maniQC
Quality of Care

Results brief

Using quality of institutional care (QuIC) assessments to strengthen emergency obstetric and newborn care services

Background

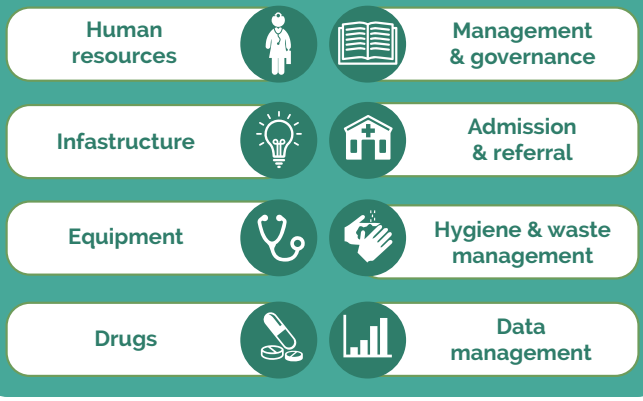
In Kenya, around 5,000 maternal deaths, nearly 29,000 newborn deaths and over 31,000 stillbirths occur each year because of the poor quality of health care[1]. Complications leading to maternal and perinatal mortality and morbidity can arise unexpectedly but a set of key medical interventions or signal functions, such as blood transfusion or administration of intravenous antibiotics, can treat emergency complications and prevent deaths. Experts also highlight the importance of health systems to measure and use data to learn and improve the quality of care. Health facilities must therefore be always equipped with skilled staff, equipment, and medicines to manage complications and provide life-saving signal functions.

Quality of institutional care

Quality of institutional care (QuIC) is an App-based approach that measures health facility readiness to perform emergency obstetric and newborn care (EmONC) life-saving interventions or signal functions under eight assessment areas (see figure 1). It identifies quality gaps in health facilities so that they can take action to address these and allocate resources to improve their quality of care.

The mobile app collects data on android devices, such as smartphones, which are uploaded to a web-based server. Results from the QuIC assessments are downloaded as an excel file and mapped to automated, easy-to-read excel scorecards. These scorecards enable decision-makers to identify gaps and make quick, informed actions to allocate resources to improve the quality of care.

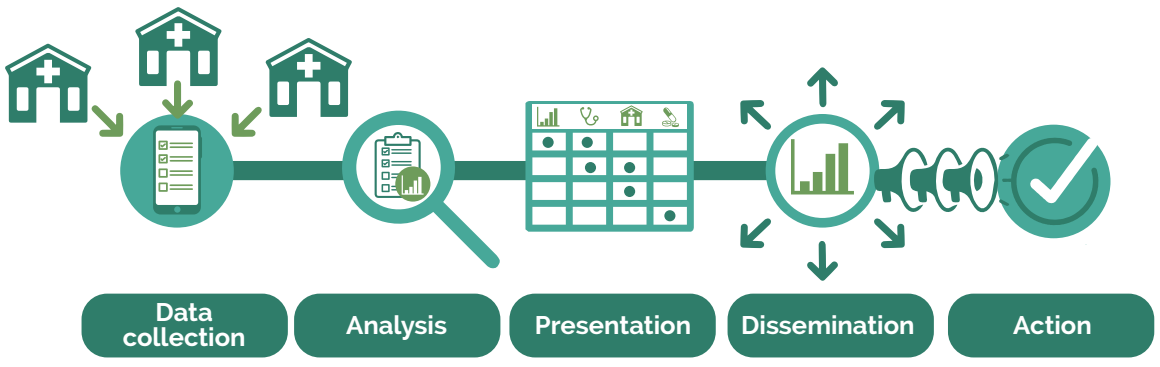
Figure 1: Domains measured during QuIC assessments:



The QuIC approach

Options' Maternal and Newborn Improvement for Quality of Care (MANI-QC) project built the capacity of the four counties (Kericho, Nandi, Kwale and Mombasa) to lead these readiness assessments by nominating sub-county health managers to become QuIC Champions and training them to gather, analyse and present findings through scorecards.

In dissemination meetings with other managers and health facility representatives, the scorecards are used to stimulate discussion about how to address gaps in the facility's quality of care. Action plans are jointly developed with and followed up by QuIC Champions.



