

Situation and Programmatic Monitoring in the context of COVID-19



System-level thinking for multisectoral programming: UNICEF Jordan's experience in COVID-19

unicef 
for every child

Hanan, 11 and a half years old, lives in Za'atari refugee camp. In March 2020, Hanan's school closed due to COVID-19 restrictions. *"It was the most difficult time of my life. I wasn't sure I would be able to finish my grade."*

Hanan loves attending her local UNICEF Makani Center after school. *"It's similar to school in that I learn subjects, but we also get to play games. I want to become a lawyer when I grow up so I can defend the innocent."*



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Abstract

When Makani Centers ("My Space" in Arabic) had to shift from face-to-face to remote service provision via digital platforms during COVID-19, the Bayanati management information system (MIS) behind it needed to adapt as well. The Bayanati system was rapidly modified to reflect both remote and in-person service provision modalities. Remote programmatic field monitoring was also introduced, involving data validation through calls and virtual visits over Zoom.

As a result of the concerted efforts from the community, from Makani implementing partners, the Government of Jordan and UNICEF, Makani Centers continued service with minimal interruption. Rapid adaptation was possible due to UNICEF's investment in the Bayanati MIS, central database, and dedicated Bayanati administration team as well as clear procedures to address data quality, ethics and protection. Previous investments in localized data use capacity through data champions and transparent adaptations to monitoring procedures with implementing partners contributed to success. UNICEF's team, structure and processes facilitated adaptive management and administration of the Bayanati system which contributed to agility, evolution and improved responses over time.

Lessons learned for consideration

Invest in a skilled Information Management team. The Bayanati Administration Team were full-time employees who had the skills to translate programmatic needs to system requirements. They could pilot and update software, provide technical assistance in applying the updated software, and generate tailored reports and queries to data users.

Create ways of working that bring Programme, Monitoring & Evaluation and Information Communication Technology (ICT) together around data. The Bayanati Administration Team regularly participated in Makani programme management meetings. Regular collaboration enabled quick identification of required programming decisions, needed data, and ICT systems to deliver on data needs.

Adopt a gradual improvement approach and build short-term actions with the long-term vision in mind. The Bayanati Administration Team found a way to use existing systems and communication channels while building towards adapted systems which resulted in continuous programmatic monitoring data generation and use. Standard data elements were identified, and field staff were able to use available and accessible data channels to communicate the data elements. As an interim measure, additional data entry by field staff was required and resolved through adaptation to the Bayanati system. The system was constantly improved through incorporation of findings of what worked well and less well from partner feedback, data verification and data audit exercises.

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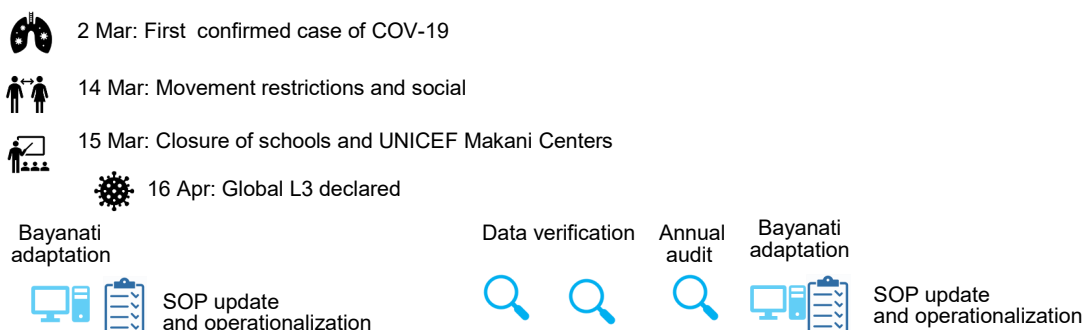
Invest in staff and partners by developing a community of practice. UNICEF invested in the capacity of UNICEF staff and implementing partners to develop a community of data savvy people who could collect, process, analyze and provide quality assurance to the data. Each Makani Center had at least one “Data Champion” and technical support available from the Bayanati and field monitoring teams.

