MAY 2021

CAMEROON

KANGAROO MOTHER CARE (KMC) DIB

PART TWO: LESSONS FROM OUTCOMES BASED DELIVERY

Glossary

CAD	Canadian Dollars
CHW	Community Health Worker
CoE	Centre of Excellence
CPD	Continuing professional development
DEC	Data Entry Clerk
DIB	Development Impact Bond
EBF	Exclusive breastfeeding
FCAF	Financial Community of Africa Franc
FCC	Fundación Canguro Colombia
GCC	Grand Challenges Canada
IRESCO	Institut de Recherche et des Etudes de Comportements
IVA	Independent Verification Agent
KFC	Kangaroo Foundation Cameroon
KMC	Kangaroo Mother Care
LBW	Low birth weight
MoPH	Cameroon Ministry of Public Health
MoU	Memorandum of Understanding
NI	Nutrition International
NNU	Neo-natal Unit
PBF	Performance-based finance
SF	Social Finance
TBA	Traditional birth attendant
USD	United States Dollars

Introduction

Cameroon KMC DIB: key stakeholders and timeline

The Cameroon KMC DIB is a social outcomes partnership between the Cameroon Ministry of Public Health (MoPH), Global Financing Facility for Women, Children and Adolescents (GFF) at the World Bank (WB), Grand Challenges Canada (GCC), Nutrition International (NI) and the Kangaroo Foundation Cameroon (KFC). It builds on a two-year Kangaroo Mother Care (KMC) pilot in Cameroon funded by GCC and led by the Fundación Canguro in Colombia.

GCC, as the investor, provided CAD 1 million (USD 780k) of upfront capital to KFC, the lead service provider, which they used to roll out and fund the initial delivery of the programme. Service delivery targeted an improvement in neonatal health outcomes through the delivery of quality Kangaroo Mother Care (KMC) in 10 public hospitals across 5 regions of Cameroon.

MoPH and NI, as outcomes funders, committed up to USD 2,430k to pay for outcomes once they had been independently verified to have been achieved. If successful, outcomes payments from MoPH and NI will cover the remainder of programme delivery costs and the repayment of GCC's capital investment.

The KMC DIB was officially launched on 17th December 2018 when outcomes contracts between the investors (GCC) and the two outcomes funders (NI & MoPH) were signed. Upfront funding was mobilised through the signature of a loan agreement between GCC and KFC on the 5th February 2019. A tripartite Memorandum of Understanding (MoU) between GCC, NI and MoPH was signed in April 2019.

KMC delivery started in the existing KMC Centre of Excellence (Laquinitinie Hospital in Douala) once the tripartite MoU was in place. Subsequent hospitals were enrolled once MoUs with KFC had been agreed. The programme was originally due to complete delivery at the end of March 2021, but was granted a six month no-cost extension to September 2021 in light of reduced enrolments due to Covid-19 in spring/summer 2020.

Cameroon KMC DIB: Programme Objectives

Contractual programme objectives linked to outcome payments focus on three areas:

- Payment Metric A: hospitals are equipped and trained to deliver quality KMC (one-off assessment);
- Payment Metric B: number of infants receiving quality KMC at programme hospitals (quarterly verification); and
- Payment Metric C: number of babies showing appropriate nutrition and weight gain at 40 week follow-up appointments at programme hospitals (quarterly verification).

In addition, the programme targeted the embedding of KMC expertise in the public health system with the ambition to certify three additional programme hospitals as Centres of Excellence and to create a pool of qualified KMC trainers among public sector clinicians in Cameroon.

Lessons from outcomes-based delivery report: methodology & objectives

This review of lessons learnt from outcomes-based delivery is based on a review of key documents, detailed analysis of operational and financial data, and interviews with over 30 key programme stakeholders undertaken by Social Finance in December 2020 and January 2021.

The review is combined of two parts, of which this report covers the second:

1) A reflection of lessons learnt from KMC roll-out to date including recommendations for implementation at scale in Cameroon; and
2) A reflection on lessons learnt from outcomes-based programme delivery using a DIB structure.

In the first instance, we expect lessons from this second report to inform preparations for the end of the DIB by the KFC team. Many of the lessons are specific to the Cameroon context and the KFC team structure and approach in particular.

Lessons from outcomes-based delivery with broader relevance to the design and delivery of future DIBs have been included in an 'end of project' report released in early September 2021. The aim of that report would be to publicly share results and reflect on the potential of outcomes-based contracts to drive improvements in neonatal health in Cameroon and beyond.

This review was led by Louise Savell (Director, Social Finance) with support from Marie-Alphie Dallest (Manager, Social Finance) and Chloe Eddleston (Associate, Social Finance). The review was funded by Grand Challenges Canada as part of their investment in ensuring the sustainability of the impact generated by the Cameroon KMC DIB. Social Finance is grateful to the cooperation and contributions of the Kangaroo Foundation Cameroon team, particularly Hortance Manjo (DIB Programme Manager)

2.1 Decision making and governance

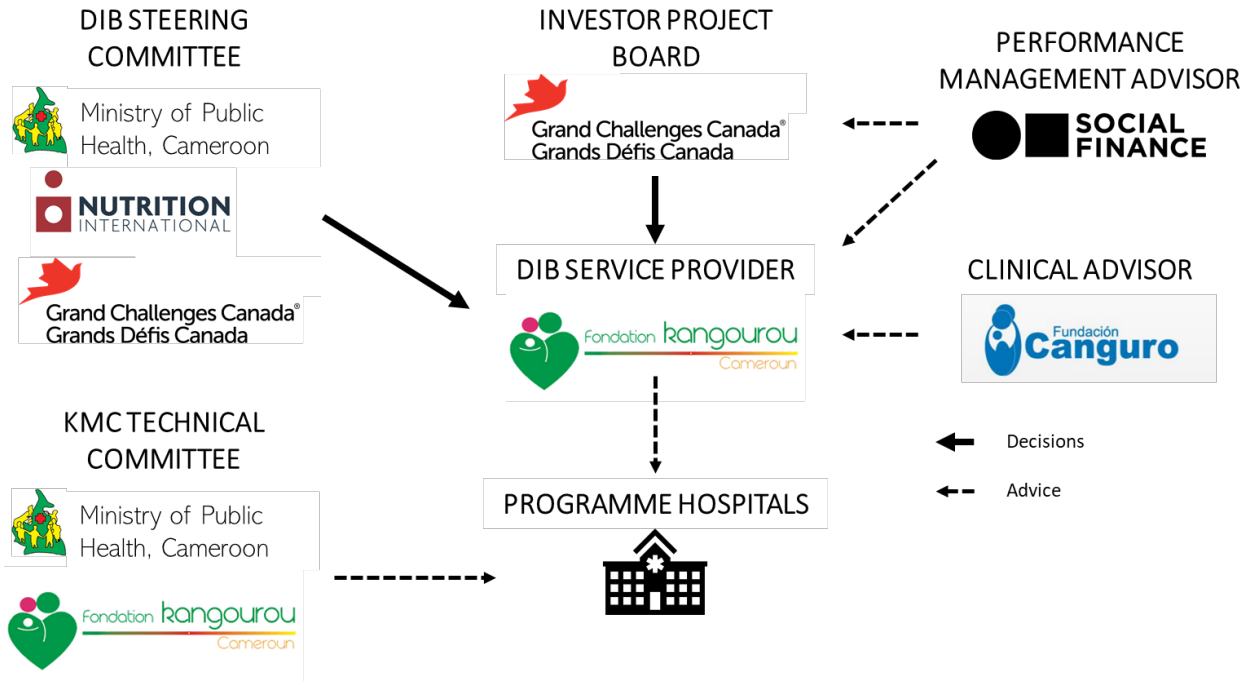


FIGURE A: Cameroon KMC DIB Governance & Advisory Structure

2.1 Overview: decision making and governance

DIB Steering Committee

The KMC DIB is not a legal entity in its own right. It consists of a series of coordinated bilateral agreements. At the centre of these contracts is KFC. Contractual parties – GCC, NI and MoPH – each hold a bilateral agreements which do not reference the other parties to the DIB. GCC has a loan agreement with KFC; MoPH has an outcomes funding agreement with GCC; and NI has an outcomes funding agreement with GCC. The multi-stakeholder MoU, signed between GCC, MoPH and NI, makes it clear that each outcome funder is obligated to make the full amount of their commitment available, but there is no joint liability. The contract with the independent verification agent, IRESCO, is also held bilaterally by NI who fully fund their costs, but their activities are governed by the decisions of the Steering Committee.

During the implementation phase of the Cameroon KMC DIB, governance is undertaken by a contractually defined Steering Committee. The Steering Committee is the governance body established to resolve disputes and challenges arising out of the outcomes contracts, and which works to maintain the good faith of the partnership between outcomes funders (MoPH and NI) and the investor (GCC) throughout the term of the DIB. Voting members of the Steering Committee include one representative from each of the outcomes funders and one representative from the investor. Observers (with no voting rights) to the Steering Committee are determined by mutual agreement and have routinely included KFC management plus observers and discussants as required. Social Finance, as board advisor and provider of performance management support on behalf of GCC, supports KFC management to prepare the agenda and materials for discussion, and attends Steering Committee meetings.

At the time of contracting, the Steering Committee was expected to meet every 6 months. In practice, however, the Steering Committee has convened (via video call) after every outcome verification cycle – approximately every three months throughout programme implementation to date. Steering Committee meetings were held regularly throughout March and April 2020 to enable rapid adjustments to be made in the face of Covid-19.

Steering Committee meetings normally commence with an operational update from KFC then turn to consideration and approval of verification results, discussion and approval of plans for the next outcome verification cycle, agreement of amendments to the verification framework (if required) and contractual decisions where appropriate. The outcomes contracts enable contract adjustment, with the consent of the investor and the outcomes funders, subject to the review of the Steering Committee. At its first meeting in September 2019, Steering Committee members agreed that approved Adjustment Proposals, formalised in the minutes of Steering Committee meetings and signed by each contractual party, would have the power of formal adjustments to the original DIB contract.

Formal variations made to date have primarily centred around the independent verification framework for programme outcomes. Following an initial verification pilot and the first round of programme hospital verification visits, a number of minor changes were needed to improve the clarity and scoring of the outcome verification tool. Subsequently, when Covid-19 restrictions prevented in person verification visits to hospitals in 2020, Steering Committee members approved additional amendments to allow for remote verification of programme outcomes enabling outcomes payments to continue in spite of Covid restrictions.

Other significant amendments approved by the Steering Committee to date have included setting objective criteria (and a related budget) for triggering a switch to 'fee for service' payments should the impact of Covid on programme operations render outcomes-based funding unfeasible for a period;[1] and approving the submission of a formal request to MoPH and the World Bank for a 6 month, no cost programme extension to off-set lower enrolment rates during the early months of the Covid-19 pandemic in 2020.

Investor Project Board

In addition to Steering Committee oversight, the KFC DIB team – as lead service provider – reports to and is monitored and supported by a Project Board acting on behalf of the contractual investor, GCC. The Project Board governs the operations, finances and strategy of the DIB, working closely with the DIB Service Provider (KFC) and the Performance Management Advisor (SF) to ensure that outcomes are achieved as effectively as possible.

The Project Board is comprised of five members: two Investor Directors, representing GCC, and three Independent Directors who bring a mix of skillsets including public health knowledge, international development programme management and impact investment expertise.

Project Board members monitor operational progress, provide guidance and support around implementation challenges, and approve strategic priorities and proposals to be taken to the Steering Committee for discussion. The Project Board also monitors the financial status of the programme in terms of budgeted vs. actual spending and KFC cashflow. Social Finance, as board advisor and provider of performance management support to KFC on behalf of GCC, supports KFC to prepare the agenda and materials for discussion, and attends Project Board meetings.

The Project Board's monitoring and decision-making remit extends solely to the loan agreement between GCC and KFC. It includes project-critical staffing and HR decisions, approval of operational budgets with >5% variance from the original programme budget, and approval of material changes to the scope of KFC's planned activities to deliver the DIB's contractual outcomes. Any decisions related to outcomes verification, conditions for outcomes payments, or the terms and term of the DIB outcomes contracts are referred on to the Steering Committee.

[1] This was never formally documented between the investor (GCC) and the two outcomes funders (NI and MoPH), but the basis for a fee-for-service calculation was discussed, approved and formally minuted in Steering Committee documentation on the understanding that corresponding contractual amendments would be made if necessary. In the event, this has not been necessary to date.

