monthly 20.5% of all doses administered in the country, indicating that the campaign was not insignificant on a national scale.[20] The 3iS campaign also made a strong contribution to improving RI coverage. The percentage of children vaccinated through the campaign as compared to through other strategies in February 2022 was 27% for OPV3, 20% for Penta1, 30% for Penta3, and 37% for MMR1.[20] Coverage rates for Penta3 and MMR1 were up by 17% and 27% respectively when comparing between March 2021 and March 2022, reaching 98% and 99% coverage in March 2022.[20] Partners attribute this increase in large part to the 3iS campaign.

The success of the campaign lies in its emphasis on outreach and community engagement. Importantly, teams had the ability to vaccinate people on the spot or at the nearby mobile clinic if they made the decision to be vaccinated. The DoH in Baghdad found that offering small incentives, such as cookies, also contributed to improving uptake. Another positive result from the campaign was that more women than men were reached through this approach, particularly in refugee and IDP settings, while the opposite is true for vaccination at health facilities. Each health promotion team in Basra includes at least one woman. Being able to send gender appropriate team members to speak to people is thought to have contributed to the campaign's success and public acceptance. Women

visited at home were not always able to make an immediate decision to take the vaccine, however, needing to first discuss with their husband and family.

> *"The other day I saw a health team travel three hours by road to reach a very remote village where they had five to six families. They found that 95% of children were zero dose. This is the beauty – you can reach very remote areas where you can find not so many, but zero dose children. Very risky to have even one zero dose child, so [it is] a very valuable exercise in reaching for those communities." (UNICEF Iraq CO)*

Despite the apparent overall success of the 3iS campaign, partners have noted that it seems to have been somewhat less successful for COVID-19 vaccination than for RI. Compared to the large increases in rates for RI, the percentage of fully vaccinated Iraqi people remains at 18.5% nationally in September 2022, up from 10% in September 2021.[22] In some cases, people agreed for their children to be vaccinated with routine immunisations, but refused the COVID-19 vaccine. It is interesting to note that respondents in a UNICEF study indicated a strong preference to receive vaccines at hospitals or PHCCs, rather than smaller secondary clinics or health houses, or other locations such as workplaces, community centres, and pharmacies.[23,24] More investigation is warranted to understand how widespread this sentiment is.

THE CHALLENGES AND ENABLERS

> *"Planning and training from the start is crucial for successful integration, and communication and participation are important too." (Iraq EPI department, MoH)*

Challenges specific to the 3iS campaign mainly relate to financing and resources, logistics, and coordination. Most of the financial and logistical challenges are likely to apply to any outreach activities, regardless of whether integration is involved. The issues around coordination and political buy-in apply to any integration activities, regardless of the modality. Table 2 lists both challenges and enablers specific to the campaign. As well as financial, logistical, and coordination-related enablers to offset the challenges, a clear enabler is the community engagement aspect and trust built between outreach teams and communities. Partners have noted that continuing to work in a siloed approach will not be sustainable in the long-term, regardless of the challenges around integration.

Table 2: Challenges and enablers arising from the 3iS campaign

Challenges	Enablers
Financing / resources	
Lack of financial stability for continuation of integrated immunisation services. Very high cost for transportation to communities. Team fatigue and lack of reimbursement for personnel costs. Turnover of qualified personnel due to workload, especially in rural areas.[25] Resources inadequate to reach entire country. Targeted areas only. Shortage of ICT equipment and internet access to input and share data in a timely fashion.	Integration can increase opportunities for funding. RI personnel have experience from polio and other campaigns, and solid mechanisms for how to target geographic locations and trace unvaccinated populations.
Logistics	
Shortage of fuel at governorate/PHC level. Challenges of carrying all (six) routine antigens plus three types of COVID-19 vaccine. Reaching hard-to-reach areas and groups such as deserts, marshes, remote areas, mobile populations.	No problems with cold chains across the country.
Coordination / political will	
Ad hoc cooperation among key stakeholders. Challenges of different sectors in the ministries working together. Different sections in PHCCs (i.e. COVID-19, RI, health promotion) have different plans, approaches and strategies that must be reconciled.	MoH understand the need for integration and moving forward with a total programme-oriented and HSS-oriented package.

Trust and community engagement	
Outreach campaigns can have the adverse effect of making people dependent on outreach and accustomed to receiving services with little effort. If the outreach activity ceases, people may be less likely to make the effort to seek the service than before.	Community-based initiatives helped facilitate awareness sessions, etc. Teams know the local area and community leaders and have prior experience working in those areas. Most communities accepted the 3iS campaign teams and the COVID-19 vaccine because they trust RI. Iraq has a well-developed RCCE strategy in place. RCCE Technical Working Group (TWG) members guide and implement community mobilisation on the ground.
Reporting and data	
The burden of recording individual service contacts, vaccine doses administered and performance data in each outreach point, and integrating that data into PHCC records, currently all paper based. Recording and reporting on the content, volume, and quality of contacts made with communities.	Each PHCC now has access to wireless internet and notebook computers for monthly data recording and reporting. District-level integration of PHCC data and reporting to DoH and national level. Nascent work on mapping of catchment population settlements and coverage, facilitating microplanning according to need and numbers. Digital birth registration to ensure all beneficiaries are registered and denominators are accurate.

