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RESEARCH AND EVALUATION REPORT

Data validation report for the USAID ASSIST Project orphans and vulnerable children improvement work in Malawi

MARCH 2016

This data validation report was prepared by University Research Co., LLC (URC) for review by the United States Agency for International Development (USAID) and authored by Alexander Kintu of the Harvard T. H. Chan School of Public Health under the USAID Applying Science to Strengthen and Improve Systems (ASSIST) Project, managed by URC. Support for improving the quality of care for orphans and vulnerable children in Malawi is made possible by the generous support of the American people through USAID, with funding from the U.S. President's Emergency Plan for AIDS Relief (PEPFAR).

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DISCLAIMER

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For more information on the work of the USAID ASSIST Project, please visit www.usaidassist.org or write assist-info@urc-chs.com.

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Acronyms

ASSIST	USAID Applying Science to Strengthen and Improve Systems Project
CBO	Community-based organization
HCI	USAID Health Care Improvement Project
MGCDSW	Ministry of Gender, Children, Disability, and Social Welfare
OVC	Orphans and vulnerable children
QI	Quality improvement
URC	University Research Co., LLC
USAID	United States Agency for International Development
VHH	Vulnerable household
VSLA	Village savings and loan association

EXECUTIVE SUMMARY

Introduction

This report summarizes findings of a validation exercise for data collected and reported under the USAID Applying Science to Strengthen and Improve Systems (ASSIST) Project in Malawi by University Research Co., LLC (URC) as part of technical assistance to improve orphans and vulnerable children (OVC) service delivery in Balaka and Mangochi districts through support for community quality improvement teams. During the initial phase, ASSIST worked with five community-based organizations (CBOs) in the rural areas of Toleza, Nancholi, Mkata, Chanthunya I, and Chingwenya, where project and CBO staff supported the creation of community improvement teams. These activities were later extended to five more CBOs in Chapola, Chanthunya II, Kadyalunda, Malembo, and Mpeya.

The USAID ASSIST Project mandates that participating countries perform external validation exercises for improvement indicators and collect data from control sites that do not receive support from USAID ASSIST. ASSIST engaged the Harvard T.H. Chan School of Public Health as an independent organization to perform these data validation activities in Malawi.

This is the first validation exercise for reported indicators in the ASSIST Malawi OVC program. The goal of this exercise was to answer four broad questions: 1) how do data collected during the validation exercise compare with previously reported data; 2) how quality improvement teams collect and interpret data; 3) how do data collected by teams compare with data available in schools; and 4) how does student educational performance in schools working with ASSIST-supported improvement teams compare with that in schools not supported by improvement teams.

Methods

We chose the five quality improvement (QI) teams that ASSIST supported during the initial phase of this program for the validation activities because the newer teams had just began submitting their data. Each community improvement team works with several villages and schools in their jurisdiction that have been chosen according to the scope of activities the team feels is feasible to implement. In total, these five QI teams work with 151 villages and 14 schools in this rural setting. We selected a convenience sample of seven schools for the validation process for education performance indicators. In addition, we selected five schools in villages near to some of the intervention schools as control sites for collecting education performance data. One control school was in Balaka District, and the other four were in Mangochi. All were within five kilometers of a school being monitored by a QI team. Records for household economic strengthening are maintained by each QI team and contain details of activities carried out in the villages. No villages were selected as control sites for assessing household economic strengthening data.

Results

All five QI teams had records for the outcome indicators for education performance. With exception of the Nancholi team, all other teams had figures on education performance in their records that were similar to those that they had previously submitted to ASSIST. Records were available only for the period when teams started work with ASSIST. There were no summarized results from the schools for the period before the start of the ASSIST work.

We found some variation in the criteria used for classifying whether a student had “passed” their exams. In most of the schools, a student was considered to have passed if they have an average score of 50 percent during their end-of-term exams. However, teachers were allowed to lower the pass mark in the event that many students do not achieve the 50 percent cutoff. These differences made it difficult to compare progress in education performance across schools with different criteria for passing. This was especially so for lower levels (Classes 1-5) where the set pass mark varied from school to school.

We found some variation in the quality of records maintained by different teams. QI teams for Nancholi, Mkata, and Chingwenya keep track of performance in counter books, which they said made it easy to track their data. A QI team member in charge of tracking education performance transcribes education data from school records into these books. Another team member also tracks any available indicators for household economic strengthening. Teams from Balaka District (Toleza and Chanthunya) did not enter their data into books but instead labeled pages from flipcharts that had been used in previous QI sessions, making it difficult to chronologically compare their data with previously submitted records.