2.1 Lessons from implementation: decision making and governance for

Contractual force of signed Steering Committee minutes supported programme adaptation

The ability to make changes to key aspects of the outcomes verification and payment arrangements based solely on consensus from voting members of the Steering Committee has enabled rapid adaptation to local circumstances and programme needs. Whilst this was helpful for finessing the outcomes verification tool in the early days of DIB implementation, this agility came into its own when Covid-19 became an issue in Spring 2020 and remote verifications had to be approved. The fact that this decision-making process was well-established before Covid hit was an advantage. Signed Steering Committee minutes act as formal adjustments, particularly in relation to the basis for outcomes payment. The investor (GCC) also formalised more material amendments through additional documentation, for instance the extension to the programme end date.

Steering Committee meetings engaged government in implementation as well as governance

KFC management noted the important role that Steering Committee meetings play in keeping MoPH stakeholders engaged, informed of programme progress, and alerting them to implementation issues and health system challenges in a timely way.

Frequent change to MoPH voting representative mitigated by consistent involvement of Dr. Martina Baye, Coordinator of the National Multisector Program to Combat Maternal, Newborn & Child Mortality, MoPH Cameroon

Since the KMC DIB began in 2018, the Steering Committee voting representative for MoPH has changed four times. This turnover could have been very disruptive had it not been for the sustained engagement and support of the Coordinator of the National Multisector Program to Combat Maternal, Newborn & Child Mortality in Cameroon (PLMI), Dr. Martina Baye, who has been involved in the DIB since the design phase. Dr. Baye's ability to support KFC staff to navigate relevant ministry processes and personnel has been invaluable to the success of the DIB. All stakeholders noted the value of having active, senior support from government to the success of outcomes-based contract delivery, particularly when working with or through public sector facilities.

Project Board discussions would have been strengthened by Cameroonian board member(s)

Overall, Project Board members feel there is a good balance between board members with KMC technical skills and those with financial management and investment understanding. However, they reflected that their ability to advise, support and challenge the KFC delivery team would have been strengthened by the involvement of one or more board members with experience of implementing health programmes in Cameroon. Project Board members particularly reflected that the absence of a Cameroonian board member had limited their ability to triangulate contextual updates from KFC and to play a tangible mentoring role.

Project Board decisions would be strengthened by a greater diversity of presenters

Project Board members were sorry not to have had the opportunity to visit Cameroon to see the KMC programme in action (plans for a multi-stakeholder visit in April 2020 were cancelled in the face of Covid-19). They reflected that, inviting a greater variety of presenters – including hospital management, KFC clinicians and programme evaluators – to speak for 15 minutes at the beginning of Project Board meetings would enrich their understanding of the programme. They also requested more photographs of the programme in action to inform their contextual understanding.

Project Board could have been more proactive in encouraging adaptive delivery

A number of Project Board members observed that when they first convened the group acted more like a grant reporting body than a board. Some Board members felt that it took the group some time to realise the potential of the operational flexibility enabled by the DIB structure.. Project Board members observed that financial and outcome scenario analyses are something the KFC team struggled to generate without support from SF in spite of their importance in ensuring the project was successful. One Project Board member noted that the team could have made more use of the adaptive delivery opportunities, but overall stakeholders regarded the programme as a success. SF noted that a more commercial investor board may have pushed harder for greater transparency around programme financial management and operational decision-making.

Use of multiple, bilateral contracts complicated legal processes

Investor stakeholders noted that one of the downsides of using multiple bilateral contracts was that it was quite complicated to manage especially when they were looking to finalize the fee for service processes and managing different organisation's priorities and legal teams. Additionally, with many staff cycling through the project on all sides, details could be overlooked. On the other hand, the investor believed that separate contracts helped to ensure ownership around all terms of the contract.

2.1 Recommendations for outcomes-based delivery: decision making and governance

- Create a robust multi-sector governance structure around a small number of clearly articulated programme objectives to monitor progress, facilitate implementation and provide constructive challenge to programme delivery teams.
- Empower the governing board to adapt key programme metrics and methodologies if necessary to respond to unforeseen circumstances during programme delivery.
- Seek an experienced, senior partner within central government to champion the programme, contribute to effective governance and facilitate smooth programme delivery.
- Ensure independent local representation on provider delivery boards (whether or not they are investor-led) to strengthen mechanisms for effective support and challenge to the programme delivery team.
- Expose provider delivery board members to a range of 'voices from the field' to deepen their understanding of the programme and programme context beyond the core delivery team. Also consider the feasibility of including board members with lived experience.
- An adaptive management mindset – using data to inform the operational delivery of outcomes – is critically important for effective governance when delivering an outcomes-based contract.

2.2 Delivery team skills, structure and incentives

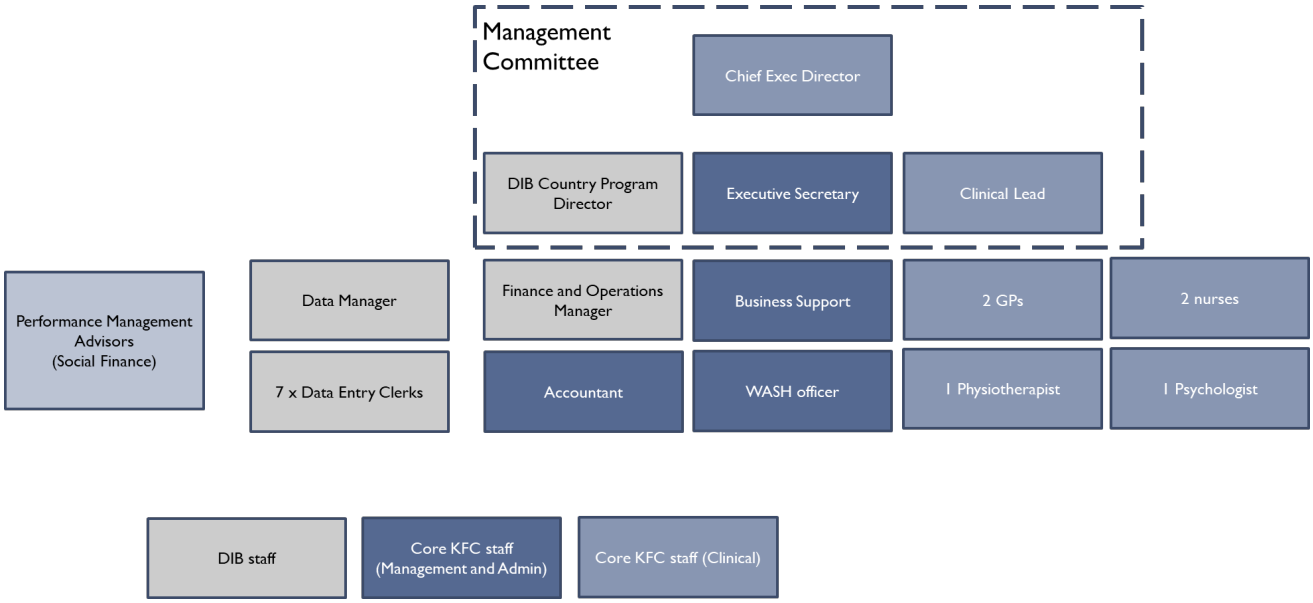


FIGURE B: Kangaroo Foundation Cameroon: Staff Structure 2018-21

2.2 Overview: delivery team skills, structure and incentives

The Kangaroo Foundation Cameroon (KFC) was incorporated in November 2016 with support from a grant from Grand Challenges Canada (GCC) to pilot a train-the-trainer approach to KMC delivery in Cameroon while the DIB was under development. This grant funded the recruitment of a core team of 12 management, administrative and clinical staff based in Douala. Between 2015 and 2016 this team developed and implemented a KMC pilot in 6 hospitals with clinical support from their parent foundation, Fundación Canguro Colombia.

Ahead of the launch of the KMC DIB in 2018, three additional roles were appointed to the central team:

- A DIB Country Program Director who has overall responsibility for the successful delivery of DIB outcomes and leads reporting to the DIB Project Board and Steering Committee;
- A Finance and Operations Manager to strengthen financial processes and oversee hospital investments and operations; and
- A Data Manager to develop and maintain a management information database, facilitate the independent verification process, and line manage hospital-based Data Entry Clerks.

In addition, 7 DIB-funded Data Entry Clerks (DECs) were appointed and placed in programme hospitals to facilitate high quality data capture, reporting and feedback loops with programme hospitals.

The DIB budget fully funded these additional roles and those of the existing KFC team for the duration of the DIB, meaning that existing staff have also been required to focus their work on the delivery of DIB outcomes. As is usual in Cameroon, all members of the KFC team received a '13th month' bonus every December throughout the DIB. Receipt of this bonus was not performance based.

The DIB also funded continued clinical support, training platform development (Cross Knowledge – see *KMC DIB: Lessons from delivery for scale*) and 2 quality assurance visits from the Fundación Canguro Colombia (FCC).

In addition to DIB funding for KFC, the DIB investor, GCC, paid for Social Finance to act as Performance Management Advisor to the KFC delivery team in Cameroon. Over the course of the DIB, Social Finance supported KFC to:

- Design, build and monitor their management information and reporting systems;
- Strengthen and monitor their financial management and resource allocation processes; and
- Ensure outcome verification and governance processes were fit for purpose and well implemented.

Social Finance's involvement was intended to build the delivery capacity of the KFC team in Cameroon with a view to supporting sustainability of impact after the DIB.

2.2 Lessons from implementation: delivery team skills, structure and incentives

A strong DIB program manager can drive significant impact

Project Board members praised the conscientious and mature project and stakeholder management approach taken by the DIB Country Program Manager, Hortance Manjo, a Cameroonian national with previous experience with internationalNGOs.. Board members noted that individuals with robust financial and data management skills had been harder to recruit in Cameroon. Project Board members reflected that to support programme resilience, it would have been helpful for the DIB Country Program Manager to have a second in command who also routinely took a programme-level view across data, finance and clinical interventions. It might also have been helpful to separate out the roles of Finance Manager and Operations Manager to ensure sufficient focus and skills around each.

Importance of balance between adaptive management and clinical KMC skills

Stakeholders emphasised the importance of the KFC delivery team having a balance of both clinical KMC training and support skills, and data and financial management skills to support the successful delivery of the DIB. It was noted that this balance of skills is important both within the central KFC team and at a hospital level.

Importance of clear delivery team role specifications and recruitment criteria

Because of an ambiguous management structure within KFC, the DIB Country Program Manager did not have the authority to put in place clear role specifications and performance targets for each member of the KFC team. As a result, many members of the KFC clinical and management teams did not seem to fully understand their roles and responsibilities in terms of proactively driving quality KMC in programme hospitals throughout the lifespan of the DIB, beyond delivering initial clinical staff training and start-of-programme hospital evaluations.

Attempts to encourage KFC clinicians to adapt their ways of working during the pre-DIB pilot, to routinely and proactively support hospitals beyond their 'home base' at Laquintinie hospital in Douala met with limited success. SF noted that the concentration of KFC clinicians at Laquintinie hospital was not conducive to ensuring consistent support was provided across all programme hospitals. KFC clinicians' engagement with programme data as a mechanism for driving programme outcomes was variable. Data feedback to hospitals instead tended to be led by the Data Manager and Data Entry Clerks with limited involvement from the KFC clinical team. SF noted that stronger linkages and communication between KFC's data, finance and clinical teams would have supported better programme outcomes.

Social Finance role compensated for skills gaps beyond capacity strengthening

KFC management noted how much the core DIB staff had learnt from the involvement of Social Finance, particularly around financial and outcomes scenario planning; data system design and analytics; and the use of data for adaptive delivery of programme outcomes. They noted that other members of the KFC Management Committee had not engaged with the support that was available from Social Finance to strengthen the skills and sustainability of the foundation as a whole.

Social Finance noted that the Data Manager role should have been specified to include basic data system design and data team leadership experience. Considerable technical support was required to develop these capabilities in the KFC team in the first 12 months of DIB programme delivery. The DIB Country Program Director noted that, on occasion that Social Finance team had had to step-in to fill specific skills gaps within the KFC delivery team.

Project Board members noted that the KFC team had relied heavily on Social Finance's experience to help them to navigate the contractual and evaluation challenges around Covid-19 in 2020-21. GCC noted that Covid-19 had delayed plans to transition more of the strategic planning and governance preparation from Social Finance to KFC. Capacity strengthening efforts had also been complicated by Covid-related travel restrictions.