ADDRESSING MULTIPLE BARRIERS

The available evidence sheds light on several persistent drivers for low COVID-19 and RI vaccine uptake in Iraq, most of which are also common in other countries in the region. These include:

- Psychological barriers such as low risk perception of COVID-19 – especially among young people – due to low case count and mortality rates,[24] concerns about vaccine efficacy and safety,[21,23] rumours that COVID-19 does not exist, and brand preference, with Pfizer preferred.[26]
- Sociological barriers such as gender norms and a belief among women that they are safe since they spend most of their time at home, while men require vaccination certificates for business affairs or travel. Along with concerns that the COVID-19 vaccine could affect women's fertility, this resulted in lower uptake among women than men (40/60%), especially in rural areas.
- Environmental barriers such as difficulties accessing PHC centres and prohibitive transport costs, especially for rural and remote areas, IDPs and refugees,[26] difficulties accessing the vaccine due to long wait times, inconvenient hours of operation, difficulty making appointments despite availability of the vaccine in nearby centres,[23,24] low service quality, lack of trust in government and its services, sometimes extending to vaccine teams,[23] and lack of enforcement of government mandates and vaccine-related restrictions on entry and movement.[21] It is interesting to note that health workers and health sector representatives generally have a much more positive perception of the accessibility of health services than the general population, as per the findings of a KAPB study from February 2022 and consultations conducted for this brief.[24]

What is interesting about the 3iS campaign is that it worked to address barriers on all three levels. It aimed to reduce hesitancy, adjust social norms, and build trust through community mobilisation and engagement, while also alleviating access- and convenience-related barriers by bringing vaccines to where people needed them.

LOOKING FORWARD

The Iraqi MoH, with support from UNICEF, plans to release a new multiyear strategy in September 2022 focusing on broader integration mechanisms. The strategy will be implemented in 2023 and will be oriented toward full, long-term programme integration, and health systems strengthening. As well as including the COVID-19 vaccine annually in the RI plan under the EPI department, the strategy is intended to move beyond immunisation to incorporate other interventions, including PHC services

such as antenatal care (ANC), postnatal care (PNC), non-communicable disease (NCD) control, and nutrition.

Moving forward, community mobilisation will be a cornerstone of integration efforts in Iraq, using the role of the community mobiliser to create links between communities and the various services available to them, at the same time building trust and gathering evidence needed to create better interventions in the future. Digitalisation will be an important aspect of this approach, with electronic reporting of doses given and eventually the establishment of individual electronic health records. Digitalised communications with community members using mobile phone messaging and applications will build on nascent approaches already being introduced.

Consultations with partners and a review of available literature shed light on numerous possible entry points for integration of COVID-19 vaccination into other services for different target populations in Iraq (see Table 3).

Table 3: Potential entry points and service integration by population group in Iraq

Population group	Potential entry points	Potential services to be integrated
Communities	PHCCs, markets, household visits, public places, gathering places, women's centres, youth centres, police engagement, shrines and mosques (especially during special events (i.e. Ramadan and Arba'een rituals), religious leaders[27]	WASH (hygiene promotion, COVID-19 IPC, cholera, menstrual hygiene management (MHM), dental hygiene)[28], management of malnutrition, diabetes, hypertension, ANC, delivery care, PNC[29], ECD screening
Vulnerable women and children	Social workers (Ministry of Social Workers and Social Affairs), non-governmental organisations (NGOs), local government collaboration[29]	Social protection (domestic violence (DV), gender-based violence (GBV), sexual abuse, psychosocial support (PSS), legal services, family tracing and reunification, emergency alternative care, release, rehabilitation and integration), birth registration, early stimulation, safe drinking water, nutrition, good parenting practices[28,30]
Children, adolescents, young people	Health and education sector (health facilities, schools, universities)	School health programme, ECD services, WASH (hygiene promotion, COVID-19 infection prevention and control (IPC), cholera, MHM)[28]
Vulnerable adolescents	Directorates of Youth and Sports	Life skills training (team building, communication, leadership, creativity skills, digital skills, employability)[31]
Out-of-school adolescents (in conflict situations, rural areas, low income, girls)	Civil society organisations (CSOs), NGOs, groups for out-of-school adolescents, Ministry of Youth in KRI and Federal Iraq	Nutrition, non-formal education programmes, life-skills training (personal development, active citizenship, youth entrepreneurship, digital skills, leadership)[28,29]
Prisoners	Detention centres, juvenile detention centres	WASH, social protection, life skills training, education
Humanitarian settings (women, children, adolescents)	PHCCs, tent-to-tent / house-to-house visits, community gatherings, CHWs, community mobilisers[31], transit points[13]	Nutrition, MNCH, RI, breastfeeding and infant and young child feeding (IYCF), growth monitoring, nutrition, micronutrients, WASH (hygiene promotion, COVID-19 IPC, cholera, MHM, distribution of hygiene products)[28,29,31]
Returnees	Door-to-door social mobilisation campaigns, transit points[13]	WASH, MNCH, nutrition, RI[32]
Syrian refugees in camps	Door-to-door / tent-to-tent visits by child protection community mobilisers and partners[33]	IYCF, health and nutrition, child protection, hygiene promotion
IDPs (children)	Winterisation campaign through youth volunteers	Winterisation response (provision of clothes to children)