Overall, we observed the following in four of the five control schools:

- When compared to schools that are supported by QI teams, control schools generally had fewer records that could be used to track student performance.
- The quality of data records in these four schools was also generally poor when compared to schools that are supported by QI teams. Only one of the schools maintained their records in a counter book, while the other three either had no records or used exercise books that were in poor condition at the time of the survey. The unavailability of these data in control schools made it difficult to compare student performance in these schools to with those monitored by QI teams.
- The content of records at these control schools was not only lacking but also varied from school to school. Although the District Education Manager's office requires all schools to track student and teacher performance, not all control schools were tracking this data.

Conclusions

We found that all QI teams prioritized education performance as their most important indicator and concentrated their efforts on this area initially. It is only more recently that the teams began tracking the effects of QI activities on household economic strengthening and plan to track the effects of these activities on population health in the future.

Our findings on education performance highlight four main points. First, most data collected from the schools and QI teams were similar to what has previously been submitted to ASSIST Malawi. Second, there is variation in the definitions of what some of the indicators collected mean, most especially the criteria used by schools to classify students that have passed a class. We also found variability in the quality of records, which in turn influenced the ability of teams to use these data for quality improvement. Lastly, with the exception of one control school, all schools that are supported by ASSIST perform better in some indicators than those that are not supported. The indicators include: the number of terms that the schools have collected summarized data on student performance, the quality of data records, and the overall number of indicators that the school tracks each term.

The qualitative data validation exercise showed that data reported by ASSIST Malawi are similar to what have been collected and maintained by community improvement teams that are supported through the project. We also found that QI interventions that are implemented by these teams have had a positive impact on education performance in primary schools and on household economic strengthening in these rural, low-income settings. However, we cannot quantify the magnitude of effect of specific interventions due to lack of individual-level data and lack of process indicators for the assessed outcomes.

More training and oversight of QI teams in data collection, collection of data on process indicators, and introduction of a uniform standard for passing grade will improve the quality of data collected and enable quantitative evaluation of the impact of QI activities.

I. INTRODUCTION

This report summarizes findings of a validation exercise for data collected and reported for the USAID Applying Science to Strengthen and Improve Systems (ASSIST) Project by University Research Co., LLC (URC) as part of technical assistance to improve the delivery of services for orphans and vulnerable children (OVC) in Balaka and Mangochi districts in Malawi.

The USAID ASSIST Project mandates that participating countries perform external validation exercises for improvement indicators and collect data from control sites that do not receive support from USAID ASSIST. ASSIST engaged the Harvard T.H. Chan School of Public Health as an independent organization to perform these data validation activities in Malawi.

The overarching goal of the USAID ASSIST Project in Malawi is to improve the quality of care and protection services for vulnerable children and their families. ASSIST Malawi has been supporting community quality improvement (QI) teams working with vulnerable children in the rural districts of Balaka and Mangochi for the past two years. The goal of this activity is to improve the quality of care and protection services for vulnerable children and their families. ASSIST has collaborated with the Ministry of Gender, Children, Disability, and Social Welfare (MGCDSW) to initiate implementation of the recommended OVC minimum standards of care in these two districts by rolling out activities in two phases. During the initial phase, ASSIST worked with five community-based organizations (CBOs) in the rural areas of Toleza, Nancholi, Mkata, Chanthunya I, and Chingwenya, where they supported the creation of community improvement teams made up of CBO staff and community representatives. These activities were later extended to five more CBOs in Chapola, Chanthunya II, Kadyalunda, Malembo, and Mpeya. All teams were trained in QI methods and gender considerations and were guided to develop community-specific improvement plans. ASSIST Malawi thereafter worked with the teams to implement these plans in order to achieve specific goals that teams themselves set.

The first topic the QI teams worked on was education – getting vulnerable children to remain in school. Specific changes introduced by teams to improve educational performance included creating after-school clubs to provide additional social and academic support mentoring by former students and activities to generate income to pay for school fees. Another area teams worked on was household economic strengthening, involving promoting participation in village savings and loan associations and development of home gardens to produce food for sale (linked to income generation for paying school fees).