2.2 Recommendations for outcomes-based delivery: delivery team skills, structure and incentives

- Recruit an experienced, outcomes-focused Programme Manager with strong project, stakeholder and team management skills.
- Create a core delivery team that combines data and financial management skills with technical and operational delivery skills.
- An adaptive management mindset – using data to inform the operational delivery of outcomes – is critically important for staff at all levels and in all roles when delivering an outcomes-based contract.
- Ensure senior management are actively engaged and take ownership for the successful delivery of DIB outcomes, and for sustaining the impact of the programme beyond the lifespan of the DIB.
- Particularly where existing staff are deployed to deliver outcomes-based contracts, time should be taken to ensure that their roles, responsibilities, reporting lines and deliverables are clearly defined, and that performance feedback is provided regularly.
- Remove dependencies on KFC clinicians at Laquintinie Hospital to ensure that quality KMC delivery will continue without KFC support.
- Explore opportunities for KFC to provide more comprehensive clinical KMC support across Cameroon.
- Organisations engaging in outcomes-based delivery for the first time may benefit from specialist support to put in place effective data, financial and governance systems for adaptive programme management.

2.3 Data systems, analysis and feedback mechanisms

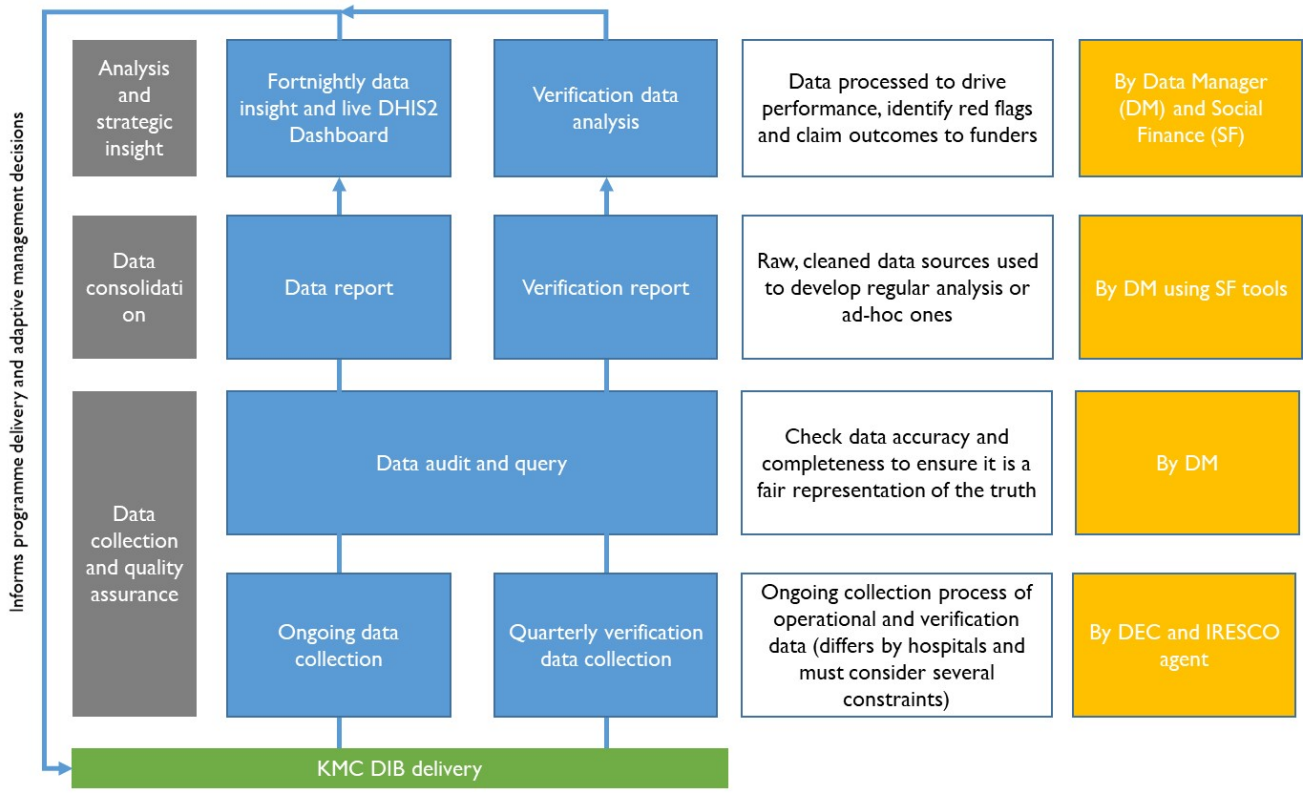


Figure C – Cameroon KMC DIB: data and reporting flows

2.3 Overview: data systems, analysis and feedback mechanisms

Cameroon KMC DIB: data system design

The DIB data system was designed to collect and visualise data on the DIB's key performance indicators to enable real time monitoring of hospital implementation of quality KMC and related health outcomes such as infant morbidity and mortality.

In September 2017, Bluesquare was selected as the data system provider for the DIB, in recognition of their extensive experience in data systems to support performance-based financing in the health sector in the region. Specifically, their experience of developing the health data system currently used by MoPH's PBF programme in Cameroon.

In May 2018, Social Finance and Bluesquare (currently based in Belgium) travelled to Cameroon to work with the KFC team to understand the flows of data and data processing that had been established during the GCC-funded KMC pilot in Cameroon. Following this trip, SF, KFC and Bluesquare designed and developed the data system's framework for the KMC DIB, using DHIS2, an open-source software platform for reporting, analysis and dissemination of data designed for health programmes in LMICs. Following signature of the DIB outcomes contract in December 2018, a second trip to Cameroon was undertaken by Social Finance, to develop and roll out dashboards for each user group (i.e. Clinicians, DECs, KF Cameroon, SF, and the IVA) working closely with KF Cameroon.

In addition to the work undertaken with Bluesquare, SF and the KFC Data Manager developed a data reporting tool to provide additional analysis to inform performance management of the DIB including data cleaning functions, to simplify checks for inconsistencies and missing data. Insights generated from the data report are circulated to the DIB management team and GCC on a bi-weekly basis and used to manage the performance of the DIB.

Cameroon KMC DIB: data system users

The data system is administered and managed by the KFC Data Manager, who is responsible for granting access permissions, changing or creating new data entry forms, and changing or creating user dashboards. The Data Manager also analyses and monitors the data from each hospital, with the support of SF on a weekly, if not daily, basis to ensure an adaptive management approach to the programme and hence the achievement of targeted health outcomes.

To avoid creating extra work for existing hospital staff while ensuring the completeness of data being collected, data in the system is input by 7 Data Entry Clerks (DECs) who are placed in each hospital funded by the DIB budget and managed by the Data Manager.

Hospitals' management team and front-line staff can also access the DIB system to view KMC performance data in their hospitals and monitor their progress towards health outcomes.

The Independent Verification Agent (IRESCO) inputs their findings from verification cycles into the data system.

Cameroon KMC DIB: data feedback mechanisms

Rapid data feedback loops between programme hospitals and KFC clinical and management staff are critical to enabling the successful implementation of quality KMC in hospitals. DECs are responsible for sharing data insights from DHIS2 with the clinical staff, and one of the key advantages of having DECs embedded within each hospital is their proximity to the clinical teams. Data insights are shared in different ways depending on the hospital, such as in all-staff meetings, or through a monthly newsletter. The KFC Data Manager supports the DECs to generate and share insights and is in turn supported by SF to generate programme level insights for the Project Board and Steering Committee.

The findings produced in the quarterly verification reports from the independent verification agent IRESCO are a valuable source of additional, independent data. Through interviews and observations, the verification report captures additional data points around the quality of KMC being delivered and service user satisfaction. These findings are analysed and then shared with hospitals following each verification in a session with hospital management and clinical staff organised by KF Cameroon. If necessary, an action plan to improve outcomes is agreed upon and implemented within these sessions.

2.3 Lessons from implementation: Data systems, analysis and feedback mechanisms

Variable engagement with data by clinical staff and programme hospitals

DECs noted that the extent to which hospital management and clinical staff engage with the data varies across hospitals. Some hospital teams focus only on the volume of enrolments, whereas in other hospitals, data is used to troubleshoot and actively improve the delivery of quality KMC. The Data Manager and DECs indicated that under-resourced hospitals were less likely to engage with the data system due to lack of staff capacity. These hospitals are no doubt the settings that would benefit the most from data-driven management, but under-staffing prevents them from utilising the data to its full capacity. KFC Management acknowledged that the level of buy-in from clinical teams varies significantly by programme hospital and has not been consistently supported by the KFC clinical team who tended to focus their time between formal trainings in Laquintinie hospital.

Data quality issues and duplication

Although some clinical staff received training at the start of the DIB on how to complete the paper forms that the DECs then enter into DHIS2, no further training has been delivered since. Data Entry Clerks observed that this often resulted in sub-par data quality and delays in data entry.

Furthermore, depending on a hospital's existing reporting requirements, some DECs flagged a concern around the duplication in the data collection process. For example, one DEC highlighted that they had 3 enrolment registers, one for the DIB, one for the hospital and one for MoPH. Record duplication of this kind created numerous opportunities for human error and inconsistencies.

Challenges from use of DHIS2 data system

The DHIS2 data system was selected for the DIB based on its existing use in monitoring progress within the broader Performance Based Finance programme for healthcare in Cameroon. The KFC Data Manager noted that the system has the advantage of being free, adaptable and good for descriptive analysis, but the system was not well-suited to collecting individual patient data and offered little analytical flexibility. Additional analytics tools were developed by SF to support the analysis of the DIB's performance (e.g. the Data report and Verification tool in Figure C). Additionally, while DHIS2 enabled centralised oversight of data from all 10 programme hospitals, it created a parallel data system within most of the programme hospitals, requiring duplication of data entry and potentially limiting data system use following the end of the DIB.

Progress towards key payment metrics was hard to track through management information

SF and KFC management noted that progress towards key payment metrics – particularly hours of skin-to-skin care for KMC babies – were not consistently captured and tracked through the DIB data system. KMC clinicians flagged the difficulties of capturing this information, but limited concerted efforts were made to find a solution. KFC management noted that the clinical teams perceived tracking hours of skin-to-skin care as extra work and were concerned that mothers would find the task tiring in addition to their other responsibilities. Project Board members noted that methods of tracking hours of skin-to-skin care for KMC had been developed and trialled by CEL in India and Ethiopia but were not adopted in Cameroon.

Use of DECs may undermine the continuity of data-driven delivery beyond the DIB

Data-driven delivery requires a fundamental cultural shift which requires time and buy-in from each of the programme hospitals. SF noted that embedding DIB-funded DECs within hospitals had accelerated the pace of data feedback loops, but the presence of DECs within programme hospitals has also meant that clinical staff have had little exposure to the data system itself, potentially limiting the sustainability of data driven delivery after the DIB. The KFC Data Manager and DECs do not currently expect the data collection system to be used after the DIB, because the clinical staff lack the training and time. They noted however that it would be valuable to allocate this function to a nurse who would be better positioned to support translation of data into clinical practice. Training nurses to collect and analyse the data to ensure the function remains embedded within hospitals should be a priority in the DIB ramp-down period.

Hard to access honest qualitative feedback from KMC mothers and hospital clinicians

GCC and other Project Board members noted the difficulties in accessing user feedback from KMC mothers and hospital clinicians. While a couple of surveys of KMC mothers were undertaken – for example, to understand reasons for mothers not bringing their babies for follow-up appointments and to unpack reasons for families discharging their babies against medical advice – systematic user feedback was not collected. SF noted the challenging power dynamics involved in seeking such feedback via interviews between KMC families and hospital clinicians, and IVAs, KFC clinicians or KFC data staff. This has limited the ability of the programme to adapt to meet service user needs.

2.3 Recommendations for outcomes-based delivery: data systems, analysis and feedback mechanisms

- Provide proactive support and regular refresher training to hospital clinicians to enable them to collect, analyse, interpret and use programme data to support improved clinical practice.
- Test potential pragmatic approaches to monitoring key outcomes, particularly hours of skin-to-skin care, to provide insight into progress towards contractual programme outcomes.
- Embed data-driven delivery beyond the duration of the current Cameroon KMC DIB by training and transitioning ownership of data systems to from KFC DECs to hospital clinicians and the MoPH before the end of the DIB.
- Consider how data collection, analysis and feedback mechanisms could be coordinated and embedded within existing hospital systems and core hospital teams in future programmes to build sustainability of adaptive delivery approaches from the start.
- Consider whether digitisation of all hospital maternal and newborn health records should be rolled-out as part of embedding KMC across the system.
- Explore participatory approaches to capturing honest feedback from KMC families and hospital clinicians to improve service design prior to contracting and during programme implementation.
- KFC to make fortnightly data insights available in French and English to improve accessibility to KFC and hospital clinicians.