Programme design should consider the context of each location and population group, bearing in mind needs, preferences, and barriers. For example, PHC services such as ANC, delivery care, and PNC are better attended in KRI than in South-Central Iraq.[34] Students in one study in Mosul, Ninawa, have been found to prefer to receive awareness through teachers and school-organised campaigns.[32]

Syria's integration of COVID-19 vaccination with demand generation activities

In Syria, although COVID-19 vaccination is yet to be systematically integrated into routine immunisation or other services, integration has occurred with RCCE interventions relating to both COVID-19 and routine immunisation. Mobile vaccination teams have paired with implementing partner health promotion teams (such as Syrian Arab Red Crescent – SARC) and Directorate of Health communications teams to deliver both awareness activities and vaccines to people where they need them. This has been successful in some governorates (e.g. Deir ez-Zor), where most of the people involved in the awareness activities subsequently chose to get vaccinated. The teams conducted household visits and community dialogues involving healthcare professionals and influential people, and people had the option to be vaccinated immediately after the dialogues.[35]

Evidence collected through KAP studies, social listening exercises, and community engagement mapping exercises was used to tailor interventions to different locations and population groups based on their situation and needs.[35,36] For example, in Homs, a group of medical and science undergraduate students known as '*hakeem* (doctor) teams' engaged in science-based dialogues on the importance of COVID-19 and routine vaccination, working to build trust among high-risk groups including health workers, the elderly, refugees, and people with comorbidities. It was found that bundling routine immunisation with COVID-19 vaccination increased trust in COVID-19 vaccines since people were familiar with and largely trusted routine vaccination, having had experience with it since their childhood. In Northeast Syria, governorate-specific demand generation strategies were used to counter misinformation and confusing health guidance. This included engaging religious leaders from mosques and churches, working with women, especially in camps populated by people of various nationalities, and featuring community influencers in social media videos and campaigns. In Deir ez-Zor there was an emphasis on improving frontline service quality, especially in hard-to-reach areas. SARC worked with the most vulnerable, and women's networks were engaged, given that women were generally more hesitant than men.[35]

The integration of RCCE teams with vaccination teams appears to have resulted in an increase in demand for COVID-19 vaccines, particularly in Al-Hasakah governorate. The process was facilitated by strong coordination between UN agencies, NGOs, camp management and directorates of health.[35] Challenges to integration included a preference among the population for certain vaccines, such as Astra Zeneca, which were not always available, low prioritisation of COVID-19 vaccination among communities, limited resources, including health workers, health infrastructure, electricity and water, and logistical challenges of ensuring availability of, delivering, and storing both COVID-19 vaccines and routine childhood vaccines, as they cannot use the same cold chain. An additional challenge is the very low uptake of COVID-19 vaccines among health workers, who are highly influential on the population.[18] Challenges differed according to the context of each governorate. For example, in Homs there is constant movement of people in border areas, in Northeast Syria people are dispersed in small, sporadic villages, and in Deir ez-Zor sandstorms hampered campaign days.[35]

In a future project, mobile teams will work to raise awareness not only about immunisation, but also about nutrition, education, WASH, and child protection.[37] A Measles and Rubella (MR) campaign is planned for October 2022, and an integrated approach is currently being developed aimed at increasing uptake of COVID-19 vaccination among parents. In addition, integration of COVID-19 vaccination with routine immunisation and polio immunisation through integrated demand generation interventions is being planned.

Using evidence to build creative programmes addressing multiple barriers

Bearing in mind that each intervention should be tailored to a specific group, location, and context, Table 4 provides, in broad brushstrokes, some potential entry points and services to consider for different population groups, as gleaned from the literature and discussions with partners working in the region.

Table 4: Potential entry points for integration by population group within MENA

Population group	Potential integration model / entry point	Potential services to be integrated
Elderly populations	Integration into PHCCs, mobile and door-to-door outreach with awareness, community dialogues, aged care homes	PHC services, chronic disease care, psychosocial support
Clinically vulnerable populations	Integration into PHCCs, door-to-door outreach and awareness, NCD clinics	PHC services, chronic disease care, psychosocial support
Women	Integration into PHCCs, door-to-door outreach and awareness, women's groups	PHC services, MNCH, antenatal and postnatal care, family planning (FP), cash distribution sites, WASH, parenting programmes
Men	Integration into PHCCs, workplaces, community dialogues, mosques	PHC services, regular diabetes and hypertension services, parenting programmes
Rural communities	Mobile outreach and fixed sites with awareness, schools, youth groups, community dialogues, engagement with religious leaders, tribal leaders, CHWs	PHC services, H&N, RI, WASH, education, child protection, ECD, cash distribution, bed nets distribution, birth registration, livelihood programmes
Urban communities	Integration into PHCCs, fixed sites, pharmacies, door-to-door outreach and awareness, schools, higher education institutions, youth groups, engagement with religious leaders, markets, and shopping malls	PHC services, H&N, RI, WASH, education, child protection, ECD, cash distribution, bed nets distribution, birth registration, livelihood programmes
IDPs/refugees in camps	Integration into existing camp-based services and centres and door-to-door/tent-to-tent outreach and awareness, engagement with religious leaders, mosques, emergency response	Health and nutrition (H&N), RI, WASH, education, child protection, ECD, cash distribution, bed nets distribution, trauma kits, hygiene kits, life-skills training, psychosocial support
IDPs/refugees/returnees/migrants in non-camp settings	Integration into existing humanitarian services and mobile outreach and awareness, community dialogues, engagement with religious leaders, emergency response	H&N, RI, WASH, education, child protection, ECD, cash distribution, bed nets distribution, trauma kits, hygiene kits, life-skills training, psychosocial support