Improvement was monitored by recording changes tested by each QI team and gathering data on a set of indicators that are submitted to URC on a monthly and quarterly basis. For the OVC work, these indicators fall in three broad areas: education performance in primary schools, household economic strengthening, and linkage to health services to improve access and utilization of health care and child protection. Given the amount of data to be collected by teams on each service area, teams were advised to first prioritize on only one of these three major areas and with time expand to other areas once the teams were comfortable with the approaches used. **Figure 1** shows an example of documentation journal used by the QI teams to record changes that the community improvement team is testing at a particular time.

All teams identified education performance as the key area for initiating improvement activities because it was scored the lowest when teams applied the Child Status Index to identify areas where vulnerable children fared worse. Education performance data were therefore available for the past two years from records that are collected by the community QI teams and from the primary schools. More recently, the QI teams started carrying out activities for household economic strengthening, but only a few had submitted data to URC by the time of this validation exercise. In addition, teams have begun carrying out activities related health but only recently began reporting progress indicators in this area. This data validation exercise therefore includes findings related mainly to education performance data and to some data recently submitted by a few sites on household economic strengthening.

Figure 1: Form used by CBOs to set and monitor progress QI activities for education Performance

Part 2: Changes Worksheet - QI Team Activities: Please list below the changes that the team has tried out in order to achieve the improvement objective. Write all changes, whether effective or not. Also note when it was started and when it ended (where applicable) to enable you to annotate the results.

Tested Changes: In the space below, list all of the changes that you are implementing to address the improvement objective. Use 1-2 sentences to briefly describe the tested change.	Start Date: DD/MM/YY	End Date if applicable: DD/MM/YY	Effective? (Yes/No) Was there any improvement observed?	Comments: Note here any potential reasons why the change was or was not effective; also indicate any change in indicator value observed related to this change.
1. Holding meetings with PE Parents, orientation on Child rights.	7/01/14	17/01/14		
2. Establishment of children's corner	28/01/14	30/01/14		
3. Formation of maths clubs at school	3/02/14	10/02/14		
4. Guidance and counselling for non-performing.	15/02/14	16/02/14		
5. Mobilization of teaching and learning resources.	20/02/14	28/02/14		
6. Inspection in all video show areas in collaboration with Child Protection Committee (CPC).	5/03/14	7/03/14		
7. Career talks	14/03/14	18/03/14		
8. Lobbying for motivational of teachers incentives	25/03/14	31/03/14		

This is the first validation exercise for reported indicators in the ASSIST Malawi OVC program. The goal of this exercise was to answer four broad questions:

1. Is there a difference between records kept by community QI team and available school records?
2. What is the process followed by QI teams in coming up with the reported figures, and what do these figures represent? For example, we were interested in finding out whether standards for passing an exam were similar across all schools.
3. Is there a difference in quality of data collected and maintained across community QI teams?
4. Is there a difference between education performance in schools that ASSIST-supported QI teams engage with and schools that do not get this support?

II. METHODS

A. Study Sample

We chose the five QI teams that ASSIST has supported since the initial phase of this program for the validation activities because the newer teams had just began submitting their data. Each selected team works with several villages and schools in their jurisdiction that have been chosen according to the scope of activities each team feels is feasible to implement. In total, these five QI teams work with 151 villages

and 15 schools in this rural setting. We selected a convenience sample of seven schools for the validation process for education performance indicators. In addition, we selected five schools in villages near to some of the intervention schools as control sites for collecting education performance data. Records for household economic strengthening are maintained by each QI team and contain details of activities carried out in the villages. No villages were selected as control sites for assessing household economic strengthening data.

B. Indicators

There are 12 process indicators for assessing the impact of QI interventions to improve education performance. These indicators are selected with the expectation that the changes introduced by QI teams will translate into better school performance (**Appendix 1**). Teams also track three outcome indicators: enrollment in primary schools, the proportion of pupils who sat the exam, and the proportion of pupils who passed the exams with each subsequent term. All data on education performance were compiled and submitted at the end of each school term by a QI team member, usually a teacher in one of the schools supported by the CBO. For validation, we selected all three outcome indicators and two process indicators of education performance (the number of vulnerable girls followed up by mother groups and the number of girls followed up by mother groups who pass exams). For control sites, we chose to collect data on all outcome indicators as well as any other records that the schools could provide that relate to student performance.