2.4 Contractual outcomes metrics, thresholds and verification

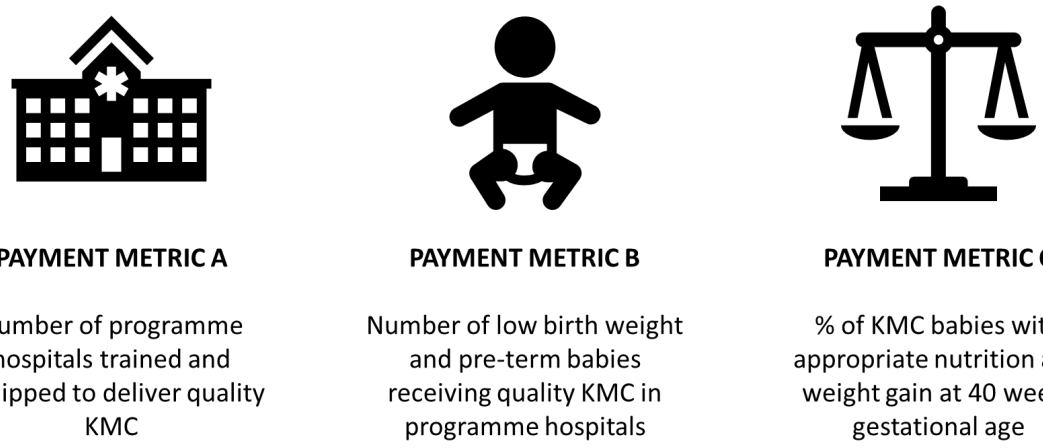


Figure D – Cameroon KMC DIB: summary of contractual outcomes metrics

2.4 Overview: contractual outcomes metrics, thresholds and verification

Contractual outcomes metrics and verification processes

The contractual outcomes metrics, summarised in Figure D, form the basis for triggering outcomes-based payments to KFC from NI and MoPH within the Cameroon KMC DIB. As discussed in Section 2.1 above, the criteria used for each were tweaked, with Steering Committee approval, following a pilot of the verification tool 2019.

These metrics are assessed – approximately quarterly – by the Independent Verification Agent (IVA) IRESCO through a combination of auditing hospital records, interviewing patients (both hospitalised and discharged), observing KMC practices, and assessing hospital facilities. On average verification agents were in hospitals for 6 days per hospital during in person verification rounds.

Payment Metric A is triggered only once for each programme hospital based on an assessment of whether the hospital has all necessary prerequisites to implement quality KMC in terms of infrastructure, equipment, trained staff and KMC protocols (see Annex 2.4.a for an annotated version of the assessment grid).

Payment Metric B is assessed in each verification cycle for all hospitals that have passed the threshold for the delivery of quality KMC (Payment Metric A). Ahead of each verification cycle, the KFC Data Manager submits a 'claim' for named babies from each hospital that have received KMC care in that evaluation period. The field agent first audits the number of infants enrolled into KMC as reported by KFC, then assesses the quality of KMC being practiced in each hospital through structured observations, interviews with KMC mothers resident in programme hospitals during the verification period, and conversations with hospital clinicians (see Annex 2.4.a for an annotated assessment grid).

Payment Metric C (see Annex 2.4.a for an annotated assessment grid) is calculated using the multiplication below multiplied by 100 to generate a %:

$$\frac{\text{FOLLOW-UP RATE: \# of KMC babies attending their 40 week follow-up appointment}}{\text{\# of KMC babies scheduled to attend their 40 week follow-up appointment}} \times \frac{\text{WEIGHT GAIN RATE: \# of KMC babies attending with appropriate weight gain at 40 weeks}}{\text{\# of KMC babies attending their 40 week follow-up appointment}} \times \frac{\text{NUTRITION RATE: \# of KMC babies attending with appropriate nutrition at 40 weeks*}}{\text{\# of KMC babies attending their 40 week follow-up appointment*}}$$

* Appropriate nutrition rates are based on verification agent interviews and observations. Other metrics are based on audited hospital records.

Outcome verification during Covid-19

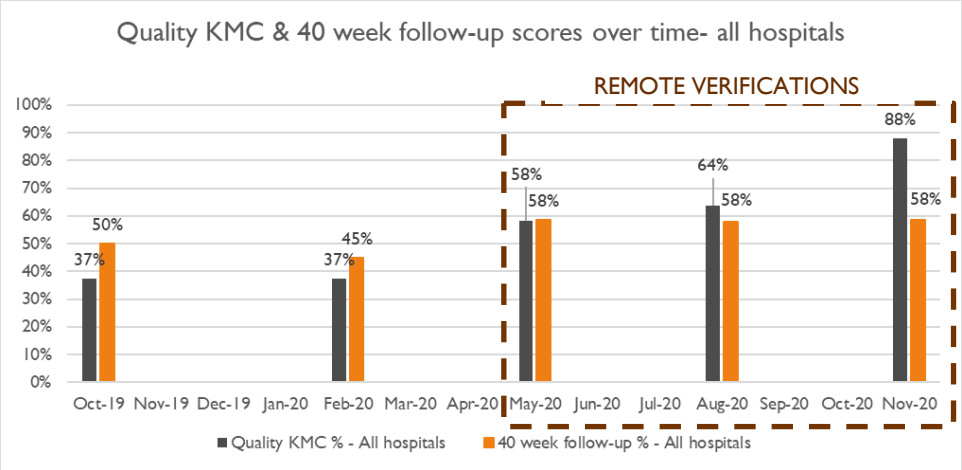
Once the Covid-19 pandemic was officially declared and the first cases were detected in Cameroon, the DIB Steering Committee agreed to switch to remote verification of contractual outcomes to remove the need for IVA visits to programme hospitals.

A modified verification schedule was approved by the Steering Committee which would enable the IVA to audit programme outcomes via telephone interviews with mothers and KMC clinicians. To minimise the amount of clinical staff time required to enable the outcome verification process, the Steering Committee removed the assessment of appropriate discharge (a component of Payment Metric B) and appropriate nutrition at 40 weeks gestational age (a component of Payment Metric C), both of which had previously been assessed through IVA interviews and observation during in-person hospital visits. A summary of the adjustments that were made can be found in Annex 2.4.b.

Audits of hospital records were deferred until in person hospital visits could resume and will be retroactively applied to the outcomes claim. In the interim, a 5% error margin was applied to the hospital claims submitted by to the IVA, reflecting an average of the error rate detected in the first two in person verification rounds.

KMC DIB outcomes

Verified DIB outcomes have improved over time, but doubtless benefitted from the removal of consideration of hours of skin-to-skin care at point of discharge (a component of Payment Metric B) during the three remote verification rounds. All hospitals assessed for Payment Metric A to date (9/10 programme hospitals) have met the requirements for delivery of quality KMC.



During the design of the DIB, it was expected that hospitals would start at a 60% quality KMC level, progressing to 70% over time thanks to practice and KFC's support. The programme has achieved these expectations only during the remote verification cycles 3, 4 and 5 when inappropriate discharge was not taken into account.

For payment metric C, it was assumed that 60% of enrolled infants would come back for their 40 week follow up appointment with 60% of them reaching appropriate weight and receiving appropriate nutrition (progressing to 70% over time). This meant that expected level of performance for payment metric C ranged from 36 to 42%. The DIB programme has consistently exceeded this initial target, reaching the outcomes cap for payment metric C during the sixth verification cycle.

2.4 Lessons from implementation: contractual outcomes metrics, thresholds and verification

Payment thresholds for 'quality KMC' are set extremely high

Project Board members and KFC Management commented on the extremely high thresholds that patients must meet to qualify as practising 'quality KMC', citing two primary concerns. Firstly, the threshold requirement that babies in KMC wards, and at point of discharge from hospital, receive skin-to-skin care for at least 20 hours a day was considered to be extremely challenging, particularly if mothers are not supported by other family members to provide this care.[2] Secondly, the requirement that patients provide correct responses to the numerous rigidly defined criteria in the IVA questionnaire to assess Payment Metric B was based on WHO standards, but the threshold criterion were seen as overly rigid by some KFC management and Board members. A number of patients who failed to meet quality KMC standards were in fact providing appropriate nutrition and practising skin-to-skin care for >17 hours a day – significantly above the minimum threshold for a detectable impact of KMC on neonatal outcomes of 8 hours a day (see annex 2.4.c. for a short evidence review). KFC Management and Project Board members felt that a linear schedule to reward increments of skin-to-skin care between 8-20 hours a day (to differentiate between a little, a viable amount and a lot) would have created stronger incentives for hospital clinicians and the KFC team. Furthermore, evidence that emerged during DIB implementation (see annexe 2.4.c) indicated that the thresholds could have been lower, but the Steering Committee opted not to amend the verification process until WHO guidelines were formally revised. .

Early discharge, driven by an inability to pay for care, was a key constraint to delivering quality KMC

Discharge against medical advice was a significant constraint to delivering quality KMC. Around 10% of babies enrolled in KMC were discharged against medical device, primarily driven by families' inability to pay for hospital care (see *KMC Lessons Learnt Part 1 - Section 1.6: hospital delivery of quality KMC*). In contexts where healthcare is not free for lower income families, it may be worth considering whether this is an appropriate criterion to include in KMC payment incentives. Some Project Board members suggested that the DIB should have funded bonus payments to KMC mothers rather than KMC clinicians.

Higher levels of patient enrolment offset lower than expected levels of quality KMC

Significantly higher levels of patient enrolment were seen during the course of the DIB than were predicted at the time of contracting (1840 to date vs 1,520 predicted at time of contracting) showing a good level of engagement with the programme by hospital staff, perhaps driven by the promise of performance-based incentive payments (see *KMC Lessons Learnt Part 1 - Section 1.4: Clinician incentives, turnover and ongoing support*). The net result was that, even though KMC quality levels were lower than predicted, 37% vs 60% during the first two verifications outcomes payments have been above baseline predictions, and are forecast to hit contractual outcomes caps. Project Board

[2] The recommendation of 20 hours was based on a review of peer reviewed evidence from KMC programmes in Colombia that were considered as part of the design process. Emerging evidence (in press) suggests that skin-to-skin care >8 hours a day will have an impact on infant mortality and morbidity.

members were concerned that staff incentive payments may be driving some unhelpful behaviours among hospital clinicians. They were also concerned that hospital staff may come to see KMC as something additional to their core role, limiting their appetite to sustain the approach after the end of the DIB.

Patient observations rely on highly trained IVAs with a strong clinical understanding

KFC Management noted how reliant in person verification results were on having highly trained IVAs that could both understand and respond to the clinical context as well as administering survey questions and undertaking complex calculations. They noted that their confidence in IVA assessments had increased after key members of the IVA team attended core KMC clinical training. The importance of supportive supervision of IVAs during verification periods, by experienced verification agents, was also noted.

SF noted that a simplified verification methodology would allow the time to be invested elsewhere, and potentially reduce the cost of future KMC impact bonds.

Small samples of mothers polarised hospital-level results

Verification results that are dependent on IVA interviews with mothers (i.e. most aspects of Payment Metric B, and the appropriate nutrition component of Payment Metric C) are extremely sensitive to the number of mothers that are resident in programme hospitals and available to be interviewed during each verification period. The KMC quality ranking of mothers that are interviewed in each hospital is then multiplied by the number of total babies that are claimed from that hospital since the previous verification round. Where the number of mothers interviewed in any given hospital was fewer than three, the risk that quality metrics would be polarised (either 0% or 100%) and hence unlikely to represent true KMC quality in that facility was high. Where hospital sample sizes were bigger (> 9 mothers interviewed per hospital per verification round), KMC quality results tended to be more balanced (around 60-70%). Small sample sizes resulted in extremely volatile quality KMC results, particularly in smaller hospitals (see Annex 2.4.d). This made accurate outcomes forecasting extremely difficult.

Payment structure incentivised contractual outcomes at the cost of longer-term system change

In addition to the three contractual payment metrics, the Cameroon KMC DIB programme aimed to embed KMC expertise in the public health system by certifying three additional programme hospitals as Centres of Excellence and creating a pool of qualified KMC trainers among public sector clinicians in Cameroon. Project Board members observed that the pressure to deliver against contractual payment metrics – to enrol patients and ensure KMC quality to secure outcomes payments to sustain programme delivery – meant that these broader system-change objectives took a back seat and seem unlikely to be fully delivered within the lifespan of the DIB. Project Board members disagreed about whether this represented a failure of the DIB incentive structure. Several noted that it was better to first demonstrate that KMC can be rolled-out at scale, then focus on embedding it in the neonatal health system.

