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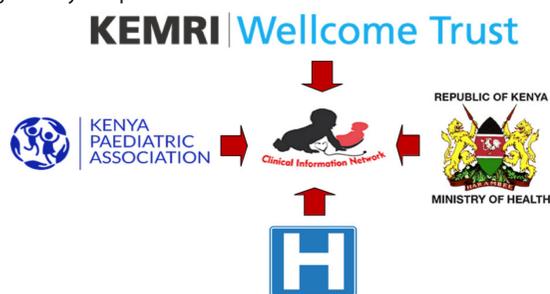
## BACKGROUND

Poor service delivery in the Kenyan public healthcare institutions can be attributed to non-compliance to evidence based practises and clinical guidelines by the health providers. This has resulted to drug dose errors, poor compliance with evidence-based standards and high mortality rates from avoidable and treatable illnesses in children. It is through audit that intervention approaches and processes are developed and implemented in a healthcare system to improve service delivery. Therefore, health systems must be improved if continued and sustained gains in health outcomes are to be made particularly in low and middle income countries.

Health systems must be improved if continued and sustained gains in health outcomes are to be made particularly in low and middle income countries. Delivery of quality health care has considerable potential in reducing childhood deaths in low-income countries where infant mortality and under 5 mortality rates are considerably high at 48 and 73 deaths per 1000 live births respectively (UNICEF, 2014). However, both anecdotal and empirical evidence have identified that poor documentation practices as a hindrance to use of routine data in monitoring quality of care delivered to the seriously sick child (Irimu et al., 2012) (Barasa, et al., 2012)

## CLINICAL INFORMATION NETWORK (CIN)

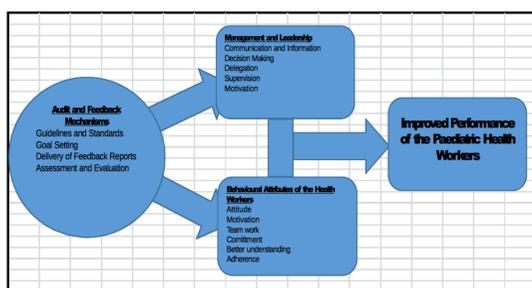
Collaborative research program by the KWTRP, Ministry of Health, Kenya Paediatric Association (KPA) and the participating county hospitals.



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## CONCEPTUAL FRAMEWORK

The mechanism of feedback was informed by the feedback delivery strategies and mechanisms according to the summary of findings by Flottorp et al in the systematic review on Audit and Feedback (Flottorp et al., 2010). This was corroborated by the behavioural theories where, if feedback was delivered in the correct format, content and context then there was high expectancy of a positive correlation of performance and the healthcare professionals as represented in Figure 2.



## METHODOLOGY

The study employed an exploratory qualitative research design and using semi-structured interviews and focus group discussions, the perceptions of the healthcare workers on audit and feedback were explored. A total of 53 paediatric healthcare workers from 14 county hospitals were purposively sampled through 10 focus group discussions and 10 semi structured interviews. Data were transcribed, themes explored, and revised in two rounds of coding and analysis in Microsoft Excel, subjected to a layered analysis, and reviewed.

## DATA ANALYSIS

The analysis involved comparison of transcripts from all the FGDs, and the semi-structured interviews. The qualitative analysis involved the identification of the important categories and subcategories, as well as patterns and relationships, through a process of discovery. The coding was validated by one of the co-investigators experienced in A&F (GI).

## RESULTS

Eight (8) major themes of the perceptions of the healthcare workers to A&F were identified as below:

Results	Evidence
1. Commitment to improve (Directed efforts) A&F were useful in identifying the gaps in care and helped to formulate and develop strategies to improve on their performance.	...we are able to direct and to influence them to do the right thing like on the feedback of the treatment charts.... MFGD2 21 2015 ...when you realize that there is a problem with managing dehydration then you organize a CME on that, if you there is a problem with malaria then you realize, so it identifies areas where you can have CME's on." FGD 2 21 2015