GLOBAL INTEGRATION EFFORTS BEYOND COVID-19

Service integration is not a new concept. The Alma-Ata Declaration of 1978 envisaged intersectoral action and the integration of essential health care into primary health care. The Health in All Policies and One Health approaches aimed to integrate health across other sectors and domains.[10] The WHO has published guidelines on integrating immunisation services[38,39] and integration is prioritised in the global Immunisation Agenda 2030.[40,41] There are numerous examples of attempts to integrate

various services within the health sector. Among the most commonly integrated services are immunisation, family planning, and HIV-related services.

In 2012, an issue of *Vaccine* documented examples of using the infant immunisation platform to deliver hearing screening, HIV services, vitamin A supplements, deworming, malaria treatment and bed-nets, family planning services, growth monitoring, and health education.[42] There are numerous examples of pairing infant immunisation with post-partum family planning education and contraceptive provision across Africa over the past decade. One review found that most of these showed encouraging outcomes in terms of family planning knowledge, attitudes, and contraceptive uptake, without adverse effects on immunisation services.[40]

Most recently, polio teams in countries across Africa, South-east Asia, and the Eastern Mediterranean region are beginning to expand their role beyond polio to include vaccination and surveillance for other diseases as part of their transition programme. In India, the National Polio Surveillance Project has been renamed the National Public Health Support Programme, with an expanded remit focusing on overall population health.[43] In Nigeria, the government plans to reposition polio teams to work on three core health priorities: essential immunisation, disease surveillance and outbreak response, and PHC. [43] In Sudan, staff from four areas of state-level health care – polio eradication, immunisation, health emergencies, and health system strengthening – have come together to work as integrated public health teams across all 18 states.[44]

Less common are examples of integration of services with other sectors outside health.[45] HIV-related care is a notable example where there have been innovative examples of combining HIV services with other needs of the target groups. As well as integration with ANC, substance misuse services, and mental health programmes,[10,46,47] there are also examples of integration with WASH services, parenting programmes, safe schools programmes, and cash transfers (see Table 5).[46–49] A review of literature on HIV integration found that conventional approaches failed to consider human rights and the structural factors that determine risk, vulnerability, health seeking, and health equity, and that integration approaches designed with service users at the centre had the potential to address this.[10] Table 5 (next page) provides some examples of integration efforts, both within the health sector and across sectors, and lists their enablers, challenges, and outcomes where available.

Enabling factors highlighted in these examples include strong existing health worker capacity, community trust of health workers or volunteers, a service delivery platform already frequented by and convenient for the target group, an enabling policy environment, and a commitment to monitoring and evaluation.

Challenges include attracting and retaining health personnel, capacity-building, misinformation and lack of trust, restrictive social norms, difficulty accessing service provision sites, logistical and security challenges for outreach, supply challenges, inadequate infrastructure and funding, vertical financing of certain services, and restrictive policies. A review of family planning and immunisation integration experiences listed similar influencing factors: adequate staff numbers, enabling social and gender norms, appropriate infrastructure, and coordinated and reliable supply chains.[40]

These factors have the potential to apply to any intervention, but in the case of integration, they could potentially be exacerbated due to the complexity of a multi-service, multi-sectoral programme with various stakeholders and additional logistical and financing requirements. Reviews have also listed factors that are specific to integration, including providing staff with sufficient training and support for additional services and time to perform additional tasks, and clear regular communication between programme managers from the different areas or sectors.[40] Other potential challenges relate to the coordination of a large number of collaborating actors, and having different funding sources for different interventions, as well as the logistical complications of transporting a more diverse range of items to outreach sites.[50] More can be learnt from programmes that are inherently cross-sectoral, such as ECD and child welfare screening where the health, education, and social welfare sectors may all be involved in service delivery, but each with different priorities, funding, reporting channels, and staff skill sets.