Programme outcomes not clearly linked to neonatal outcomes in Cameroon

SF noted that an evaluation was not in place to assess the link between programme outcomes to neonatal morbidity and mortality in Cameroon which could have strengthened conversations on future KMC roll out. While the evidence base for KMC is robust in other countries, an outcomes evaluation – not necessarily tied to payments – would have potentially supported conversations with government around future KMC roll-out and helped to nuance parameters around 'good enough' vs. 'best' in relation to targeted hours of skin-to-skin care.

There was no explicit incentive to ensure ongoing hospital 'readiness' to deliver quality KMC

Payment Metric A provided a one-off assessment of a hospital's "readiness" to deliver quality KMC and created a strong incentive for KFC to ensure that the relevant infrastructure, equipment and training was delivered. All programme hospitals (10/10), met the threshold for payment, but SF noted that KFC has no systematic incentives to ensure 'readiness' standards continue to be met by programme hospitals throughout the programme delivery period. Given the high level of hospital clinician turnover (see Lessons Learnt Part 1: Section 1.4) and the variation in KMC quality across programme hospitals, regular systematic reviews of infrastructure, equipment and staffing would been valuable. In theory, Payment Metric B should have provided a sufficient incentive to ensure this, but in practice resource allocation by KFC to programme hospitals seems to have been less systematic.

2.4 Recommendations for outcomes-based delivery: contractual outcomes metrics, thresholds and verification

- Consider using a sliding scale of incentives for hours of skin-to-skin care for future outcomes-based KMC programmes to ensure that the best is not the enemy of the good.
- Reflect on how to structure incentives in relation to patient discharge against medical advice in contexts where healthcare is not free for lower income households. Consider potential bonus payments (or hospital cost offset) for KMC mothers.
- Consider requiring that a minimum % of patients demonstrate a minimum quality of KMC in each hospital in order to qualify for outcomes-based payments, to offset potential incentives to simply increase patient enrolments.
- Explore ways to simplify the quality KMC assessment (Payment Metric B) to reduce the time and cost burden of future KMC DIBs.
- Provide clinical KMC training to IVAs in addition to supportive supervision around research methods to support accurate evaluation of programme outcomes.
- Where hospital-level sample sizes are small, consider basing payments on programme-level quality calculations to reduce the chances of binary results (i.e. base payments on the quality KMC % of all patients interviewed across all hospitals multiplied by all patients claimed for in any given period, instead of calculating this on a hospital-by-hospital basis) – see Annex 2.4.d.
- If hospital-level KMC quality results are important to track, seek alternative methods of routinely tracking key metrics for all KMC babies – particularly hours of skin-to-skin care – through routine data collection rather than serendipitous interviews.
- Proactively review current infrastructure, equipment and staffing needs at all KMC programme hospitals to identify priorities for investment before the end of the DIB.
- Be cognisant that contractual outcomes metrics will take precedence over broader programme objectives that are not financially incentivised.

2.5 Financial structure and management systems

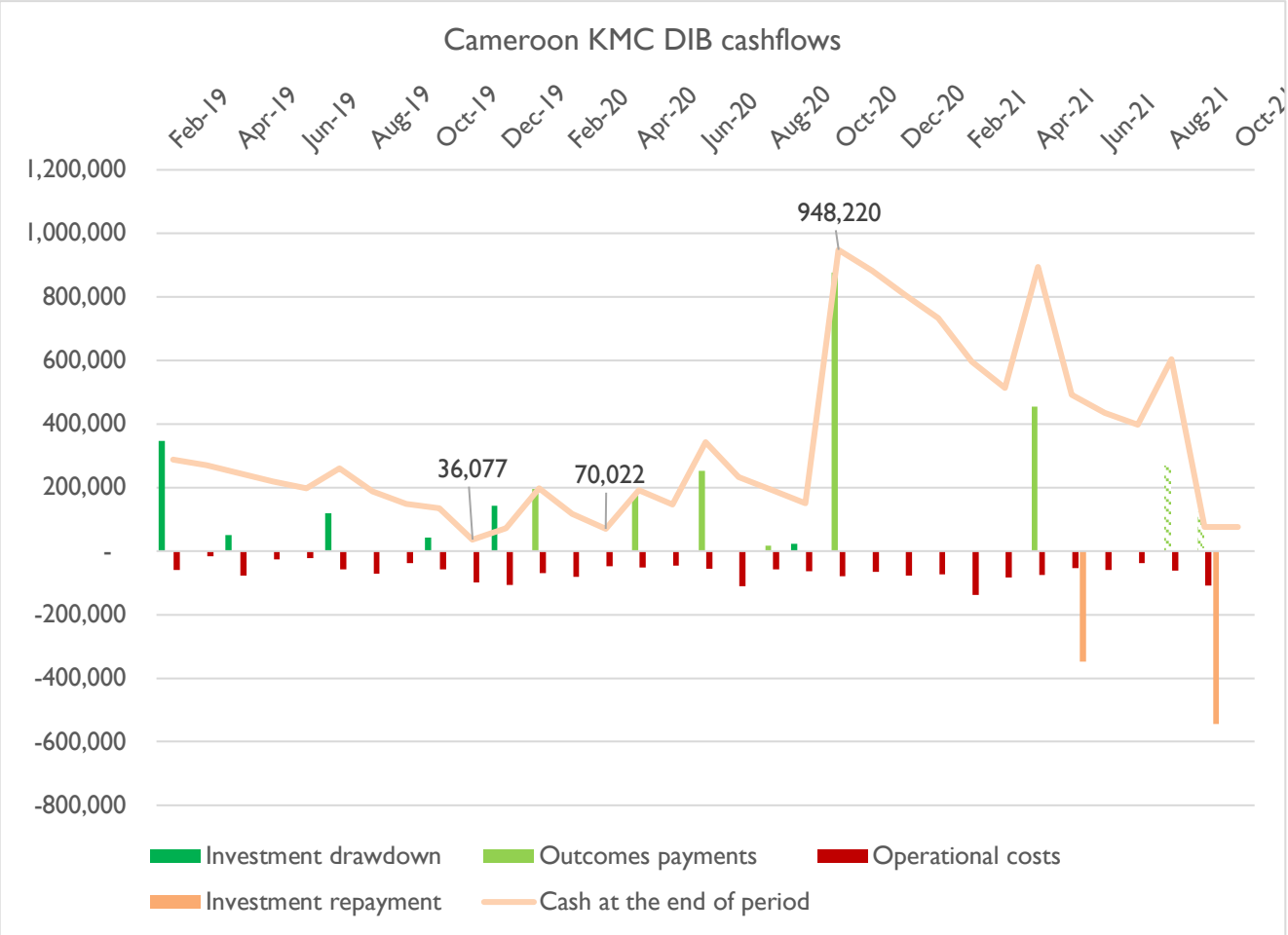


FIGURE E: Cameroon KMC DIB financial flows

2.5 Overview: financial structure and management systems

DIB investment

Unlike many Impact Bonds, the Cameroon KMC DIB was not structured around a Special Purpose Vehicle. Instead it was structured as a conditional loan between the DIB service provider, KFC, and the investor, GCC.[3]

While KFC is not party to the two bilateral outcomes contracts between the investor (GCC) and the outcomes funders (NI and MoPH), outcomes payments that are claimed after each verification round are paid directly to KFC.

KFC drew down GCC investment in five tranches over the first 10 months of implementation. Release of each tranche was conditional on GCC-approved use of previously received funds. This disbursement model enabled the investor to retain control and oversight over their investment in the first year, although the scope of the loan agreement did not extend to auditing the use of funding received from outcomes payments, even though this provides the means for loan repayment.

[3] *GCC may forgive from the outstanding Loan Principal and any interest accrued to date such amounts corresponding to any outcomes not achieved by the Borrower [KFC] in accordance with Schedule N, up to a maximum of $1,777,990 and consider all repayment obligations with respect to the forgiven amounts extinguished.*

It is anticipated that GCC investment will be repaid in two tranches in the final six months of the DIB term. GCC's Return on Investment (ROI) is contractually capped at 17%.

DIB outcomes payments

From January 2020 onwards all remaining DIB delivery costs have been funded by the outcomes payments received from Nutrition International (NI) and MoPH.

Reliance on the accrual and timely payment of outcomes funding was high. Government payment delays periodically led the team to face critical cashflow shortages, at times resulting in only 2-4 weeks' of cash at bank. From mid-2019 to mid-2020 KFC operated with less than three months' cash reserve.

In light of this reliance on timely outcomes payments, outcomes funding from NI was brought forward to allow MoPH more time to process their first payment. Subsequent MoPH payments have been impacted by a range of factors from insufficient funds in allocated government payment accounts to confusion about whether the Cameroon PBF team needed to undertake a secondary audit of verified results.

KFC financial management

KFC significantly strengthened their internal financial management and control processes at the beginning of the DIB. This was a requirement of the DIB investor, GCC, and was formalised in a Letter of Engagement between KFC, the Project Board and Social Finance.

Strong financial management processes are required to ensure best use of DIB funding and to lay the foundations for adaptive management of resources during programme implementation. SF has worked closely with the KFC management team throughout programme implementation to strengthen KFC's capacity to develop tools and processes to create transparency, improve financial scenario planning and ensure effective cashflow management.

A full budget review was undertaken before programme commencement to adjust for operational realities. Overall, variance against budget lines has been relatively low over the course of the DIB to date (see Annex 2.5.a.). The budget lines where the DIB spent more than expected are travel, training and evaluation, community engagement and clinical material.

2.5 Lessons from implementation: financial structure and management systems

Accurate projection of outcomes-based revenues has been extremely hard

SF noted that with small evaluation sample sizes creating volatility, and no consistent management information relating to hours of skin-to-skin care for KMC babies (see sections 2.3 and 2.4 above), accurate forecasting of outcomes-based revenues has been extremely difficult. This was further complicated by the move to, and then from, remote verification as a result of Covid-19. In the absence of robust management data, KFC and SF have tended to use conservative assumptions which have consistently under-estimated outcomes-based revenues.

Team cashflow is sensitive to the timing of outcomes payments

MoPH payment delays were anticipated from the outset. A 3-month payment delay - a conservative estimated of the contractually agreed timeline of 46 days for the invoicing and payment process – was modelled during the design phase. In practice, MoPH payment delays were significantly longer, on average 6 months. These delays were due to an initial misunderstanding of the verification process and lack of coordination between Cameroon's PBF and MOPH departments. The programme managed to mitigate these delays thanks to the involvement and flexibility of NI who

agreed to frontload their outcomes funding, and GCC who agreed to defer repayment of their investment to safeguard operational cashflow.

Budget reforecasting was essential at the beginning of DIB operations

A significant lag between contractual budget setting (Q2 2018) and operational mobilisation (Q1 2019) required wholesale budget reforecasting before delivery commenced. Whilst onerous, this exercise had the advantage of enabling the newly recruited DIB management team to understand and take ownership of the programme budget.

Resource allocation to hospitals was largely reactive rather than proactive

Beyond planned investments in programme hospital infrastructure and equipment, KFC has continued to fund additional resources for hospitals throughout the course of the programme. Infrastructure investment per hospital ranged from $0 to $50,000 (median $20,000). Equipment spend per hospital, to the end of December 2020, ranged from $7,000 at HGOPY to $34,000 at Laquintinie (median $9,500) of which approximately 35% was KMC-specific consumables. Requests to KFC for additional equipment, or to flag urgent maintenance needs, tended to be made directly by KFC clinicians, the hospital KMC 'focal point' or the Data Entry Clerks (DEC). SF raised concerns that the resulting allocation of resources appeared to be largely demand rather than needs driven.

Resource allocation to hospitals was not consistently documented

KFC agreements to hospital resource requests have tended to be verbal, which has led to some lack of clarity around equipment usage and maintenance responsibilities. SF noted that the absence of consistent, auditable documentation makes it difficult for programme stakeholders to assess the effectiveness and appropriateness of DIB programme spending.

KFC team required considerable support around financial management

SF noted that the KFC team has required considerable support throughout the programme to ensure robust financial management and controls. Spending and outcomes reforecasting to inform cashflow projections and scenario analysis have been a particular area of focus for SF's monitoring and capacity strengthening activity. KFC has also required SF support to calculate investor repayments, differentiate appropriate vs. inappropriate use of DIB funds (e.g. for core neonatal health infrastructure like incubators, generators and antibiotics), and determine when it was appropriate to consult the Project Board for budget / spending approval.