2. Opportunity to Reflect on Quality of Care Delivered The feedback reports enabled them reflect on the quality of care delivered to patients. The areas of suboptimal performance and gaps identified prompted the health care workers (HCWs) to address the gaps.	...you know how to manage this children and ultimately the quality of care has really changed.... It's about people being conscious and documenting just what they want..... FGD 2 31 2015
3. Better understanding of Hospital Morbidity and Mortality A&F reports revealed some serious childhood illnesses which had previous been assumed to be uncommon causes of admission. There was consensus that the documentation process had improved and the hospitals had better information on causes of mortality.	Some of the discharge summaries were missing, they are not just lying around, and patients went with them home. Those ones who died, previously we were not writing, we are now trying to write, previously we were not writing, so the thing that we relied on was this book (The daily mortality entry book)." DR BM 01 2014
4. Reinforced Standards on Care The audit reports helped them develop orientation plans to induct new interns on delivering high quality paediatric care in the participating hospitals.	.... "I would say that our Nurses plus the Clinicians, CO's interns and the MO's interns they have embraced the use of pediatric protocols.... we copied some things and then we put them on the wall so it was easier for them to just look at them and....." FGD 2 05 2015
5. Enhanced Support Supervision A&F enabled them to give supportive supervision to the health care workers. They (paediatricians) also felt that the hospitals' administration supported them in the implementation of the good documentation practises.	"Yea, it looks like it enhances that and you see if you are able to identify where the problem are and you can correct them. So to me it's good it's always good" GO 37 2014
6. Enhanced Team work The emphasis on the use of the CPGs enhanced team work amongst the teams with the senior paediatricians providing guidance and leadership in the unique and complicated cases.	".... If you don't have that team work, then you can't manage, simple as that. So currently we have a very good team work who both works in the paediatric ward and the new born ward, yea so things are working and I hope they remain like that...." GO 27 2014
7. Used Data for Planning The feedback reports were helpful in highlighting the lack of resources in the facilities vital in the delivery of paediatric care and enhanced proper forecasting of resources, planning and decision making.	..... there is a time our Paediatrician who was like we really need to get a pulse oximeter..... I never used to see the importance but he really fought hard and we got three so actually I'm able to see the importance yes and so the feedback is good, it is going to help us improve the quality. FGD 2 25 2015
8. A&F as an Incentive The identified gaps from the A&F reports formed the basis of new trainings for staffs throughout the CIN project.	..... our department has actually benefited a lot because we are able to support the data clerk uh our data clerk does not mean that she would always deal with the CIN information

## DISCUSSION

The strategy of delivering feedback involved detailed review of the paediatric care process in the selected facilities based on the basic paediatric protocols and guidelines. The delivery of paediatric care was matched against the standards as was stipulated in the basic paediatric guidelines and which was the basis of the performance measurement. All the participating hospitals had targets and goals to achieve that formed the measurement points against which performance was evaluated through the collected data. The performance/feedback reports covered all the care points and departments involved in clinical paediatric care and were delivered to all the healthcare workers in these departments.

### Commitment

The findings from this study indicated that A&F enhanced the commitment of the health care workers to improve the quality of care. These findings were consistent with the systematic review by Flottorp et al., which argued that commitment and support was important in the implementation of the A&F strategies.

### Quality of Care

The feedback reports provided self-directed reflection on the quality of care delivered to patients by the health care professionals. They HCWs felt they were able to monitor and evaluate their performance the areas of suboptimal performance and gaps identified prompted them to address the gaps. According to the systematic reviews by Ivers et al., and Flottorp et al., different ways of monitoring or auditing practice (audit based on routinely collected data from electronic patient records, paper-based forms, patient surveys, peer audits through practice visits, etc.); which was what was employed by the CIN project was one of the strategies that provided data to the HCWs.

### Planning and Decision Making

A&F enhanced proper planning and evidence based decision making due to the provision of feedback reports. The healthcare workers also appreciated that the availability of correct patient data which was essential in making correct diagnosis and treatment decisions. These results resonated with the theme that evidence-based medicine (EBM) was the conscientious, explicit, and judicious use of current best evidence in making decisions about the care of individual patients as discussed by Nzinga et al., 2009 where the best evidence was aggregated to define optimal and sequential decisions in providing clinical care.

### Leadership and Supervision

From our study, the paediatricians felt that the regular audit and feedback reports enabled them to provide support to the HCWs compared to what used to happen before the CIN project started. They felt that they received adequate support from the leadership of the hospitals' to implement the good documentation practises. The leaders did not mind the comparison of their performance to the other 13 participating health facilities and actually the comparative analytics challenged them to improve. This was corroborated by the study by Nzinga 2009 that the establishment of accepted and realistic standards of care at facility levels (including orienting new staff to standards) improved the performance of the HCWs.

## CONCLUSION

The audit and performance feedback reports positively influenced the behavioural attributes and the leadership and management skills of the health workers. The hospitals appreciated the feedback reports which explicitly brought awareness of their performance. A&F was perceived to improve paediatric care and reduced variation in documentation practices and quality of patients' care.