This brief shares the results from QuIC assessments and interviews with key stakeholders.

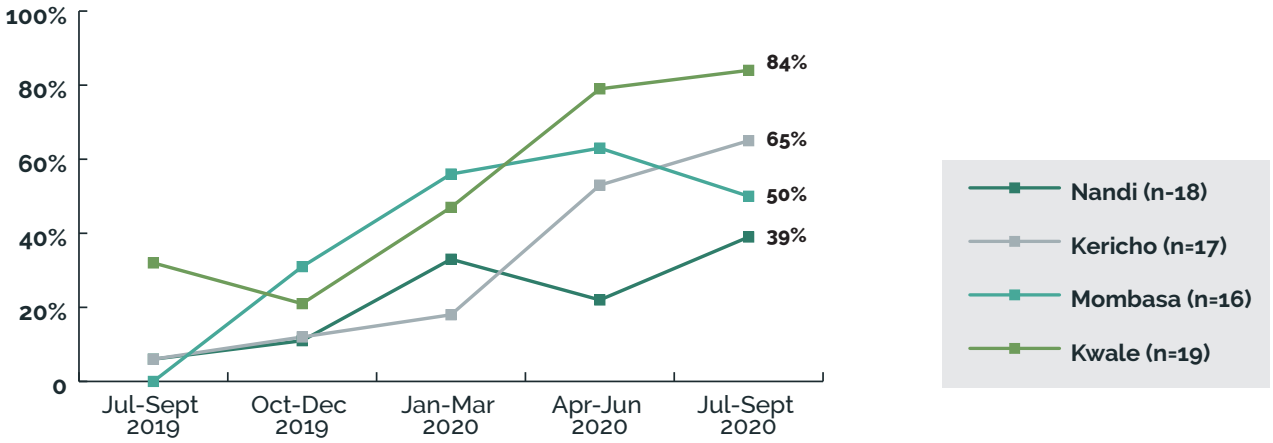
Results

Since the first QuIC assessment we engaged the County teams in October 2019, there has been a consistent increase in the number of facilities that provide all emergency life-saving signal functions relevant to the level of care, eg. newborn resuscitation or cesarean sections. (see fig. 3).

The most significant improvements were partly attributed to frequent and regular quarterly QuIC assessments, which result in opportunities for on-the-job supportive supervision and the development of action plans that address the gaps identified (Quote 1).

MANI-QC QuIC facility assessment support in numbers	
4	County health management teams supported to conduct QuIC facility assessments
22	Sub-county health management teams supported to conduct QuIC facility assessments
70	Health facilities assessed each quarter
52	Health professionals trained to analyse and disseminate QuIC assessment findings
5	Rounds of assessment conducted

Fig.3: Proportion of health facilities with capacity to perform EmONC signal functions



Quote 1: "From the regular assessment we were doing, they enabled us to highlight the gaps in the facility like lack of skills, lack of equipment and instruments… and find a way of being able to teach them and address the gaps." **(County Health Manager, County A)**

Other improvements in quality that the stakeholders attributed to QuIC include:

Greater availability of functional life-saving equipment and medicines: At the start of the project many key pieces of equipment were either not available, functional, or easily accessible. The QuIC approach has resulted in rearranging clinical areas so key equipment and drugs are close at hand during emergencies. (Quote 2)