Investor audit should ideally have extended to the use of outcome payments

SF noted thatGCC's conditional loan agreement only enabled the investor to audit KFC's use of directly invested funds. As GCC's repayment of capital is determined by the use of outcomes payments received by KFC from NI and MoPH, it would have made sense for them to retain a right of audit over all DIB programme spending.

2.5 Recommendations for outcomes-based delivery: financial structure and management systems

- Seek to ensure management information correlates with and predicts progress towards contractual outcomes whenever possible to support accurate outcomes-based revenue forecasting.
- Work closely with Government outcome funders, well-ahead of the first payment trigger point, to ensure all stakeholders understand the basis for payment and internal payment systems have been identified and prepared.

- Consider the capital recycling rate and related operational risks when determining the DIB investment requirement, allowing a buffer for receipt of outcomes payments from government if relevant.
- Strengthen the capacity of local delivery teams to budget, reallocate resources based on programme needs, and reforecast costs and revenues based on outcome scenarios.
- Ensure local teams document the rationale and terms of all infrastructure investment and equipment provision with programme hospitals.
- Clearly determine in-scope and out-of-scope spending items and establish regular review points and decision-making processes throughout the DIB delivery period.
- Ensure DIB investors have the right to audit the use of their initial investment and outcomes payments used to fund programme delivery throughout the course of the DIB.

Acknowledgments

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Appendices

CAMEROON KANGAROO MOTHER CARE (KMC) DIB

SUPPORTING APPENDIX FOR LESSONS FROM OUTCOMES BASED DELIVERY

MARCH 2021

List of appendices

SOCIAL FINANCE
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Annex 2.4

2.4.a Annotated assessment grids

Payment Metric A – Annotated Verification Grid

Payment Metric A – Prerequisites				**Guidance for interview and Observation**
Date of Survey				
Hospital Name				
Assessor Name				This is the name of the field agent performing the verification
Category	**Items needed**	**Minimum quantity needed**	**Quantity available at the hospital**	**Guidance for interview and Observation**
Equipment	Lycra bands (or similar support materials)	1 per mother	_____ bands/ _____ mothers currently enrolled in KMC	For the equipment section, the field agent must: - Check that each piece of equipment is available (i.e. that KMC staff or mothers are easily able to use the equipment) - Check that this equipment is functional (i.e. that it is operational) - Take pictures for proof (ensuring consent is asked when relevant) Support materials: anything that can be used to hold the baby in Kangourou position, this can include cloth and other materials

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				NB: if the field agent is unsure if the support is appropriate, they should ask a member of the clinical team.
	Functional weight scales (mechanical or electronic) with a precision of at least 10 g	2 *(1 for the KMC ward and 1 for the KMC follow-up programme)*	____	Check if the scales are operational and that they have the right precision level. The scales need to have a precision of 10g or lower (i.e. if the precision level is 15g, the scale is not aligned with requirements).
	Neonatal gastric tube	5	_____ neonatal gastric tubes	Neonatal gastric tubes currently in use should be included in this check
	Neonatal nasal cannula	5	____ neonatal nasal cannulas	Neonatal nasal cannulas currently in use should be included in this check
	Infantometer or baby mattress wedge or ramp with height measurement unit for the KMC Follow-up Programme	1	____	
	Cups and Syringes	4 (of either)	____	4 of either means 4 in total, and can be for example 2 cups and 2 syringes, or 4 syringes, or 4 cups, etc. The cups must be of good quality and for the exclusive use of the baby. Cups belonging to the mothers (i.e. not provided by the hospital) should be included as long as they are for the exclusive use of the baby. Plastic bottles do not count.
	Soap	Sufficient for mothers and staff use	Yes / No	"Sufficient" means available in the Neonatal unit, KMC ward and in the follow-up unit. If two of the three areas share a sink, then one container of soap is sufficient. If there are several sinks, then each sink should have soap.

Staff	Nurse or professional midwife trained and accredited in KMC by KF Cameroon or by a KF Cameroon-trained healthcare provider	1	____	At a minimum, there should be 1 trained nurse or professional midwife as permanent staff. KF Cameroon will provide a list of trained staff with date of training in advance of the verification visit. The field agent will then cross-check this list by asking the clinical staff at the facility, If the trained staff is on leave during the verification visit, the field agent can try to access hospital HR record if feasible. The field agent can coordinate with a member of KF Cameroon to tackle any issue.
	Paediatrician or general physician trained and accredited in KMC by KF Cameroon or by a KF Cameroon-trained healthcare provider	1	____	At a minimum, there should be 1 trained GP or paediatrician as permanent staff. KF Cameroon will provide a list of trained staff with date of training in advance of the verification visit. The field agent will then cross-check this list by asking the clinical staff at the facility, If the trained staff is on leave during the verification visit, the field agent can try to access hospital HR record if feasible. The field agent can coordinate with a member of KF Cameroon to tackle any issue.
Infrastructure	Separate KMC Ward	1	Yes / No	There needs to be a dedicated space for the mothers to practice KMC.
	Separate area for the follow-up unit	1	Yes / No	There needs to be a dedicated space for clinical staff to receive the mothers for their follow-up appointments.
	Chairs with backs and armrests for mothers or caregivers in the neonatal unitbb	For Laquintinie, HGOPY, HGOPED, Yaounde CHU, Garoua, Ngaoundere Regional and Ngaoundere Protestant: 6 For Bonassama, Bafia and Buea 4	____chairs	If you can't observe the number of required chairs, check with a member of the clinical staff where the chairs might be located. The chairs need to be available at the point of care to be considered available.

	Beds for mothers in the KMC Ward	For Laquintinie, HGOPY, HGOPED, Yaounde CHU, Garoua, Ngaoundere Regional and Ngaoundere Protestant: 6 For Bonassama, Bafia and Buea 4	____ beds	If you can't observe the number of required beds, check with a member of the clinical staff. The beds need to be available at the point of care to be considered available.
	On-site running water and free drinking water for the KMC Ward	N/A	Yes / No	If you can't observe this, check with a member of the clinical staff. To be considered available, free drinking water must be available at point of care.
	Access to sanitation (toilet and shower) for the mother	N/A	Yes / No	If you can't observe this, check with a member of the clinical staff. To be considered available, sanitation must be available at point of care.
	Examination table for the KMC Follow-up Programme	1	_____	If you can't observe this, check with a member of the clinical staff. To be considered available, the examination table must be available at point of care.
Administrative / hospital policy	Institutional KMC policy, including KMC protocols for the neonatal unit, the KMC ward, and the follow-up unit	N/A	Yes / No	Check that the facility has a normative protocol for the neonatal unit, KMC ward and follow up unit that clearly describes the KMC practice. If you cannot observe this, then check with the medical staff. Protocols should be easily accessible to KMC clinical staff.
	Parental access to the neonatal unit 24 hours a day\	N/A	Yes / No	IVA to ask members of staff or mothers to confirm the answer
	Access to rapid HIV test for mothers	N/A	Yes / No	IVA to ask members of staff to confirm the answer.

				Note that this rapid test does not need to be available in the neonatal unit as long as mothers can access it within the hospital.
Summary	**Has the hospital met all the requirements for KMC?**		**Yes / No**	If the hospital is missing an item from the checklist, then they DO NOT meet the requirements

Payment Metric B -

Appropriate SSC and Nutrition

KMC Appropriate Skin-to-Skin Contact and Appropriate Nutrition Questionnaire		**Guidance for interview and Observation**
Patient (infant) name		The field agent should complete one grid for each mother interviewed
Date of survey		
Hospital Name		
Assessor Name		This is the name of the field agent performing the verification
Which part of the programme are they in	Select one: ☐ Neonatal unit ☐ KMC ward	Determining which part of the programme a mother is in should be a decision made by clinical staff, not the verification agent. When mothers are being considered as being part of the KMC ward this will be indicated in their medical records. IRESCO should base their decision on the medical record. If the information is not available in the clinical file, the verification agent should then consult the clinical staff.
Skin-to-Skin contact		

1. **Questions to ask the mother or other caregiver (please note who the caregiver is if different from the mother)**	1.1. Is there anyone supporting you to care for your baby? If so, who is the other main caregiver? (Single answer, unprompted) *[This question does not count towards the assessment and is used only to gather additional information on gender issues]*	Select one: ☐ Baby's father/male partner ☐ Other male family member ☐ Male friend ☐ Mother's mother ☐ Other female family member ☐ Female friend	This doesn't count towards the assessment
	1.2. How long are you (and/or other people supporting you) keeping your baby in KMC position each day? ○ *This should be 8 hours per day if in the neonatal unit;* ○ *At least 20 hours per day if in the KMC ward or if no incubator or radiant warmer is available in the neonatal unit.*	___ hours	Be very clear that this question is about the amount of time a baby is in KMC position per day, regardless of who is carrying them. Mothers may not be able to tell you exactly how long they hold the baby for. If this is the case, try to identify if they are above or below the 8 or 20-hour threshold, by asking leading questions such as "When are you not holding the baby? How long for?" For example, if the mother says that she holds the baby in Kangaroo position all the time except when she leaves the hospital to get food, try asking her "how long does it usually take you to get food outside of the hospital?". Double check answer with other mothers/ staff to ensure the answer given by the mother is realistic.
	What are the things that can prevent a mother/caregiver including you to practice KMC at night? *Tell the mother/caregiver: Because of the factors above it may happen that you do not care for the baby exactly as expected. So, for the next questions on SSC at night, SSC over time and incubator; tell me what happened exactly. even if it was not exactly as recommended by the doctor.*	List factors	This doesn't count towards the assessment

	[This question does not count towards the assessment but is used to put the mother at ease]		
	1.3. How often do you (and/or other people supporting you) practice SSC at night? Every night, some nights or not at all? ○ *Every night is the required answer for appropriate KMC*	Select one: ☐ Every night ☐ Some nights ☐ Not at all	The aim of this question is to record how often the baby is receiving SSC overnight since the mother started KMC.
	1.4. How often do you (and/or other people supporting you) practice KMC? Every day, 5-6 days per week, 3-4, 1-2? ○ *Every day is the required answer for appropriate KMC*	Select one: ☐ Every day ☐ 5-6 days a week ☐ 3-4 days a week ☐ 1-2 days a week ☐ Not at all	The aim of this question is to check that the baby is receiving SSC every day since starting KMC. If the caregiver interviewed has been practicing KMC for less than a week, but has done so every day, then please tick every day.
	1.5. If the mother is in the neonatal unit: When your baby is not being held skin-to-skin / in KMC position, where is the baby? ○ *The infant should be placed in an incubator or under a radiant warmer when not in KMC position*	Select one: ☐ In an incubator or under a radiant warmer ☐ Somewhere else e.g. bed, table, chair ☐ Well wrapped in a cot, away from draughts and covered by a warm blanket ☐ N/A (Not in the neonatal unit)	Indicate where the baby is when not with the mother. Please note that this question only applies to the mothers in the neonatal unit. The additional option (well wrapped in a cot) does not have any effect on the summary rule, its only purpose is to collect information for the moment.
2. IVA to observe mother's practices	2.1. If the mother is in the neonatal unit: Is the baby placed in an incubator or under a radiant warmer when not in KMC position?	☐ Yes ☐ No ☐ No but the baby is well wrapped in a cot, away from draughts and covered by a warm blanket	The field agents are not expected to observe mothers for an extended period of time. However, they should note whether they observe anything that would indicate poor quality KMC being delivered, e.g. babies in the neonatal unit not being placed in an incubator when the mother cannot perform SSC. Please note that this question only applies to the mothers in the neonatal unit.

		☐ N/A (Not in the neonatal unit)	The additional option (well wrapped in a cot) does not have any effect on the summary rule, its only purpose is to collect information for the moment.
	2.2. In the KMC ward, when a mother is not performing SSC, is someone else performing it for her?	Select one: ☐ N/A (Not in the KMC ward) ☐ Yes ☐ No	The mother may have someone supporting her performing KMC
	2.2.1. If the response to 2.2. is no, then for how many hours was the mother not performing KMC? *If the mother is evidently absent from the KMC Ward for more than 4 hours (and if no one else is performing KMC on her behalf), the infant is not deemed to have received appropriate KMC*	___ hours	If during your time in the ward, you see that there is a baby left unattended for an extended period of time, then try to assess how long they have been unattended for. The field agents are not expected to observe the babies for extended period of times but might see during the visit that a baby is left on the bed for more than 4 hours, in which case they should note it as this is not quality KMC.
	2.3. Is the infant correctly positioned when in SSC? *(Answer should be yes to all the following questions)* 2.3.1. The infant is kept upright when in KMC position, with body and cheek against the mother's chest ("frog" position)	Yes / No	If in doubt, ask a member of clinical staff.
	2.3.2. The baby is secured on the mother's chest with an appropriate support system (lycra band or other available cloth).	Yes / No	The cloth used doesn't have to be a lycra band. What is important is that the baby is firmly secured on to the mother or other caregiver's chest. If in doubt, ask a member of clinical staff.
	2.3.3. The baby's head is covered with a cap to avoid temperature loss.	Yes / No	The aim of this question is to verify that the baby's head and feet are covered to avoid temperature loss.