There are 12 indicators for household economic strengthening (**Appendix 2**). We selected two (the number of vulnerable households that establish kitchen gardens and the number of vulnerable households linked to village savings and loan schemes) as indicators for validation of household economic strengthening data. Where available, these data were submitted to URC by a selected QI team member. Process indicator data for household economic strengthening were initially requested monthly but this was later changed to quarterly.

C. Data Collection

We collected validation data by visiting each selected QI team at their CBO offices and, where possible, at the schools. During these visits, teams were asked to provide records that could be used for comparison with data previously submitted to URC. Pictures were taken of these records after verbal consent from the QI teams for use during data analysis. In addition, all teams were asked to describe the processes used in enumerating the coverage indicators. For example, a team member would be asked to describe how the number of households with kitchen gardens had been counted. Teams that reported process indicators for education performance were asked to describe the process of tracking orphans and vulnerable children in schools. For control sites, head teachers were asked to provide any records used for monitoring student performance as well as those for initiatives to improve their passing rates. Example of these include teachers work plans, student school attendance, and end-of-term performance. We also asked head teachers to describe any such initiatives that take place in their schools but are not documented.

D. Data Analysis

Data analysis was qualitative and involved two processes. First, QI teams were asked to describe processes used to collect and enumerate data on specific process indicators, such as the number of vulnerable girls that are passing exams and the number of vulnerable households that established kitchen gardens. Field notes of described processes were taken during sessions with each QI team. The expectation was that each team should have a detailed and structured mechanism in place for collecting these data. Second, for outcome indicators, we compared data on education performance that was collected during the validation field visits to records of data previously submitted to URC and maintained by the project in an Excel spreadsheet. The spreadsheet contains school records of the five most recent academic terms, with details on the number and percentage of students enrolled in each class at the

beginning of each term, those that sat for exams at the end of that term, and those who passed. These data are further disaggregated by sex. With few exceptions, schools' entries into this database have no missing data and very few have queries on reported figures. For each of the seven schools selected, we compared all records collected during the field trips with those in the database and recorded any inconsistencies. We also compared previously reported data on household economic strengthening with records maintained by the CBOs.

III. RESULTS

The data validation findings are organized by the four areas addressed by the exercise: 1) comparing data collected during the validation exercise with previously reported data; 2) how teams collected and interpreted data; 3) comparing data collected by teams with data available in schools; and 4) comparing student educational performance in schools working with ASSIST-supported improvement teams with that in schools not supported by improvement teams.

1. Are data collected during the validation exercise similar to data previously submitted by QI teams to URC?

Figure 2 shows measures of data quality across the 15 schools that are supported by the QI teams. Overall, there was complete documentation of interventions that teams carry out in the community, with all teams keeping records on a set of QI indicators (see example in Figure 3 for one QI team). Teams either directly submit these progress reports to URC during site visits or hand them over to district social workers who then submit the reports to URC.

Figure 2: Measures of data quality across different schools (n=15)