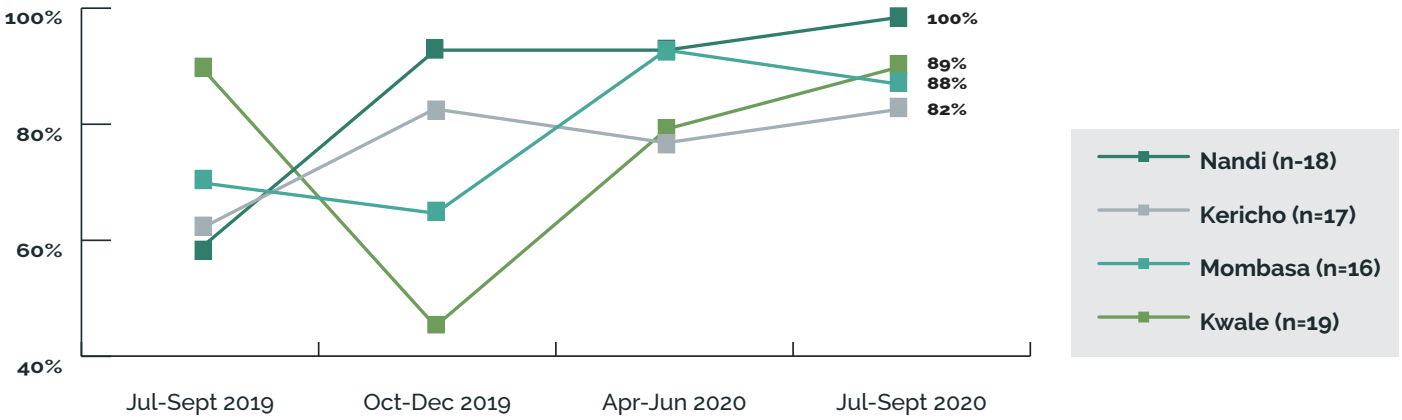
An increase in skilled midwifery providers: Competence among health workers has improved because findings from QuIC assessments have informed decision-makers to respond to the human resource needs, such as knowledge and skills gaps as well as under-staffing. Respondents reported better distribution and sharing of staff trained in emergency obstetric and newborn care across shifts and facilities. In complement, building skills through MANI-QC's EmONC mentorship programme[2] has contributed to improving competence and confidence in performing obstetric emergency lifesaving services. This is reflected as a rise of the proportion of facilities that can perform life-saving functions (see in fig 3, above). Fewer facilities reported gaps in their human resources for health in quarter 3 of 2020 (7% on average, compared to 42% in the same quarter in 2019).

Quote 2: "[QuIC] helped us reduce mortalities of newborns. We have the warmers now, so there are no risks of hypothermia…we can take care of the premature babies. … it has helped us in resuscitation because we have modified a resuscitator. We also received an Ambu bag, face masks and also we have received an oxygen cylinder, which has helped us a lot in reducing severe conditions." **(Facility In-Charge, County D)**

Improved documentation of obstetric cases: The QuIC approach also assesses the accuracy and timeliness in the documentation and reporting clinical progress for women in labour. Data from the QuIC assessments show how deliveries are better monitored through partographs, particularly in Kericho county (see fig. 4), and respondents reported that signs of risks or complications are more promptly identified and managed. (see quote 3)

Quote 3: "When you look at the issue of the partograph many of our staff even our medical officers could not monitor a mother very well using a partograph. From the time QUIC came in, we have been able to go the extra mile. The assessors show you some of the ways you can interpret and use to mitigate some of these emergencies." **(Facility In-Charge, County A)**

Fig.4: % of facilities assessed with partographs completed correctly



More effective referral systems: QuIC assessments have prompted staff to improve referral documentation (quote 4). QuIC assessment results from the last assessment period (July to September 2020) show a 28% improvement from 66% to 94% in the facilities that reported having up-to-date referral documentation compared to the same period in 2019,

An improvement in facility infrastructure: Gaps in facility infrastructure identified through QuIC led to the construction of, for example, hot water showers, and adjustments to provide slanting floors to improve their cleanliness and waste drainage (quote 5). In total, there is a 20% increase in the number of facilities that report availability of hot water for bathing and drinks for mothers since the baseline.

Women are more satisfied with facilities that are better equipped: Respondents reported that QuIC contributed to stronger, better organised and equipped maternity services. They also reported that this boosted staff morale and made them feel proud of their facilities (quote 6). So much so that in one sub-county, health managers reported establishing maternity open days to show their facilities to clients (quote 7).