Invest in a central database that can support multiple sectors. The Bayanati database could be quickly sampled for assessments and research to understand the impact of COVID-19 on the population because consent to participate in studies was systematically sought from participants at registration. The structure of the database supported outreach and referrals to relevant programming

within UNICEF and across agencies. Linkages with secondary data sources such as the Education Management Information System (EMIS) and UNHCR registration contributed to an enhanced understanding of vulnerability and programme coverage. Analysis and visualization tools helped identify patterns and trends at geographic, programmatic, community and individual levels.

Data protection and data quality procedures need to be established at the onset and updated over time. UNICEF Jordan put in place a data protection policy in consultation with headquarters, even before the corporate data protection policy was released in 2020. Investments in assessing, auditing and enhancing data quality also gave external credibility to Bayanati data. UNICEF has invested in data protection procedures that allow the use of data beyond facilitating the work of Makani through informed consent.

Timeline



Makani Centers have provided an integrated package of services to marginalized and vulnerable children and adolescents (aged 0-18 years) and their caregivers in Jordan since 2015 (Box 1). Services include early childhood development, community-based child protection, and adolescent and youth participation activities including life skills and innovation labs. Using a network of community-based Centers and community outreach across Jordan, Makani services also identify and refer children to appropriate specialized support.

In 2016, UNICEF and implementing partners began using Bayanati (“My Data” in Arabic), a web-based monitoring and data management system to track children and indi-

Box 1: Groups targeted for Makani services include:

- Unaccompanied and separated children
- Children under profound stress
- Children affected by armed conflict
- Children belonging to marginalized minority groups
- Adolescents at risk of exploitation by extremist groups
- Children engaged in labour
- Out-of-school children
- Children with poor school performance
- Adolescent girls, particularly girls at risk of early marriage or already married
- Children with disabilities
- Parents and families of vulnerable children

viduals benefiting from UNICEF programmes in real time (e.g. daily updates to data). Bayanati managed data for Makani and for Hajati (“My Needs” in Arabic), an integrated social protection programme for children which combined education cash transfers and supportive services. Connection at the level of data management made referrals and outreach between the Hajati and Makani programmes easier. Data use terms were clearly defined in programme cooperation agreements with partners.

Around 400,000 children and 333,000 families benefited from Makani services since their inception. Many of these families and children faced challenges in securing an education due to poverty and the threat of early child labour and child marriage. Positive impacts included increased learning

outcomes, greater likelihood to work with others to solve community problems, and greater likelihood of financial literacy and leadership in older girls who attended¹.

In 2020, 141 Makani Centers operated across Jordan through six national partners². Makani Center locations were data-driven and established in areas with a high density of vulnerable households which has been confirmed through other agency assessments. The data-driven approach has supported partnership with the National Aid Fund and its provision of cash assistance to host communities, refugee camps and informal tented settlements.

On 2 March 2020, the Ministry of Health (MOH) confirmed the first case of COVID-19 in Jordan. The Government of Jordan took swift measures to control the spread of COVID-19, including a full national level lockdown in mid-March. Over 50,000 children using in-center services faced the closed doors of the Makani Centers. Urgent action was required to adapt service delivery and management.

Pivot to remote Makani services supported by staff embedded in the community

The closure of the Makani Centers required a switch to remote service provision via simple and familiar technologies. The rapid transition of services was supported by the presence of frontline staff who lived in the camps and host communities. Embedded in the community, Makani facilitators were able to set up WhatsApp groups, keep contact with the children, and monitor their progress thanks to the contact information in the Bayanati system. Services initially focused on communication of COVID-19 related messages, distribution of hygiene kits, provision of learning support via WhatsApp and phone, and messaging caregivers on how to support their children during lockdown. To ensure broad access,