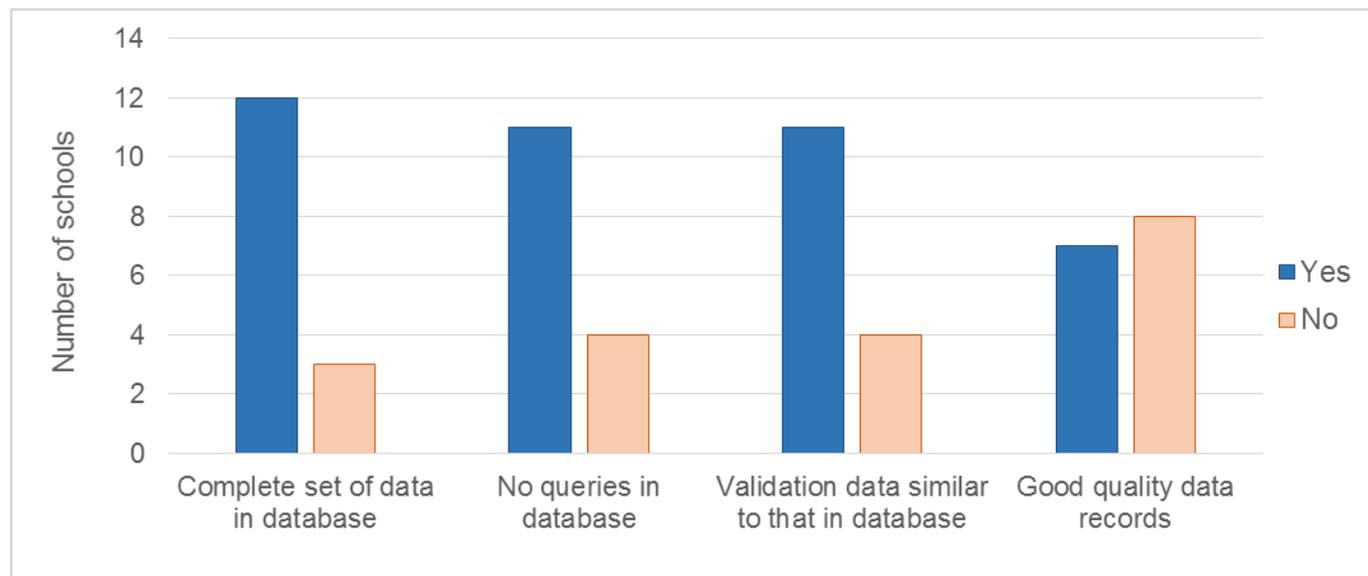


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3. Is there a difference in quality of data collected and maintained across community QI teams?
4. Is there a difference between education performance in schools that ASSIST-supported QI teams engage with and schools that do not get this support?

II. METHODS

A. Study Sample

We chose the five QI teams that ASSIST has supported since the initial phase of this program for the validation activities because the newer teams had just began submitting their data. Each selected team works with several villages and schools in their jurisdiction that have been chosen according to the scope of activities each team feels is feasible to implement. In total, these five QI teams work with 151 villages

for collecting data on the several indicators of household economic strengthening in a few select villages, with plans to later cover all villages in their jurisdiction. All QI teams, with the exception of the Nancholi team, were able to describe a clear and detailed mechanism of collecting data on some of the household economic strengthening indicators in their records. QI teams that had set smaller goals for collecting data on household economic strengthening indicators were generally tracking progress better than those with more demanding goals. For example, the Chingwenya team found it easier to collect data from the 30 households that they are working with as compared to the Nancholi team that was working with 140 households. We could not compare data previously reported to URC with those collected during the field visits because there is no existing database for these data, since teams were just starting to focus on this improvement aim.

Figure 4: One QI team’s data tracking progress in household economic strengthening

- lots of hope of being
since it goes down and down
to some problems!

DATA COLLECTED ON	NES	Kandubi	Mmenyanga
	Numbers		
1 FISP	$\frac{9}{12} \times 100 = 75\%$	$\frac{5}{5} \times 100 = 100\%$	$\frac{7}{13} \times 100 = 54\%$
2 SCTP	$\frac{1}{2} \times 100 = 50\%$	$\frac{1}{5} \times 100 = 20\%$	$\frac{1}{3} \times 100 = 33\%$
3 Livestock	$\frac{4}{12} \times 100 = 33\%$	— = 0%	— = 0%
4 Wetland farming	$\frac{3}{12} \times 100 = 25\%$	$\frac{3}{5} \times 100 = 60\%$	— = 0%
5 Kitchen garden	$\frac{2}{12} \times 100 = 17\%$	— = 0%	— = 0%
6 YST	$\frac{1}{12} \times 100 = 8\%$	— = 0%	— = 0%
7 Business support	$\frac{4}{12} \times 100 = 33\%$	— = 0%	$\frac{1}{13} \times 100 = 8\%$
8 Modern farming	$\frac{1}{12} \times 100 = 8\%$	$\frac{5}{5} \times 100 = 100\%$	$\frac{12}{13} \times 100 = 92\%$
9 Small s. business	$\frac{3}{12} \times 100 = 25\%$	$\frac{1}{5} \times 100 = 20\%$	$\frac{3}{13} \times 100 = 23\%$

2. What do the figures represent?

We found some variation in the criteria used for classifying whether a student had “passed” their exams or not. In most of the schools, a student was considered to have passed if they have an average score of 50 percent during their end-of-term exams. However, teachers were allowed to lower the pass mark in the event that many students do not achieve the 50 percent cutoff. This variation made it difficult to compare progress in education performance across schools with different criteria for passing. This was especially so for lower levels (Classes 1-5) where the set pass mark varied from school to school. Passing rates were easier to compare across schools in Class 8, where students in all schools in a district take the same exam in the second and third school terms. For some zones, these exams have been extended to Classes 6 and 7, making it easier to compare performance for all upper grades.