Table 5: Previous integration examples

Health services integration				
Country	**Integration model**	**Enablers**	**Challenges**	**Positive outcomes**
Egypt	Private post-COVID-19 clinic: provides multidisciplinary care including rehabilitation, physical therapy, laboratory and radiological services, and psychosocial health care.[51]		Unable to provide telemedicine to allow more frequent monitoring of patients.	More women than men visited the clinic, consistent with previous studies that show more women have post-acute sequelae of SARS-CoC-2 infection.
Papua New Guinea	Polio staff delivered integrated outbreak response for polio, measles and rubella, reaching remote communities by helicopter, boat, and foot.[43]	Polio teams are well equipped to deal with new and complex health challenges due to prior experience.	Logistical and security challenges.	
Pakistan	Close collaboration between the polio and immunisation programmes for a nationwide measles-rubella and oral polio vaccine catch-up campaign.[43]			Over 93 million children reached with vaccines.
Tanzania	HPV vaccination with adolescent health education (including RSH), de-worming, and nutrition and vision screening in schools, health facilities, and communities. [40,50]		Side effects of deworming believed by community members to be attributable to HPV vaccines, affecting uptake. Challenge of reaching out-of-school girls.	
Tanzania	De-worming and measles vaccination for in school and pre-school children aged 7-14 years.[50]		Misinformation, timing of interventions during school exams, concerns about teachers dispensing medications, large class sizes resulting in stock-outs, supply delays for remote districts, failure to document logistical issues.	
Kenya, South Africa, Vietnam, USA, Canada	HIV-related care and substance misuse services (various models).[10]	Makes it possible to better meet the needs of people who need these two services.	Fragmented health service coverage, access (physical and financial), funder reluctance to invest in horizontal health care, restrictive substance use policies, social determinants of health.	
Ghana	GoodLife Campaign is an integrated umbrella SBC approach that promotes a range of positive health behaviours (e.g. MCH and malaria prevention and treatment) through multimedia channels.[45]			Campaign reached a broad base. Sales of zinc tablets increased 280% and 80% of women exposed to the campaign used bed nets.

Integration with other sectors				
Country	**Integration model**	**Enablers**	**Challenges**	**Positive outcomes**
Peru	Multisectoral, data-driven set of interventions including free health insurance for pregnant women and children, cash transfers and financing to improve maternal nutrition, access to care, and stunting rate.[52]			Health service utilisation doubled, stunting rates decreased from 28% to 13% between 2008 and 2016.
Bangladesh	Multiple interventions including microfinance programmes, family planning policy changes, incentives for girls' education, and increased workforce participation for women.[52]	Assisted by a strong NGO sector and local research organisations capable of influencing policymaking.		Increased women's empowerment through improved mobility, social connections, and decision-making capability, ultimately leading to a reduction in child mortality by 61% between 2000 and 2017.
Bangladesh	Integration of hygiene promotion and provision of handwashing hardware at household and compound level with cholera immunisation.[53]			45% of households that received hygiene promotion had a functioning handwashing station compared to 22% of households that received only the vaccine.
Nepal	Hygiene awareness sessions delivered at vaccination centres with rotavirus vaccine. Hygiene intervention package created based on formative research data.[53]	Thousands of caregivers visit vaccination centres at least five times during a child's first year.		Hygiene and public health sectors worked together to avoid miscommunication about the rotavirus vaccine. The programme was still being delivered at scale in 2021.
Kenya	Delivery of hygiene kits and hygiene promotion delivered to caregivers during infant vaccine campaigns.[53]			Instances of correct handwashing technique doubled compared to households not receiving the intervention.
Ethiopia	CHSS model (close-to-community – CTC model) used to increase HIV testing among pregnant women and ANC service use, and improve sanitation.[47]	CTC workers can offer more support than facilities, while linking communities with facilities and services.	Paying community workers or attracting volunteers, adequate training and supervision, infrastructure and medicine supply, transport, community support for programme and workers.	More pregnant women registered for ANC and tested for HIV. More postnatal outreach visits. More households had functioning, properly used latrines. Community relationships strengthened.
Mozambique	Intersectoral coordination committees involving health, education and youth ministries set up at national, provincial and district levels to integrate their various activities into a coherent whole. Adolescents were reached in schools, clinics and communities.[54]	National government provided budget and policy support. Monitoring and evaluation occurred throughout scale-up.	Complexity of the multi-sectoral approach. Resistance due to norms about adolescent SRH and gender norms hindered scale-up in some areas.	Successfully managed and scaled up. Provided SRH information and services to many adolescents.
Sub-Saharan Africa	Cash transfers, parenting support and safe schools for adolescents living with HIV.[48,49]			Combination of the three services had a positive effect across seven sustainable development goals (SDG) targets. Beneficial effects for nutrition, cognitive development, education, and safety.

There is limited published evidence on how integration programmes are designed, the barriers and challenges experienced, or lessons learnt, and programme outcomes. It is also likely that interventions that reach publication are the most successful and that challenges or failures are less often documented or shared publicly. Reviews have called for more rigorous evaluation of integrated programmes with better documentation of challenges and operational factors that drive success or failure. Objective reports are needed on implementation and impact to inform decision-making about appropriate, feasible, and acceptable integration models and service delivery platforms in different scenarios.[40,45,50]

As can be seen in the above examples, outcomes are not always reported and are not well linked to specific factors, making it difficult to draw conclusions about the success of different types of integrated interventions. Nonetheless, these examples on their own suggest that programmes incorporating various services in conjunction can lead to positive outcomes across various indicators.

If effectively designed and delivered, integration may be a way to economise and reduce cost and effort by bundling services together, while enhancing convenience and service experience and therefore uptake for the target group. It also has the potential to capitalise on COVID-19 investments, innovations, and lessons learnt and, if approached holistically, to strengthen systems. In any case, intervention design should consider contextual factors and the multiple influencing drivers, including individual (psychological), social and environmental (logistical, political), that can influence an individual's willingness and ability to access services.