Box 2: Functions of the Bayanati data

The Bayanati system has an interactive dashboard for management, and the capacity to build customized reports. Participants’ data is entered into the Bayanati system at the Makani Centers and used to:

- **Register participants**
- **Support individual case management** by capturing household information, individual needs and services received.
- **Monitor programme coverage** by identifying characteristics and locations of those reached by each service.
- **Monitor programme performance** at multiple levels, from the Makani Center, the implementing partner and the overall programme.
- **Generate consistent programme reporting** across platforms, for example agency specific donor reports as well as contributions to ActivityInfo which tracks results of the Jordan Response Plan.
- **Facilitate daily work in Makani Centers** including overall center management, individual progress management and class scheduling
- **Support research and evidence generation.** Data of Bayanati was used to support rapid assessments, impact evaluations and other research.

¹ Presler-Marshall, E., Jones, N., Baird, S. and Malachoswka, A. (2019) [Adolescents in Jordan: psychosocial well-being](#). Policy Note. London: Gender and Adolescence: Global Evidence.

² The Ministry of Social Development (MOSD), the Islamic Center Charity Society (ICCS), Yarmouk Ba’qaa Club (YBC), the East Amman Charity (EAC), Mateen, and Jordan River Foundation (JRF).

several tools including Google Forms and social media platforms were also used.

Rapid adaptation of the Bayanati system to support remote delivery of Makani services

The Bayanati system also needed adaptation to support the remote function of Makani Centers (Box 2). The Bayanati Administration Team, under the Social Protection Section, provided overall management of the data system. This included:

- managing a **third-party IT company** (for software development and system maintenance)
- coordinating with the **UNICEF Information Communication Technology (ICT) system** (for administration and support), as well as **programme teams** (for programming and monitoring data requirements)
- coordinating with **implementing partners** who provided services in host communities and informal tented settlements and with **UNICEF teams** who undertook direct implementation in refugee settings

Thanks to an agile software development approach, the Bayanati Administration Team regularly participated in Makani management meetings. As the Makani programme was adapted, information requirements were identified in these meetings and the Bayanati team collaborated with the UNICEF ICT and third-party IT company to develop the IT solutions. Some modifications introduced included:

- Creation of a new **“remote” service type** in accordance with the new modality of service delivery.
- **At the individual level:** ability to collect additional data to allow for continuous contact with beneficiaries and to support the teams in re-enrolling children who had dropped out during remote learning or needed further learning support (e.g. multiple contact numbers, whatsapp number, address, and school details).
- **At the household level:** ability to collect contact details for the household and additional details on the household situation (e.g. sex, age and working status of the head of household, receipt of additional assistance

from UNICEF, the UN or the government).

- **At the center level:** added categories in the service and class schedule to allow tracking of attendance of blended services and daily recording of whether they were given remotely or face-to-face.
- **At data management level:** ability to flag if child is enrolled in services which take place at the same time. Scripts, auto reports, and dashboards were updated to reflect the data modifications and have them accessible by field staff at all times.
- **At the system level:** activation of offline attendance module to serve COVID-19 contact tracing in schools in refugee camps where data was migrated to the central database once connected to the internet. Doubling of server capacity to enable smooth system performance with more than double the users.

The Bayanati Administration Team also updated the standard operating procedure (SOP) for the adapted software and provided daily technical assistance to support their uptake. Guidance notes were also developed to explain the modifications, including the adjusted process of data collection and verification, so that all users were equipped with the information needed to use the modified Bayanati system.

The Bayanati system already had a structure of role-based access (Figure 1) and skilled users across UNICEF and implementing partners who could both enter and use the data. As a result, Makani Centers could operate in both remote and face-to-face modalities as needed, supported by tools to monitor access to services, identify gaps and address them quickly.

Addressing data quality with remote service

The Bayanati Administration Team also took action to address the potential for the deterioration in data quality with remote operations.

- Q First, the team identified potential gaps and bottlenecks in data quality and ensured that they were addressed in the SOPs and guidance notes for remote data collection.