3. How does data quality compare across QI teams and schools?

Each QI team includes at least one teacher from a school in their jurisdiction that coordinates data collection from all schools, which made it easy to access school records during site visits. We only had access to school records of the school where we met with the QI team. This school also serves as the venue where teams hold their regular meetings. We found some variation in the quality of records maintained by different teams. QI teams for Nancholi, Mkata, and Chingwenya keep track of performance in counter books, which they said made it easy to track their data. A QI team member in charge of tracking education performance transcribes education data from school records in the team’s counter book. Another team member also tracks any available indicators for household economic strengthening.

Teams from Balaka District (Toleza and Chanthunya) did not enter their data into books but instead labeled pages from flipcharts that had been used in previous QI sessions, making it difficult to chronologically compare their data with previously submitted records.

4. What is the comparison between schools that receive QI team support and those that do not?

We selected five schools as control sites for collecting data to be used for comparison with schools that are supported by QI teams. One control school was in Balaka District, and the other four were in Mangochi District. All five were within five kilometers of a school being supported by a QI team.

Overall, we observed the following in four of the five control schools:

- 1) When compared to schools that are supported by QI teams, control schools generally had fewer records that could be used to track student performance. None of the head teachers that we interacted with at these four schools was able to provide us with a complete set of records or data for tracking education performance for the academic term that had just ended. Two head teachers had records on performance for only two of the eight classes, and one head teacher did not provide us with any records at all.
- 2) The quality of records in these four schools was also generally poor when compared to schools that are supported by QI teams. Only one of the schools maintained their records in a counter book, while the other three either had no records or used exercise books that were in poor condition at the time of the survey. The unavailability of these data in control schools made it difficult to compare student performance in these schools with that of school supported by QI teams.
- 3) The content of records at these four control schools was not only lacking but also varied from school to school. Although the District Education Manager's office requires all schools to track student and teacher performance, not all control schools were tracking this data. With the exception of summary results for primary school exit exams (Term 3 exams for Class 8) that are provided by the district education office to all head teachers, few of these schools had any data to show that they continuously track student performance. Some, but not all, schools had records of several indicators as required by the district to track performance other than exam results including, monthly student attendance, the use of teaching plans, number of orphans per class, and others. The teachers were also unable to describe what they do with the collected data besides submitting it to the District Education Manager's office.

Despite the above observations, one control school, Mkumba Catholic Primary School, had the best data records in all schools assessed (including those that receive QI team support). This school is in the same area as the schools that are supported by Nancholi team and located about three kilometers from where this team meets. This school had very detailed data on student performance in the past three years. Unlike other schools that only presented the number of students that sit and pass exams, Mkumba was the only school to further stratify their data by subject (English, Mathematics, Chichewa, Arts and Life Skills, Social and Religious Studies, and Primary Science). In addition, the school also tracked monthly class attendance, teacher absenteeism, the number of students that drop out in any term, those that are readmitted after previously dropping out of school, as well as those that repeat a class. They also consistently track the number of orphans per class as well as students that are in and out of the school (both stratified by sex).

We were unable to compare the effect of ASSIST support on household economic strengthening because most teams had only recently begun working on that area in the communities. For this reason, we did not select control communities for collecting comparison data on household economic strengthening indicators. However, most of the teams had collected data on some of the indicators that they had

established, such as formation of village savings and loan groups and the number of families that were practicing wetland farming.

IV. DISCUSSION

A. Summary

We found that all QI teams prioritized education performance as their most important indicator and concentrated their efforts on this area initially. It is only more recently that the teams began tracking the effects of QI activities on household economic strengthening, and they plan to track the effects of these activities on population health in the future.

Our findings on education performance highlight four main points. First, most data collected from the schools and QI teams was similar to what has previously been submitted to URC Malawi. Second, there is variation in the definitions of what some of the indicators collected mean, most especially the criteria used by schools to classify students that have passed a class. We also found variability in the quality of records, which in turn influenced the ability of teams to use these data for quality improvement. Lastly, with the exception of one control school, all schools that are supported by QI teams perform better in some indicators than those that are not supported. The performance measures include: the number of terms that the schools have collected summarized data on student performance, the quality of data records, and the overall number of indicators that the school tracks each term.