ACKNOWLEDGEMENTS

This brief has been written by Nadia Butler with Soha Karam, Amaya Gillespie, Aarunima Bhatnagar and Elnur Aliyev (UNICEF). Consultations were held with David Hipgrave, Husam Sabri Al-Musawi, Israa Abdulrahman Mansour, Ali Abdulhusain Saleh, Damascus Macheri, Alaa Rahi (UNICEF Iraq), Firas Al-Mossawi (Iraq Ministry of Health) and Tonia Rifaey (WHO EMRO). It was reviewed externally by David Hipgrave, Thewodros Zewde Shay (UNICEF Iraq), Rose Aynsley (WHO EMRO) and Muhammad Shafique (IFRC MENARO). It was internally reviewed by Olivia Tulloch (Anthrologica), Diane Duclos and Melissa Parker (LSHTM) and Tabitha Hrynick (IDS) and edited by Victoria Haldane (Anthrologica). This brief is the responsibility of SSHAP.

CONTACT

If you have a direct request concerning the brief, tools, additional technical expertise or remote analysis, or should you like to be considered for the network of advisers, please contact the Social Science in Humanitarian Action Platform by emailing Annie Lowden (a.lowden@ids.ac.uk) or Olivia Tulloch (oliviatulloch@anthrologica.com).

The Social Science in Humanitarian Action is a partnership between the Institute of Development Studies, Anthrologica and the London School of Hygiene and Tropical Medicine. This work was supported by the UK Foreign, Commonwealth and Development Office and Wellcome Grant Number 225449/Z/22/Z. The views expressed are those of the authors and do not necessarily reflect those of the funders, or the views or policies of IDS, Anthrologica or LSHTM.

KEEP IN TOUCH

@SSHAP_Action info@socialscience.org www.socialscienceinaction.org SSHAP newsletter

Suggested citation: Butler, N, Karam, S, Gillespie, A, Bhatnagar, A Aliyev, E. (2022) Key Considerations for Integrating COVID-19 Vaccination Services: Insights from Iraq and Syria for the MENA Region. Social Science in Humanitarian Action (SSHAP) DOI: 10.19088/SSHAP.2022.034

Published September 2022

© Institute of Development Studies 2022

This is an Open Access paper distributed under the terms of the Creative Commons Attribution 4.0 International licence (CC BY), which permits unrestricted use, distribution, and reproduction in any medium, provided the original authors and source are credited and any modifications or adaptations are indicated. http://creativecommons.org/licenses/by/4.0/legalcode