Figure 1: Role-based access to Bayanati

UNICEF System Administrator	<ul style="list-style-type: none"> • OVERALLADMINISTRATION • Manage user access, centre access, database • Quality control
UNICEF programming monitoring	<ul style="list-style-type: none"> • DASHBOARD VIEW • Performance monitoring • Reporting
Implementing Partner Access	<ul style="list-style-type: none"> • MONITORING AND QUALITY CONTROL • Data quality assurance • Performance monitoring & reporting
Community Based Organization	<ul style="list-style-type: none"> • REGISTRATION • CLASS & ACTIVITY TEACKING • REFERRALTRACKING



Second, a **data verification exercise was undertaken in August and September**. UNICEF's deployable Field Monitoring team of seven people conducted data verification by phone and compared Bayanati data with parental responses. Child age, education and access to service data was found to be accurate (93-98%). Data related to disability was found to be less accurate (71%) due to the difficulty of capturing disability related data by phone. Remote contact also had its challenges. It was common to have a functional WhatsApp number but disconnected phone network number. Insufficient access to internet and devices was also reported, undermining participation in remote services.



Third, the **annual data quality audit was undertaken in October 2020** and served as a second stage of data verification. The UNICEF Field Monitoring Team undertook in-person visits to a number of Makani Centers and conducted interviews with frontline staff. They triangulated data from documents in the Centers with data from the Bayanati and evidence from WhatsApp and google docs to identify bottlenecks in service delivery. The audit aimed to reach parents who had not been reached in the earlier verification exercises to confirm if their children

were receiving remote services. The audit revealed additional challenges related to insufficient internet access and devices. The findings supported UNICEF's distribution of tablets and internet bundles to most affected families.

Adapted programmatic monitoring

Prior to COVID-19, the Field Monitoring Team carried out spot checks to directly observe activities and compare with how they were recorded in Bayanati. Attendance of a sample of participants was included, to confirm their participation and to identify challenges if they were not in class. Through direct interaction with programme participants and frontline workers, the Field Monitoring Team could identify what was working well or less well from the point of view of those accessing services. These findings were shared with programme managers at the Makani Center, partner agencies, and UNICEF staff as needed.

Remote monitoring was introduced when in-person monitoring was not possible. Activities included:

- **Two satisfaction surveys by phone** (May and August) on quality of service, child engagement levels, and challenges in benefiting from services.
- **Phone, Zoom or Teams calls** with implementing partners and frontline staff to discuss program progress, share new initiatives, provide feedback and address key issues. Once the lockdown was relaxed in May, the deployable field teams returned to in-person field monitoring.
- **Activity monitoring through participation in WhatsApp groups** where programme coordinators would be added to randomly selected WhatsApp class group for few days to monitor the content, method of service delivery, and engagement.

Clear monitoring protocols and open communication around their adaptation strengthened the working relationship between UNICEF and its partners. 15 programmatic visits were conducted based on the HACT requirement and recorded in eTools which are also linked to the Bayanati. Implementing partners generate the data from Bayanati and input the values for each indicator.

Results

The adapted Bayanati system played an essential role in the provision of flexible services through the Makani Centers, as well as other programmes and overall working partnerships in Jordan.

- **Strengthened Government and UN partnership and coordination.** Data and evidence from Bayanati was used to create linkages between the Government safety net and UNICEF programs. The data and data skills of the team supported joint implementation of programming, including joint informal tented settlement response during COVID-19, and joint cash assistance during COVID-19 between UNICEF and UNHCR.
- **Programming decisions by UNICEF and other agencies,** including targeting of winterization efforts, eligibility for internet support and to receive tables, and expanding coverage of the National Aid Fund to vulnerable groups were based on data from Bayanati.
- **Multiple assessments² used the Bayanati information as the sampling frame³** which might not have been possible in such a timely manner if the Bayanati system were not in place.
- **Programmatic referral pathways between services also expanded** from ones initially based on the Protection, Health and GBV referral pathway (UN protection sector) to others based on Makani that could then link to services in education (formal schools, double shift schools, non-formal schools providing accultured learning, inclusive schools) and referrals to advanced computer trainings, vocational trainings, entrepreneurship and other employment opportunities through partnerships with specific service providers.