B. Impact on Education Performance

There is evidence that quality improvement activities have had a positive effect on education performance in the communities that are supported by QI teams that receive support from ASSIST. This is manifested by the positive trend in education performance in almost all schools that receive this support; by the similarity of data that QI teams previously submitted to URC Malawi, and finally by the data collected during the validation process. In addition, schools that are supported by teams with more reliable data tracking mechanisms generally performed better than those that did not. For example, almost all schools supported by the Chingwenya team have progressively performed better than those from Nancholi and Chanthunya. We were unable to compare education performance trends in QI team-supported schools with those for control schools because the latter do not consistently collect these data. In addition, we could only compare within-school trends because the schools had different criteria for classifying students that passed exams. Between-school comparisons are possible for zonal mock exams in higher classes and for primary school leaving exams; this is an area where QI teams can collaborate with the school district and head teachers to standardize grading across schools.

The lack of data on process indicators for education performance makes it difficult to conclusively infer an effect of the QI activities on student performance. For example, it would be easier to assess the impact of mother groups if the QI teams were documenting the number of girls being followed up by these groups in a particular school and those that pass exams. Furthermore, schools are not regularly tracking the number of orphans and vulnerable children or documenting their performance. The reason for this is that extra assessment for vulnerable children compared to children not classified as OVC may bring more attention to them and possibly add to their vulnerability. However, the effect is that we are unable to determine the impact of specific education performance QI activities among the most vulnerable groups. Nonetheless, we can still conclude that ASSIST activities have a positive impact on vulnerable children because of the levels of extreme poverty in almost all households in these two districts.

C. Impact on Household Economic Strengthening

Although teams are only beginning to track indicators for household economic strengthening, there is strong evidence that the QI teams have had an impact in this area. This is supported by data that they have been collecting (though not submitting to URC) on the several indicators associated with better

livelihoods in these rural communities. Examples of these indicators are: the number of village savings and loan groups established and how much money has been saved, the number of households that have been trained in better farming practices, and the number of households linked to household economic opportunities that are supported by different non-governmental organizations. However, it is unclear whether these activities are also available in households that have not been selected by QI teams for piloting household economic strengthening activities. Better and stronger evidence on the impact of QI activities on household economic strengthening will be provided by regular collection of these indicators as well as by documentation of case studies from communities that the QI teams monitor.

In addition, teams generally found it easier to implement QI activities for household economic strengthening, mainly because QI team members directly implement most of these activities in the communities as compared to education performance in schools where the teams have to rely on teachers and parents to implement the recommended activities. Furthermore, education performance is influenced by other community factors that the QI team may not monitor. For example, there was district-wide poor performance in education during one of the terms because of flooding from heavy rains that prevented students from accessing schools.

There was also evidence of established working partnerships between ASSIST Malawi, QI teams, and the Malawi Ministry of Gender, Children, Disability, and Social Welfare that makes it easy to implement QI activities. A similar partnership between QI teams, ASSIST Malawi, and the district education offices could aid the implementation and future institutionalization of QI activities for education performance.

D. Addressing Data Deficiencies

We suggest the following interventions as ways of improving the validity of the data collected by the QI teams:

- 1) The QI teams need more training on effective methods of data collection, reporting, and storage. Data collection and storage tools like pre-printed forms for data entry and counter books would ease the burden on these teams and establish similar standards across teams. Training may also include teams sharing lessons learned, best practices, and other innovative ways of collecting data. For example, the Chingwenya team uses one QI member per village to collect data on indicators of household economic strengthening and has therefore been more efficient than the Nancholi team, which uses several QI team members to randomly sample households and come up with indicator estimates.
- 2) QI teams need more oversight and continuous support to ensure that data are collected consistently across schools. This continuous support helps teams identify more efficient ways of implementing and monitoring the effects of QI interventions. Better oversight and ongoing support are also needed to ensure better data quality. The existing workload for the two technical staff at URC Malawi, which includes data collection, cleaning and reporting, and providing technical assistance for several projects does not allow them to effectively monitor the quality of data and intervene promptly if need arises. We therefore recommend additional support for the URC staff to cover these roles.
- 3) The teams should begin collecting data on process indicators for education performance. This will help them focus on interventions that yield the best results and leave out those that do not. Process indicators will provide more reliable evidence that observed positive trends in education performance are due to QI activities and opposed to generalized secular trends in the schools. Furthermore, the teams should work with schools to utilize individual pupil level data so that later analysis can examine the effects of the program on vulnerable children compared to the rest of the student population. This would allow disaggregation without drawing specific attention to these children.