REFERENCES

1. United Nations. (2022, April 11). COVID-19 vaccine access in conflict areas remains critical. *UN News*. https://news.un.org/en/story/2022/04/1116032
2. UNICEF. (n.d.). *How to improve primary healthcare to prepare for future pandemics*. Retrieved 19 July 2022, from https://www.unicef.org/stories/how-to-improve-primary-healthcare-to-prepare-for-pandemics
3. GAVI. (2022, June 24). Gavi board responds to an uncertain world: Fragile and conflict settings, future pandemics and the ongoing fight against COVID-19. *Reliefweb*. https://reliefweb.int/report/world/gavi-board-responds-uncertain-world-fragile-and-conflict-settings-future-pandemics-and-ongoing-fight-against-covid-19
4. USAID & MOMENTUM. (2021, April 27). *Maintaining Focus on Routine Immunization through COVID-19 Vaccination*. https://usaidmomentum.org/wp-content/uploads/2021/05/WIW-Webinar-slide-deck-FINAL-508.pdf
5. WHO, World Bank, GAVI, IMF, WTO, & UNICEF. (2022). *G20 Indonesia: Accelerating COVID-19 Vaccine Deployment*.
6. WHO. (2022). *Country COVID-19 Intra-Action Review (IAR) Report May 2022*. https://reliefweb.int/report/south-sudan/country-covid-19-intra-action-review-iar-report-may-2022
7. Hilal, N., Shaya, R., Hamadeh, R., Antonio, C., & El-Jardali, F. (2021). *Integrating COVID-19 Vaccination into the Primary Health Care Network in Lebanon*. Knowledge to Policy Centre, American University of Beirut, Republic of Lebanon Ministry of Public Health. https://www.aub.edu.lb/k2p/Documents/Integrating%20COVID-19%20Vaccination%20into%20the%20Primary%20Health%20Care%20Network%20in%20Lebanon_Full%20Version_reduced.pdf
8. Afolabi, A. A., & Ilesanmi, O. S. (2021). Dealing with vaccine hesitancy in Africa: The prospective COVID-19 vaccine context. *The Pan African Medical Journal*, *38*, 3. https://doi.org/10.11604/pamj.2021.38.3.27401
9. UNICEF. (2022, April 13). *We must take the rapid action needed to accelerate vaccination.* https://reliefweb.int/report/world/we-must-take-rapid-action-needed-accelerate-vaccination
10. Haldane, V., Jung, A.-S., Foo, C. D., Shrestha, P., Urdaneta, E., Turk, E., Gaviria, J. I., Boadas, J., Buse, K., Miranda, J. J., Strathdee, S. A., Barratt, A., Kazatchkine, M., McKee, M., & Legido-Quigley, H. (2022). Integrating HIV and substance misuse services: A person-centred approach grounded in human rights. *The Lancet Psychiatry*, *0*(0). https://doi.org/10.1016/S2215-0366(22)00159-6
11. Butler, N., Tulloch, O., & Karam, S. (2021). *Norms, beliefs, & practices relevant to the prevention of COVID-19 in the Middle East & North Africa: A literature analysis*. UNICEF Middle East and North Africa Region Office. https://www.unicef.org/mena/media/10821/file/UNICEF%20-%20a%20literature%20analysis%20FINAL.pdf.pdf
12. Petit, V. (2019). *The Behavioural Drivers Model*. UNICEF MENARO. https://www.unicef.org/mena/reports/behavioural-drivers-model
13. WHO & UNICEF. (2022). *Considerations for integrating COVID-19 vaccination into immunization programmes and primary health care for 2022 and beyond (Draft)*. WHO and UNICEF.
14. WHO EMRO. (2022, July 27). *Personal communication* [Personal communication].
15. UNHCR. (2022, June 16). *Middle East and North Africa*. Global Focus. http://reporting.unhcr.org/mena
16. UNICEF Egypt. (2021, October 24). *EU and UNICEF improve access to COVID-19 vaccination and education for refugees and migrants in Egypt*. https://www.unicef.org/egypt/press-releases/eu-and-unicef-improve-access-covid-19-vaccination-and-education-refugees-and
17. WHO EMRO. (2022, September 2). *Personal communication* [Personal communication].
18. Shibani, M., Alzabibi, M. A., Mouhandes, A. E.-F., Alsuliman, T., Mouki, A., Ismail, H., Alhayk, S., Rmman, A. A., Mansour, M., Marrawi, M., Alhalabi, N., Habib, M. B., Albuni, M. K., Al-Moujahed, A., Sawaf, B., Zahrawi, H. W., Bakdounes, A. M. tawfik, Alhouri, A. N., Abdulal, N. Z., … Data Collection Group. (2021). COVID-19 vaccination acceptance among Syrian population: A nationwide cross-sectional study. *BMC Public Health*, *21*(1), 2117. https://doi.org/10.1186/s12889-021-12186-6
19. UNICEF MENARO. (2022, July 13). *Personal communication* [Personal communication].
20. Al-Mossawi, F. (2022, June 21). *Best practices on COVID-19 vaccination and strategies with Intensification of Integrated Immunuization Services (IIIS)*.
21. Rahi, A., Hipgrave, D., Al-Mossawi, F., & Kadhim, K. (2022, May 25). *Update on Routine and COVID-19 Immunization in Iraq*.
22. UNICEF Iraq CO. (2022, September 4). *Personal communication* [Personal communication].
23. UNICEF & Stars Orbit. (2021). *Study to understand knowledge, attitudes, belief, behavior (KABP) and practices of communities towards COVID-19 vaccination*.
24. Stars Orbit. (2021). *Study to understand knowledge, attitudes, belief, behaviour and practices (KABP) of communities towards COVID-19 vaccination and education including out of school youth and children, girls' access to education and transition to secondary school and related challenges.*
25. EMPHNET. (2020). *Countries' Strategies to Maintain Immunization Achievements During the Pandemic while Adapting to Post Pandemic*. The Eastern Mediterranean Public Health Network. file:///Users/nadiabutler/Downloads/Webinar%20Brief,%20Countries%20Strategies%20to%20Maintain%20Immunization,%20Polio%20and%20Routine%20Immunization,%20July%202020%20(1).pdf
26. Health Cluster. (2022). *COVID-19 vaccination in humanitarian settings report 14*.
27. UNICEF. (2021). *Erbil Programme Progress Report*. UNICEF.
28. UNICEF. (2020). *The Country Programme Action Plan (CPAP) 2020—2024*. UNICEF.
29. UNICEF. (2021). *Iraq Country Office Humanitarian Situation Report No. 2*. UNICEF.
30. UNICEF. (2019). *Country programme document: Iraq*. United Nations Economic and Social Council.
31. UNICEF. (2021). *Country Office Humanitarian Situation Report No. 1*. UNICEF.
32. UNICEF. (2022). *Iraq Q1 Sitrep: Summary Analysis of Programme Response: Communications for Development (C4D), Risk Communication and Community Engagement (RCCE)*. UNICEF.
33. UNICEF. (2021). *Country Office Humanitarian Situation Report No. 1 (Syrian Refugees)*. UNICEF.
34. Central Statistical Organization Iraq, Kurdistan Region Statistics Office, Iraqi Ministry of Health, & UNICEF. (2018). *2018 Multiple Indicator Cluster Survey (MICS6) Briefing*.
35. Iraqi Ministry of Health, UNICEF, UNHCR, UNFPA Syria, UNDP, & UNRWA. (2022). *Risk Communication and Community Engagement: The need of the hour*. https://reliefweb.int/report/syrian-arab-republic/risk-communication-and-community-engagement-need-hour
36. Ministry of Health. (2021). *Community Engagement and Demand Generation Assessment for COVAX roll-out*. https://reliefweb.int/report/syrian-arab-republic/community-engagement-and-demand-generation-assessment-covax-roll-out
37. UNICEF. (n.d.). *Integrated Community Engagement Project in Deir ez Zor ICE*[3]. UNICEF.
38. WHO. (2016). *Guide to introducing HPV vaccine into national immunization programmes*. World Health Organization. https://apps.who.int/iris/handle/10665/253123
39. WHO. (2018). *Working together: An integration resource guide for immunization services throughout the life course*. WHO. https://apps.who.int/iris/handle/10665/276546
40. Morgan, C., Giattas, M. R., Holroyd, T., Pfitzer, A., Engel, D., Sidibe, A., Holloway, M., Bloem, P., Fields, R., Shimp, L., & Kumar, S. (2022). Integration of other services with human papillomavirus vaccination; lessons from earlier in the life course highlight the need for new policy and implementation evidence. *Vaccine*, *40*, A94–A99. https://doi.org/10.1016/j.vaccine.2021.12.066
41. WHO. (2020). *Immunization Agenda 2030: A Global Strategy to Leave No One Behind*. https://www.who.int/publications/m/item/immunization-agenda-2030-a-global-strategy-to-leave-no-one-behind
42. Wallace, A. S., Ryman, T. K., & Dietz, V. (2012). Experiences integrating delivery of maternal and child health services with childhood immunization programs: Systematic review update. *The Journal of Infectious Diseases*, *205 Suppl 1*, S6-19. https://doi.org/10.1093/infdis/jir778