The transparent update of standing operating procedures for remote operations of Makani enhanced data quality through building trust. And overall, partnerships were strengthened with local NGOs, the Government of Jordan, other UN agencies and research institutions.

As a result of the concerted efforts from the community, from Makani implementing partners, the Government of Jordan and UNICEF, Makani Centers continued service with minimal interruption. In 2020, Makani Centers reached over 150,000 individuals, about 80% of the number of individuals reached in 2019. All Makani Centers were in-person with appropriate COVID-19 protocols by September 2020 and have been able to shift from in-person to remote services as needed as the pandemic progressed. Makani Centers will now be able to switch between in-person and remote programming flexibly without interruption and with adequate monitoring.

What did it take?

The Bayanati system required four builds over a period of six months to support the response. This required:

- **A dedicated team** of 6 information management officers, responsible for a developing and administering Bayanati. This included developing business requirements, developing tools and conducting analyses (including business intelligence and geographical analysis), providing technical support to partners and frontline staff, and supporting data quality and security.
- **In-house technical skills** within the Bayanati Administration Team, such as software development, database and query building, technical support and capacity building, data protection and quality assurance protocol development, data analysis and visualization skills.
- **Cross-sectoral coordination mechanisms** with clear roles and accountabilities between management, programme, and IT.
- **Inputs from Legal and Data Protection** colleagues in UNICEF Headquarters to develop data protection and data sharing protocols.
- **A roles-based access to Bayanati** empowered implementing partners to contribute and use the data for

³ For example Małachowska, A., Al Abbadi, T., Al Amaireh, W., Banioweda, K., Al Heiwidi, S. and Jones, N. (2020) 'Listening to young people's voices under covid-19. Exploring the impacts of covid-19 on adolescents in Jordan's refugee camps and host communities.' Policy brief. London: Gender and Adolescence: Global Evidence.

⁴ A sampling frame is defined as a list of people forming a population from which a sample is taken.

programmatic course correction themselves, without having to receive information through requests for analysis by UNICEF.

- **An LTA with a software company with a flexible contract based on a daily rate** for tasks. This contract structure meant that unforeseen fixes could be made as needed quickly.
- An estimated 50,000-70,000 **USD annually (hosting, maintenance, development contracts).**
- A **deployable Field Monitoring Team.**

Enabling factors

- **The structure in the office allowed early and agile identification of needs that were linked to systems to respond.** The Bayanati Team was involved in Makani meetings, and two-way communication was encouraged. As a result, programming requirements were identified and translated quickly into IT solutions.
- **A management team promoting usage of data and evidence for decision making** that was willing to invest in technological solutions to support effective and efficient program design and implementation.

Challenges

- The Bayanati system is agile, and **requires rigorous testing and quality checks to ensure continuity of key functions** as it adapts to evolving programme needs.
- **The quality of remote data collection can be reduced by the digital divide** where respondents may not have consistent phone number, access to devices and access to internet. Action is needed to mitigate these impacts. A dedicated data quality officer helped mitigate impact but continuously checking data and following up with implementing partners and front line staff.

Next steps

UNICEF will continue to improve Bayanati, building on foundational elements such as strengthening data protection and supporting localized data capacity. Linkages are being explored with other systems that support blended and interactive remote services such as Microsoft teams (for in-

teractive classes), and Survey123 (survey module for quick surveys and student tests). A document management module is being developed to enable frontline staff to upload and manage documents which will minimize error, minimize paper consumption, and support remote audits. UNICEF Jordan is expanding the best practices of information management to serve the whole office through the initiation of a cross-sectional Information Management Working Group.

For more information, including further documentation on tools described, please contact:

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