Quote 4: "initially, people were just referring maybe by word of mouth but currently, at least we can be able to see the referral forms of someone being referred, accompanied by a staff who is qualified." **(Sub-county officer, County A)**

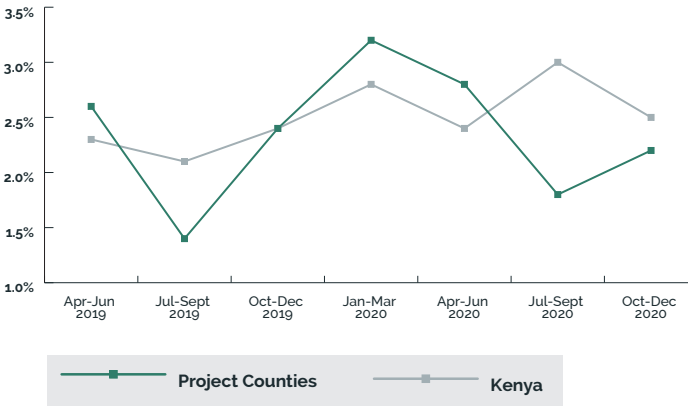
Quote 5: "We never used to have mother-friendly services, we could hear of them, but they were not being implemented on the ground. With the QUIC assessment … we were in a position to provide our mothers with hot water for bathing, hot drinks after delivery, water for drinking during labour and delivery, clean beddings during labour and after delivery. Those are some of the achievements that we did." **(Maternity In-Charge, County B)**

Quote 6: "It has also boosted the morale of the health care workers because they have been able to see they are doing something positive; they can see themselves grow every time the assessment is done and they get the feedback; at least they get to note their gaps and we walk with them in improving those gaps." **(Subcounty manager, County C)**

Quote 7: "In fact with the improved situation in our maternity, we did something called 'open maternity day' so that before pregnant women go to the maternity they are informed about all the services that are there so that they build confidence with them." **(Subcounty Manager, County A)**

These improvements in quality of care are contributed to improved health outcomes and overall **decline in the obstetric case fatality rate**, which refers to the proportion of mothers who presented at a facility with an obstetric complication and died. Comparing the performance of the four supported counties together against the national performance, fig. 5, shows a progressive decrease in the obstetric case fatality rate in 2020 (except in the last quarter shown in the figure, where a slight increase may be due to a strike among healthcare workers[3]).

Fig.5: Obstetric case facility rate



Complementarity across project interventions: The MANI-QC project implements other quality improvement approaches, such as strengthening maternal and perinatal death surveillance and response systems and, through its' EmONC mentorship programme, and provides some targeted health systems strengthening support at the county level. Stakeholders described how well these interventions complement each other (quote 8). For example, they were able to address knowledge and skills gaps that were identified using the QuIC approach through the EmONC mentorship scheme. QuIC also provided facilities and sub-county health management teams with evidence to advocate for additional resource allocation in health system strengthening forums at facility and county management levels, including through the maternal death surveillance and response (MPDSR) committees that are supported by the project. This has resulted in the recruitment of more health staff, and the procurement of drugs and equipment, such as newborn resuscitaire, ambu-bags for helping babies breathe and vacuum extractors for assisted vaginal deliveries.

Lessons

The QuIC approach enables service providers to better identify gaps in the quality of emergency obstetric and newborn care and allows health managers to develop plans to address them. Reflection and analysis are required to understand where some counties have achieved better scores than others for some domains. Achievements have been bolstered through its complementarity with other quality of care interventions and accountability mechanisms, such as by integrating QuIC findings with annual work planning processes and MPDSR systems.

Conclusion

The QuIC assessments are flexible and are a litmus test of the quality of a whole facility. It is critical to secure support from the sub-county and county health management teams and encourage ownership through key players that act as champions and leaders who use the evidence to promote sustainable improvements in quality of care.

Quote 8: "As soon as we get our QuIC results we usually have a meeting as a department like maternity and neonatal team and go through the results and then that would now be the smaller team in the unit and during our MPDSR review meeting again now that will involve the bigger team the team from casualty from lab from MCH that is when we discuss the findings again. **(Facility Manager, Country A)**

References

[1] WHO, UNICEF, UNFPA, World Bank Group & United Nations Population Division (2019) Trends in maternal mortality 2000 to 2017: estimates. UN Inter-Agency Group for Child Mortality Estimation (UN IGME) (2019) Levels and Trends in Child Mortality: Report 2019
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[2] This mentorship scheme provides opportunities for midwives (mentees) from level 2-4 facilities to be paired with mentors in mentorship sites to re-gain confidence in managing emergency cases in hospitals with large caseloads.

[3] During the period of industrial 'go-slows' or strike action in public facilities in Mombasa county, faith-based facilities saw a rise in the number of deliveries beyond their usual capacity and saw more maternal deaths due to obstetric complications.

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