43. WHO. (2022). *Role of the polio network in COVID-19 vaccine delivery and essential immunization: Lessons learned for successful transition*. World Health Organization. https://apps.who.int/iris/handle/10665/355292
44. WHO. (2022, March 28). Integrated Public Health Teams: Helping Sudan move forward on polio transition. *World Health Organisation*. https://www.who.int/news-room/feature-stories/detail/integrated-public-health-teams-helping-sudan-move-forward-on-polio-transition
45. Breakthrough RESEARCH. (2019). *Advancing integrated social and behaviour change programming*. Population Council. https://www.prb.org/wp-content/uploads/2020/03/tulonge-afya-rla-integrated-sbc-1-l3.pdf
46. Cluver, L. D., Sherr, L., Toska, E., Zhou, S., Mellins, C.-A., Omigbodun, O., Li, X., Bojo, S., Thurman, T., Ameyan, W., Desmond, C., Willis, N., Laurenzi, C., Nombewu, A., Tomlinson, M., & Myeketsi, N. (2022). From surviving to thriving: Integrating mental health care into HIV, community, and family services for adolescents living with HIV. *The Lancet Child & Adolescent Health*, *0*(0). https://doi.org/10.1016/S2352-4642(22)00101-8
47. Lunsford, S. S., Fatta, K., Stover, K. E., & Shrestha, R. (2015). Supporting close-to-community providers through a community health system approach: Case examples from Ethiopia and Tanzania. *Human Resources for Health*, *13*(1), 12. https://doi.org/10.1186/s12960-015-0006-6
48. Cluver, L. D., Orkin, F. M., Campeau, L., Toska, E., Webb, D., Carlqvist, A., & Sherr, L. (2019). Improving lives by accelerating progress towards the UN Sustainable Development Goals for adolescents living with HIV: A prospective cohort study. *The Lancet. Child & Adolescent Health*, *3*(4), 245–254. https://doi.org/10.1016/S2352-4642(19)30033-1
49. Sherr, L., Cluver, L., Desmond, C., Toska, E., Aber, L., Dhaliwal, M., Webb, D., & Dugbazah, J. (2020). A new vehicle to accelerate the UN Sustainable Development Goals. *The Lancet Global Health*, *8*(5), e637–e638. https://doi.org/10.1016/S2214-109X(20)30103-0
50. Watson-Jones, D., Lees, S., Mwanga, J., Neke, N., Changalucha, J., Broutet, N., Maduhu, I., Kapiga, S., Chandra-Mouli, V., Bloem, P., & Ross, D. A. (2016). Feasibility and acceptability of delivering adolescent health interventions alongside HPV vaccination in Tanzania. *Health Policy and Planning*, *31*(6), 691–699. https://doi.org/10.1093/heapol/czv119
51. Aiash, H., Khodor, M., Shah, J., Ghozy, S., Sheble, A., Hassan, A., Abbadi, S., Sabry, K., Zeid, A. A., & Abdelbary, A. (2021). Integrated multidisciplinary post-COVID-19 care in Egypt. *The Lancet. Global Health*, *9*(7), e908–e909. https://doi.org/10.1016/S2214-109X(21)00206-0
52. Phillips, D. E., Bhutta, Z. A., Binagwaho, A., Boerma, T., Freeman, M. C., Hirschhorn, L. R., & Panjabi, R. (2020). Learning from Exemplars in Global Health: A road map for mitigating indirect effects of COVID-19 on maternal and child health. *BMJ Global Health*, *5*(7), e003430. https://doi.org/10.1136/bmjgh-2020-003430
53. Lamb, J. (2021). *Summary report: Integrating vaccine promotion into COVID-19 prevention work*. http://resources.hygienehub.info/en/articles/5374253-summary-report-integrating-vaccine-promotion-into-covid-19-prevention-work
54. Chandra-Mouli, V., Gibbs, S., Badiani, R., Quinhas, F., & Svanemyr, J. (2015). Programa Geração Biz, Mozambique: How did this adolescent health initiative grow from a pilot to a national programme, and what did it achieve? *Reproductive Health*, *12*(1), 12. https://doi.org/10.1186/1742-4755-12-12