- 4) The aforementioned increase in the data collected by schools and QI teams will necessitate better oversight by district education offices. Schools are currently required to collect data on some of the education performance indicators that ASSIST monitors. In Mangochi District, schools are also required to have a contact teacher that is in charge of collecting these data. However, we found that only one of the selected primary schools had implemented these standards, which may in part explain why they had the best data monitoring structures and passing rates at exit exams for primary schools. URC Malawi should work towards more partnerships with district education officers with the aim of improving oversight of the required standards of record keeping and data that are available to QI teams.
- 5) There is need for uniform standards of “passing” exams at the end of each term. This would help make between-school comparisons in performance trends and enable the QI teams to intervene in schools that are lagging behind others. What may be more relevant is to collect data on whether the child has been allowed to progress to the next level based on the teacher’s assessment, which may not be indicated only with a passing grade on examination. Related to this, teams can work with schools to collect more detailed performance statistics. For example, in the current reporting structure, passing is defined according to an average score of all subjects taught in a particular class. This summary measure does not provide valuable information on where students are struggling most and where QI teams can work with teachers to improve their performance. One control school collects summary data on performance per subject and intervenes accordingly. This could be one of the reasons why this school had the best performance (as per their records) when compared to all schools used in this validation exercise.

E. Limitations

Several issues could bias our findings. First, the lack of detailed data from control schools made it difficult to establish the effects of activities of QI teams that are supported by ASSIST. A feasible way of doing this would be accessing data on primary school exit exams from district education offices. This may still be inadequate because comparisons could only be made for third-term performance for students in Class 8 but not for previous terms and lower grades. Nonetheless, we can conclude that ASSIST-supported improvement activities have resulted in better tracking of student performance and more proactive interventions with the aim of improving this performance.

Second, our findings are based on validation activities in only five of 10 QI teams that ASSIST Malawi works with. Although some of our findings might not hold for all QI teams, we can conclude that the observed findings are generally similar across all teams, including the five newly formed teams that were not included in the validation process.

F. Conclusion

The qualitative data validation exercise showed that data reported by URC Malawi are similar to what has been collected and maintained by community-based organizations that are supported through the USAID ASSIST Project. We also found that QI interventions that are implemented by these teams have had a positive impact on education performance in primary schools and on household economic strengthening in this rural, low-income setting. However, we cannot quantify the magnitude of specific interventions due to lack individual-level data and on process indicators for the assessed outcomes. Implementation of the above-listed strategies will not only improve the quality of data collected but also enable quantitative evaluation of the impact of QI activities.

APPENDICES

Appendix 1: List of Process Indicators for Tracking Improvement in Education Performance

#	Indicator
1	Proportion of pupils who pass termly exams
2	Proportion of vulnerable children engaged in mentorship program who pass exams
3	Proportion of girls followed up by mother groups
4	Proportion of vulnerable girls followed up by mother groups who pass exams
5	Proportion of vulnerable girls followed up by mother groups who improve on school attendance
6	Proportion of vulnerable girls writing all continuous assessments
7	Proportion of vulnerable children attending school weekly
8	Proportion families engaged in parent teacher dialogues
9	Proportion of vulnerable children whose guardians engage in parent teacher dialogues, who pass exams
10	Proportion of vulnerable girls attending role model talks who pass exams
11	Proportion of vulnerable girls who attend role model career talks
12	Proportion of vulnerable children participating in children's corner
13	Proportion of vulnerable children participating in children's corner who pass exams

Appendix 2: List of Indicators for Tracking Improvement in Household Economic Strengthening and Food Security

1	Proportion of vulnerable households (VHHs) that have food throughout the year
2	Proportion of VHHs that are able to access essential needs
3	Proportion of VHHs linked to Farm Input Subsidy Program
4	Proportion of vulnerable households linked to Social Cash Transfer Program
5	Proportion of VHHs linked to household economic strengthening supported by CBOs
6	Proportion of VHHs involved in small scale livestock production such as piggery, rabbits, goats
7	Proportion of VHHs involved in wetland farming
8	Proportion of VHHs established kitchen gardens
9	Proportion of VHHs linked to village savings and loan association (VSLA)
10	Proportion of VHHs linked to VSLA engaged in small businesses
11	Proportion of VHHs engaged in small businesses
12	Proportion of VHHs practicing modern methods of farming

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