	The baby is also wearing socks and a diaper.		
Summary	Has the baby received appropriate SSC? *The baby has received appropriate SSC if:* • *They are in the neonatal unit and the answer to 1.2 is >8 hours; OR they are in the KMC ward and the answer to 1.2 is >20 hours;* • *The answer to 1.3 is 'Every night';* • *The answer to 1.4 is 'Every day';* • *The answer to 1.5 is 'In an incubator or under a radiant warmer' OR 'N/A (Not in the neonatal unit)';* • *The answer to 2.1 is 'Yes' OR 'N/A (Not in the neonatal unit)';* • *The answer to 2.2 is 'Yes' OR 'N/A (Not in the KMC ward)'; OR the answer to 2.2 is 'No' and the answer to 2.2.1 is '<4 hours'; and* • *The answers to 2.3.1, 2.3.2 and 2.3.3 are all 'Yes'.*	Yes / No	
Nutrition			
1. Questions for the mother (to be asked in this order) to check if she has exclusively breastfed her child in the last 24 hours	*What are the things that can prevent a mother/caregiver including you to feed the child according to the doctor's instruction?* *Tell the mother/caregiver: Because of the factors above it may happen that you do not feed the baby exactly as expected. So, for the next questions on breastmilk, water, other milk, anything else; tell me what happened exactly. even if it was not exactly as recommended by the doctor.* *[This question does not count towards the assessment but is used to put the mother at ease]*	List factors	

	1.1. In the last 24 hours, did you give your baby breastmilk? (either through oral, tube, syringe, or cup/spoon feeding)	Yes / No	The mother may not be able to express milk, or the baby may have difficulties latching. In this case, maternal milk (which may also come from another mother) can be fed through cups, syringes and tubes. Please check which type of milk the mother is using by asking the mothers and checking with the clinical staff.
	1.2. In the last 24 hours, did you give your baby water?	Yes / No	
	1.3. In the last 24 hours, did you give your baby any milk other than breastmilk?	Yes / No	
	1.4. In the last 24 hours, did you give anything else to your baby?	Yes / No Please specify: _____- _____	If a mother gives her baby prescribed medication, please tick "No". Prescribed medication is not an issue for the baby and therefore is not considered in this nutrition assessment.
2. If the mother has exclusively breastfed her child in the last 24 hours (question 1), has she exclusively breastfed her child since starting KMC?	2.1. Since starting KMC, have you given your baby breastmilk? (either through oral, tube, syringe, or cup/spoon feeding)	Yes / No	The mother may not be able to express milk, or the baby may have difficulties latching. In this case, maternal milk (which may also come from another mother) can be fed through cups, syringes and tubes. Please check which type of milk the mother is using by asking the mothers and checking with the clinical staff.
	2.2. Since starting KMC, have you given your baby water?	Yes / No	
	2.3. Since starting KMC, have you given your baby any milk other than breastmilk?	Yes / No	
	2.4. Since starting KMC, have you given anything else to your baby?	Yes / No Please specify: _____	If a mother gives her baby prescribed medication, please tick "No". Prescribed medication is not an issue for the baby and therefore is not considered in this nutrition assessment.
3. Observation of feeding other than breastfeeding?		Yes / No	The mother may not be able to express milk, or the baby may have difficulties latching. In this case, maternal milk (which may also come from another mother) can be fed through cups, syringes, and tubes. Please check which type

		If Yes: ☐ Artificial Milk ☐ Water ☐ Other _____	of milk the mother is using by asking the mothers and checking with the clinical staff.
4. Why did the infant receive anything other than breastmilk? *[Ask the mother and double-check with the medical staff]*	It is medically advised for the mother not to breastfeed (select all that apply): ☐ Mother has human t-cell lymphotropic virus type I or II ☐ Mother has other disease or condition. Please specify: _____ ☐ Mother is receiving cancer chemotherapy agents ☐ Mother uses illicit drugs ☐ Mother is HIV-positive and has chosen not to breastfeed after counselling Other reasons: ☐ Mother refuses to breastfeed or insists on using formulas. Please provide reason for this: _____		All other medical reasons should be recorded in the second tick box. If the mother's answers are inconsistent with the medical staffs, then check the medical record and flag the inconsistency with them to seek resolution.
5. The paediatrician has documented in the infant's file the reason for substituting or supplementing breastmilk with artificial milk.		Yes / No Please provide the reason documented: _____	If the paediatrician has recommended artificial milk, then the baby is receiving appropriate nutrition. However, the paediatrician's recommendation should be properly documented in the patient's file.
Summary	Has the baby received appropriate nutrition? *The baby has received appropriate nutrition if:* • *The answers to 1.1 and 2.1 are 'Yes' AND the answers to 1.2, 1.3, 1.4, 2.2, 2.3, 2.4, and 3 are 'No' OR* • *If answers to 1.3 or 2.3 are 'Yes' (regardless of answers to 1.1 and 2.1) AND answers to 1.2, 1.4, 2.2 and 2.4 are all "No", AND answer to 3 is either "No" or "Yes – Artificial*	Yes / No	

	Milk", AND there is a medical reason for the mother not to breastfeed in 4; OR • *If answers to 1.3 or 2.3 are 'Yes' (regardless of answers to 1.1 and 2.1) AND answers to 1.2, 1.4, 2.2 and 2.4 are all "No", AND answer to 3 is either "No" or "Yes – Artificial Milk", AND there is no medical reason for the mother not to breastfeed in 4, AND the answer to 5 is 'Yes' and the reason documented is provide;. OR* • *The answers to 1.1 and 2.1 are 'Yes' AND the answers to 1.2, 1.3, 1.4, 2.2, 2.3, and 2.4 are 'No' AND answer to 3 is "Yes – Artificial Milk" AND there is a medical reason for the mother not to breastfeed in 4; OR* • *The answers to 1.1 and 2.1 are 'Yes' AND the answers to 1.2, 1.3, 1.4, 2.2, 2.3, and 2.4 are 'No' AND answer to 3 is "Yes – Artificial Milk" AND there is no medical reason for the mother not to breastfeed in 4, AND the answer to 5 is 'Yes' and the reason documented is provided* *If the mother says (or is observed) that she is feeding her infant with anything other than breastmilk or artificial milk, then the baby has not received appropriate nutrition.*		
Has the baby received both appropriate skin-to-skin contact and nutrition?		Yes / No	

A3 – Payment Metric B - Appropriate Discharge

KMC Appropriate Discharge Questionnaire		Guidance for interview and Observation
Patient (infant) name		The field agent should complete one grid for each mother interviewed
Date of survey		
Hospital Name		
Assessor Name		This is the name of the field agent performing the verification

Which part of the programme are they in		Select one: ☐ Neonatal unit ☐ KMC ward	Determining which part of the programme a mother is in should be a decision made by clinical staff, not the verification agent. When mothers are being considered as being part of the KMC ward this will be indicated in their medical records. IRESCO should base their decision on the medical record. If the information is not available in the clinical file, the verification agent should then consult the clinical staff.
1. Status of the infant *Ask nurses or doctors and check against hospital records where possible*	1.1. The child is stable and able to regulate temperature on his own.	Yes / No	Ask clinical team
	1.2. The child required a feeding tube in the last 3 days.	Yes / No	Ask clinical team
	1.3. The child has demonstrated adequate weight gain, i.e.: ○ If the child is older than 10 days, it has gained weight in the last 2 days (based on hospital record). ○ If the child is 10 days or less, it has not lost more than 10% of its birth weight	Yes / No	This needs to be checked against the medical records.
	1.4. The child presented episodes of apnea or had oxygen desaturation during the last week	Yes / No	Ask clinical team
	1.5. There is clinical suspicion of sepsis or infection.	Yes / No	Ask clinical team
	1.6. The child completed his/her treatment, if any.	Yes / No	This needs to be checked against the medical records.
2. Mother's or Carer's ability to care for the child *Combination of questions for the mother and*	2.1. Circle the appropriate answer: SSC is accepted and applied (Yes if answers to 2.1.1 to 2.1.3 are appropriate)	Yes / No	
	What are the things that can prevent a mother/caregiver including you to practice KMC? *Tell the mother/caregiver: Because of the factors above it may happen that you do not care for the baby as expected. So, for the next questions on Kangaroo position, SSC at night, KMC*	List factors	

questions for the nurse/doctor	*over time and KMC ability at home; tell me what happened exactly. even if it was not exactly as recommended by the doctor.* *[This question does not count towards the assessment but is used to put the mother at ease]*		
	2.1.1. In the last two days, how long on average have you put your baby in the Kangaroo position each day? *Mother (and/or other people supporting the mother) should provide SSC >20 hours per day if in the KMC ward, >8 hours per day if in the neonatal unit.*	___ hours (per day)	The field agent should note the average number of hours per day over the last two days Day 1: ___ hours Day 2:_____ hours (Day 1+ Day 2) / 2 = average hours
	2.1.2. How often do you (and/or other people supporting you) practice SSC at night? Every night, some nights or not at all? *Answer should be 'every night' in order for SSC to be considered accepted and applied*	Select one: ☐ Every night ☐ Some nights ☐ Not at all	This question is about how often the baby is in SSC at night, regardless of who is carrying the infant.
	2.1.3. How often do you (and/or other people supporting you) practice KMC? Every day, 5-6 days per week, 3-4, 1-2? *Answer should be 'every day' in order for SSC to be considered accepted and applied*	Select one: ☐ Every day ☐ 5-6 days a week ☐ 3-4 days a week ☐ 1-2 days a week ☐ Not at all	The aim of this question is to assess whether the baby is in KMC every day,
	2.2. Ask the mother/carer: Do you feel able to care for your child using KMC (position and nutrition) at home?	Yes / No	
	2.3. Ask the nurse/doctor: Does this mother/carer need to be regularly reminded to provide continuous SSC?	Yes / No	This question is for the nurse/doctor, not the mother

	~~2.4.~~ Ask the nurse/doctor: Is the mother /carer well enough to practice SSC?	Yes / No	This question is for the nurse/doctor, not the mother
3. Mother's ability to breastfeed	3.1. Ask the mother: "Are you exclusively breastfeeding?" If "yes": please ask question 3.2 and 3.3, if "no" go directly to 3.4.	Yes / No	This question is for the mother.
	3.2. If the answer to 3.1 is "yes", check if the mother places her baby at her breast on her own, without any help required and can feed them on her own.	Yes / No	The field agent should ask the clinical staff whether the mother can position the baby at her breast on her own without help. However, if during the visit, they observe that the mother requires help and is not able to do it on her own, the field agent should tick "No".
	3.3. If the answer to 3.1 is "yes", check if the mother is able to express milk (ask the mother and/or check with the medical staff)	Yes / No	The field agent should ask the clinical staff whether the mother can express milk. However, if during the visit, they come to observe that the mother is not able to do it, the field agent should tick "No".
	3.4. If the answer to 3.1 is "no", check with medical staff and medical record: It is medically advised for the mother to use mixed or artificial milk?	Yes / No	There are several medical reasons for which a mother may be advised to use mixed or artificial milk. Please consult the medical staff and record.
4. Support of the family	4.1. Ask the mother: Will you receive help from another person at home? (includes family members, friends, neighbours, etc.). *[This question does not count towards the assessment and is used only to gather additional information on gender issues]*	Yes / No	This doesn't count towards the assessment
	4.2. If yes to 4.1, then who is the main person helping you? (Single answer) *[This question does not count towards the assessment and is used only to gather additional information on gender issues]*	Select one: ☐ Baby's father/male partner ☐ Other male family member ☐ Male friend	This doesn't count towards the assessment

		☐ Mother's mother ☐ Other female family member ☐ Female friend	
5. Ask the nurse/doctor: Is this person free of infectious or contagious disease, skin disease, fever, and physically and mentally able to manage the child under KMC?		Yes / No	The field agent should ask the clinical staff.
Summary	**Has the infant been appropriately discharged?** The infant has been appropriately discharged if • Answers to 1.2., 1.4, 1.5 and 2.3 are "No" AND answers to 3.1 is "No" and 3.4 is "Yes", OR, • Answers to 1.2., 1.4, 1.5 and 2.3 are "No" AND answers to 3.1 is "Yes" and 3.2 and 3.3 are "Yes", • AND all the others are "Yes", with: ○ The answer 2.1 being is considered a "Yes" if: ▪ Answer to 2.1.1 is >20 hours in the KMC ward and >8 hours in the neonatal unit, AND ▪ Answer to 2.1.2 is "Every Night", AND ▪ Answer to 2.1.3 is "Every Day" The answers to 4.1 and 4.2 do not count towards the scoring of this screening guide	**Yes / No**	

A4 – Payment Metric C - Nutrition at 40-week Follow-Up

KMC Adequate Nutrition Questionnaire At Follow-Up Appointment		Guidance for interview and Observation
Patient (infant) name		The field agent should complete one grid for each mother interviewed
Caregiver relationship to infant (father, mother, aunt, etc.)		

Date of survey			
Hospital Name			This is the name of the field agent performing the verification
Assessor Name			
1. Questions to ask the mother (in this order) to check if she has exclusively breastfed her child in the last 24 hours.	*What are the things that can prevent a mother/caregiver including you to feed the child according to the doctor's instruction?* *Tell the mother/caregiver: Because of the factors above it may happen that you do not feed the baby exactly as expected. So, for the next questions on breastmilk, water, other milk, anything else; tell me what happened exactly. even if it was not exactly as recommended by the doctor.* *[This question does not count towards the assessment but is used to put the mother at ease]*	List factors	
	1.1. In the last 24 hours, did you give your baby breastmilk? (either through oral, tube, syringe, or cup/spoon feeding)	Yes / No	The mother may not be able to express milk, or the baby may have difficulties latching. In this case, maternal milk (which may also come from another mother) can be fed through cups, syringes and tubes. Please check which type of milk the mother is using by asking the mothers and checking with the clinical staff.
	1.2. In the last 24 hours, did you give your baby water?	Yes / No	
	1.3. In the last 24 hours, did you give your baby any milk other than breastmilk?	Yes / No	
	1.4. In the last 24 hours, did you give anything else to your baby?	Yes / No Please specify: _____	If a mother gives her baby prescribed medication, please tick "No". Prescribed medication is not an issue for the baby and therefore is not considered in this nutrition assessment.

2. If the mother has exclusively breastfed her child in the last 24 hours (question 1), has she exclusively breastfed her child since starting KMC? *The recall in this case is much poorer so the mother might reply that she has only breastfed her child when she hasn't. The verification agent should therefore observe mothers while visiting the hospital and record any instances during which the mother fed her child with anything other than breastmilk.*	2.1. Since you left the hospital, have you given your baby breastmilk? (either through oral, tube, syringe, or cup/spoon feeding)	Yes / No	The mother may not be able to express milk, or the baby may have difficulties latching. In this case, maternal milk (which may also come from another mother) can be fed through cups, syringes and tubes. Please check which type of milk the mother is using by asking the mothers and checking with the clinical staff.
	2.2. Since you left the hospital, have you given your baby water?	Yes / No	
	2.3. Since you left the hospital, have you given your baby any milk other than breastmilk?	Yes / No	
	2.4. Since you left the hospital, have you given anything else to your baby?	Yes / No Please specify: _____	If a mother gives her baby prescribed medication, please tick "No". Prescribed medication is not an issue for the baby and therefore is not considered in this nutrition assessment.
3. Observation of feeding other than breastfeeding?		Yes / No If Yes: ☐ Artificial Milk ☐ Water ☐ Other _____	The mother may not be able to express milk, or the baby may have difficulties latching. In this case, maternal milk (which may also come from another mother) can be fed through cups, syringes, and tubes. Please check which type of milk the mother is using by asking the mothers and checking with the clinical staff.

4. **Why did the infant receive anything other than breastmilk?**	It is medically advised for the mother not to breastfeed (please select all that apply): ☐ Mother has human t-cell lymphotropic virus type I or II ☐ Mother has other disease or condition. Please specify: _____-_____ ☐ Mother is receiving cancer chemotherapy agents ☐ Mother uses illicit drugs ☐ Mother is HIV-positive Other reasons ☐ Mother refuses to breastfeed or insists on using formulas. Please provide reason: _____		All other medical reasons should be recorded in the second tick box. If the mother's answers are inconsistent with the medical staffs, then check the medical record and flag the inconsistency with them to seek resolution.
5. The paediatrician has recommended artificial milk to the mother and has documented this reason in the infant's file.	Yes/ No Please provide the reason given: _____		If the paediatrician has recommended artificial milk, then the baby is receiving appropriate nutrition. However, the paediatrician's recommendation should be properly documented in the patient's file.
Summary	Has the baby received appropriate nutrition? *The baby has received appropriate nutrition if:* • *The answers to 1.1 and 2.1 are 'Yes' AND the answers to 1.2, 1.3, 1.4, 2.2, 2.3, 2.4, and 3 are 'No' OR* • *If answers to 1.3 or 2.3 are 'Yes' (regardless of answers to 1.1 and 2.1) AND answers to 1.2, 1.4, 2.2 and 2.4 are all "No", AND answer to 3 is either "No" or "Yes – Artificial Milk", AND there is a medical reason for the mother not to breastfeed in 4; OR* • *If answers to 1.3 or 2.3 are 'Yes' (regardless of answers to 1.1 and 2.1) AND answers to 1.2, 1.4, 2.2 and 2.4 are all "No", AND answer to 3 is either "No" or "Yes – Artificial Milk", AND there is no medical reason for the mother not to breastfeed in 4, AND the answer to 5 is 'Yes' and the reason documented is provided.* • *The answers to 1.1 and 2.1 are 'Yes' AND the answers to 1.2, 1.3, 1.4, 2.2, 2.3, and 2.4 are 'No' AND answer to 3 is "Yes – Artificial Milk" AND there is a medical reason for the mother not to breastfeed in 4;*	Yes / No	

	• *The answers to 1.1 and 2.1 are 'Yes' AND the answers to 1.2, 1.3, 1.4, 2.2, 2.3, and 2.4 are 'No' AND answer to 3 is "Yes – Artificial Milk" AND there is no medical reason for the mother not to breastfeed in 4, AND the answer to 5 is 'Yes' and the reason documented is provided* *If the mother says (or is observed) that she is feeding her infant with anything other than breastmilk or artificial milk, then the baby has not received appropriate nutrition.*		

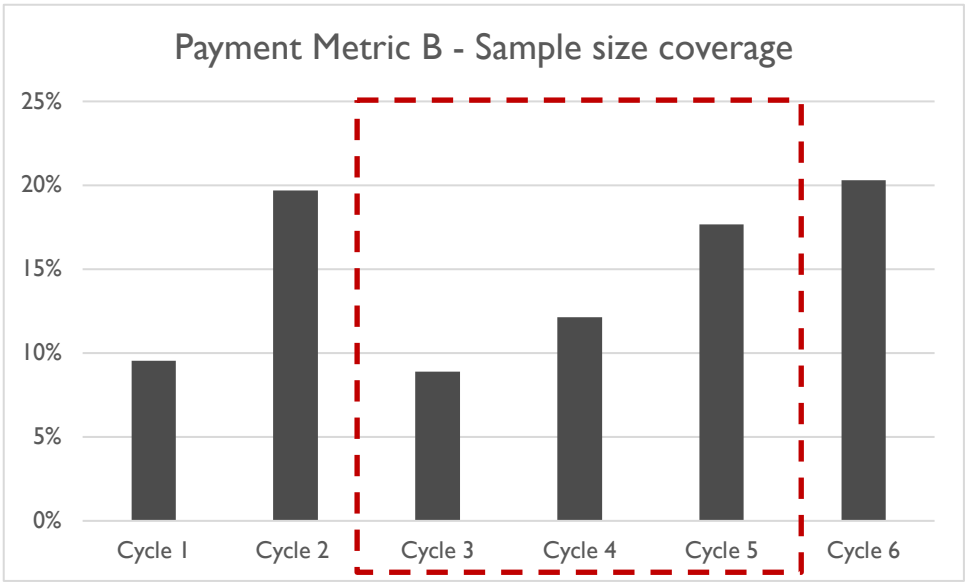
2.4.b Summary of adjustments to enable remote verification of outcomes

Payment metric	Current calculation	Adjusted verification calculation	Operational implications
Payment Metric A	In person verification by IRESCO during hospital visits.	Hospital-reported facility and staffing updates & photographic evidence of facility requirements.	Live video tour by hospital clinician with IRESCO to examine facilities. Scanned staff training information.
Payment Metric B	Audited total number of babies enrolled x ((% of patients with Appropriate SSC and Nutrition assessed through survey and observation x 75%) + (% of patients with Appropriate Discharge assessed through surveys and observation x 25%))	Checked total number of babies enrolled –[X%]* x ((% of patients with Appropriate SSC and Nutrition x 100%)	IRESCO to check patient enrolment via telephone calls No audit will take place during the remote verification. We will be deducting an "error margin"*from claimed amount. Once normal verifications can resume, IRESCO will audit all claimed patients' file, and payments will be retroactively adjusted if necessary. Remote interviews with mothers via telephone to assess SSC and nutrition using an amended verification grid. Calls with clinicians around authorized medical decisions regarding appropriate nutrition.
Payment Metric C	Follow up rate x Appropriate weight rate x Appropriate nutrition assessed through surveys with the clinical staff and mothers during 40 week follow up consultation	Follow up rate** x Appropriate weight rate x Appropriate nutrition rate at 40 weeks	In person and tele-consultations treated as equally valid based on new KF Cameroon guidelines (under development). Only babies who attend the in person 40 week follow up session to be included in the calculation for appropriate weight. Appropriate nutrition assessed using data submitted to IRESCO which will be audited once normal verifications can resume and retroactively adjusted for if necessary.

2.4.c Evidence review on duration of skin-to-skin care

Study reference	Type.	Hours of SSC	Results
Acharya N, Singh RR, Bhatta NK, Poudel P. Randomized Control Trial of Kangaroo Mother Care in Low Birth Weight Babies at a Tertiary Level Hospital. J Nepal Paediatr Soc **2014**	RCT	6 hours per day	LBW babies less than 2000 gm who receive KMC show better weight gain and have less incidence of hypothermia than those who do not receive KMC.
Kangaroo Mother Care as compared to conventional care for low birth weight babies, Syed Manazir Ali1, Jyoti Sharma1, Rajyashree Sharma2, Seema Alam1, **2009**	RCT	6 to 8 hours per day	Kangaroo mother care results in better weight gain, decreases the risk of serious infections and hypothermia, stabilizes physiological parameters, decreases the hospital stay, promotes breast feeding and has no adverse effect on growth and mortality in LBW babies.
Effect of Kangaroo Mother Care on physical growth, breastfeeding and its acceptability. Gathwala G1, Singh B, Singh J, **2010**	RCT	c. 10 hours per day	KMC improved physical growth, breastfeeding rates and was well accepted by both mothers and nursing staff.
Kangaroo Mother Care and Neonatal Outcomes: A Meta-analysis. Boundy et al., **2016**	Meta-analysis	Variable	Mortality benefit 0.64 with>22 hrs per day, no benefit between 4-8 hours
Effect of community-initiated kangaroo mother care on survival of infants with low birthweight: a randomized controlled trial. Mazumder et al., **2019**	RCT	<2000g – 9.9H, >=2000g – 10.8H (median	These infants were treated in the community with support from ASHA workers. Mortality benefit- 28 mortality RR 0.71 for intervention group, and RR 0.76 for 180 day mortality. Intervention infants had higher weight for age Z-scores.

2.4.c Interview sample size as a % of babies claimed



2.4.d Alternative Payment metric B calculation

Cycle		Outcomes claimed		DIB level adjustment		Variance
1	$	128,650	$	134,850	$	6,200
2	$	114,700	$	111,600	$	-3,100
3	$	319,300	$	280,550	$	-38,750
4	$	237,150	$	303,800	$	66,650
5	$	354,950	$	359,600	$	4,650
Total	**$**	**1,154,750**	**$**	**1,190,400**	**$**	**35,650**

NB: The calculation for quality KMC is currently calculated on a hospital basis. This table shows the impact of calculating quality KMC at an aggregate level across all hospitals.

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